Pilgrim Federation

EYFS & KS1

Learning Theme:



Great Fire of London

Links to Other Learning Themes:
This Learning Theme links to:
Homes & Houses
Our Planet
Where We Live
The British Isles

NURSERY PHONICS

Little Wandle Rhyme Time units:

Pat-a-Cake

Nursery Rhymes:
5 Currant Buns in a Baker's Shop.

Hot Cross Buns.

Queen of Hearts.

Pat-A-Cake.

Sing a Song of Six Pence.

Ten Fat Sausages.

The Muffin Man.

Little Miss Muffet.

Fire Fire!

Communication and Language

- Pretend play as a firefighter.
- Visit from the fire station.
- Use walkie-talkies to talk to one another about a fire.
- Share a range of non-fiction books.

Understanding of the World

- Talk about the role of a firefighter. How do they keep people safe?
- Look at the parts of a fire engine. Name the parts.
- Talk about the sound a fire engine makes. Use musical instruments to make the sound of a travelling fire engine.
- Talk about the colours of a fire/fire engine. Name the colours.



Mathematics

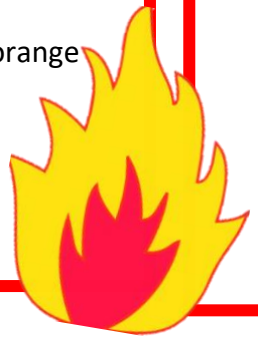
- Use 2D and 3D shapes to build fire engines.
- Count the wheels on a fire engine.
- Practise writing 999.
- Use red and yellow counters to make simple AB patterns.
- Use language such as big/small to describe a fire engine and its parts.

Literacy

- Make a fire safety poster using drawings and marks.
- Talk about The Great Fire of London and how this started in a bakery. Write a list of foods you would find in a bakery.
- Use playdough to make bakery foods.
- Make bread – follow instructions and sequence these using pictures

Expressive Arts & Design

- Use junk modelling resources to make fire engines.
- Make bonfire cakes or fire themed biscuits.
- Create pictures using red, orange and yellow.
- Provide the children with collage materials to make fire collages.
- Sing 'London's Burning'.



Physical Development

- Add different sized beakers and buckets to the water tray for children to empty and fill.
- Use sticks to build camp fires.
- Turn the three-wheeled toys into pretend fire engines. Drive them at different speeds.
- Draw a ladder on the ground in chalk. Can the children move through the ladder in different ways?
- · Encourage children to use water pistols or spray bottles to 'put out' a chalk fire!
- Use marbles to create red/orange/yellow paintings.

Personal, Social and Emotional Development

- Talk about fire safety.
- Create a role-play fire station and encourage the children to work together.
- Take part in a school fire drill.
- Work together to put out a pretend fire by passing a bucket down the line.
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EYFS (Nursery & Reception) Medium Term Planning
Learning Theme: The Great Fire of London

Big Question: What caused the Great Fire of London?

<table>
<tr>
<td colspan="2">Focus of Learning (INTENT):
Within this learning theme, the children will discover and explore the historical event of The Great Fire of London. They will become historians as they revisit London in 1666. To begin, the children will learn about London as a capital city. They will locate this within the UK and recognise how it differs to Norfolk and the locality. The children will then discover the cause of the fire and focus on this starting in the bakery. They will then look at how the fire spread and compare firefighters past and present. To conclude the learning theme, the children will learn about London after the fire and focus on how it was rebuilt, learning about famous London landmarks.</td>
<td colspan="2">Prior Learning/Links to Learning Themes:
• Children may have some understanding of the meaning of the word past.
• The children may know where London is.
• Some children may have visited London and have first-hand experience of the city.
• Some children, through television and books, may understand what London is like.
• Children may be able to make links and comparisons to buildings and houses during this time, which links to the learning theme ‘Houses and Homes’.</td>
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<tr>
<td colspan="4">Key Questions for Teaching:
• Where is London?
• Why did The Great Fire of London happen?
• What happened during The Great Fire of London?
• What happened after The Great Fire of London?
• How has London developed since the fire?
• What are some famous London landmarks?
• How is London different to where we live?
• What do we mean by the past?</td>
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<tr>
<td>Focused Literacy Texts:</td>
<td>• All Aboard the London Bus
• Master Bun the Bakers’ Boy
• The Little Red Hen
• Toby and the Great Fire of London
• Non-fiction texts based on The Great Fire of London.
• Paddington’s Guide to London</td>
<td>Texts that Link (these can be read at story time and used in provision):</td>
<td>• Vlad and The Great Fire of London
• A Walk in London
• Peter Rabbit Goes to London
• No, Nancy, No!
• The Tower Bridge Cat
• Madeline in London
• Winnie the Pooh Goes to London</td>
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			• The Great Fire of London by Emma Adams and James Lewis • The Fire Cats of London • The Baker's Boy and The Great Fire of London
Role-Play Opportunities	• Bakery • Fire Station • London Bus • Different London Landmarks		
Nursery Rhymes & Songs	London's Burning; Here in Pudding Lane; Fire, Fire Everywhere; Let's Get Building!; Five Currant Buns in a Baker's Shop; The Wheels on the Bus; London Bridge is Falling Down.		

	Communication and Language	Personal, Social, Emotional Development	Physical Development Enhancements*	Literacy Autumn Term Spring Term	Mathematics	Expressive Arts & Design	Understanding of the World
Week 1 Settling In **Autumn Term Only**	N – Spend time getting to know the children throughout the day. Learn their interests. R – Circle Time – Talk about themselves using new vocabulary to describe them as a person. Talk about their families - Who is in their family? What special things do they like to do with their family? N/R – Sing nursery rhymes.	N/R – Sing Head, Shoulders, Knees and Toes - Can they identify parts of their body? N/R – Provide the children with chalks to draw around each other. N/R – Make nature faces using seasonal materials.	N – Support the children to regular their emotions within the setting by developing a positive relationship. R – Think about what makes us all unique through looking at photographs of each other. Look at similarities/differences between us all. N/R – Discuss the classroom rules and why we have them. How do they keep us safe?	N/R – Share books with children about starting school e.g. Starting School by Janet & Alan Ahlberg. N/R – Take part in regular reading sessions and allow the children to choose books of interest to share. N – Children to draw a picture of their family. R – Children to draw a picture of their family. Can they add labels to their pictures?	N/R – Sing nursery rhymes and read books involving number. R - Encourage children to sort objects by colour and size. R – Make comparisons through play using mathematical vocabulary e.g. more than/less than.	N/R – Create self-portraits using different media. R – Draw something that they like to do. Can they describe it? Mix together different coloured paints. Can they paint their hands and feet?	N/R – Use a treasury basket to explore the five senses. Go on a sensory walk around the setting/village. Use magnifying glasses and explore natural objects.

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Week 2 **Where is London?** Text – All Aboard the London Bus	N/R – Look at different famous buildings in London. Discuss what they are like and learn their names. Use a box of resources linked to London as a stimulus (include a tube map). Talk about what it is like to explore London. How would we feel?	N/R – Talk about our own houses and where we live. What are our houses like? Do we have similar/different houses? R – Discuss the importance of knowing where we live in case of an emergency. Talk about our addresses.	N/R – Add a map of London to a tuff tray and provide different vehicles for the children to manoeuvre around the city. What do they see as they travel around the map? N/R – Provide the children with flag templates. Can they create St. George's red cross?	**Autumn Term** N/R – Introduce the children to the text and explain that this is a book of short poems. Talk about the meaning of a poem and discuss rhyme. N/R – Identify the words that rhyme within the different poems. N – Look at the bus that the book is based upon. Form a bus and sing Wheels on the Bus. Perform this to the rest of the group, including actions.	Following White Rose Maths	N – Look at a picture of London as a city. Think about what sounds you would hear when walking around the city. Use percussion instruments to recreate the sounds. R – Paint paper of different shapes and sizes to re-create London city. 	N/R – Locate London on a map. Use magnifying glasses to explore London. R – Discuss what London is like and record facts.

	Communication and Language	Personal, Social, Emotional Development	Physical Development Enhancements*	Literacy Autumn Term Spring Term	Mathematics	Expressive Arts & Design	Understanding of the World
Week 2 (cont.)				N – Create big, red buses. Use lines/shape and marks for windows and features. Orally describe the bus. N/R – Talk about visiting London. Have the children been before? Would they like to go? What would they like to see? R - Record their answers using a speech bubble (scribed where necessary) and a drawing/picture of them. R – Make/draw a big, red bus and add labels using marks.			

	Communication and Language	Personal, Social, Emotional Development	Physical Development Enhancements*	Literacy **Autumn Term** **Spring Term**	Mathematics	Expressive Arts & Design	Understanding of the World
Week 2 (cont.)				R – Imagine you are looking at London from the top of the bus. What can you see? Record what you can see through drawing/mark making. **Spring Term** N/R – Introduce the children to the text and explain that this is a book of short poems. Talk about the meaning of a poem and discuss rhyme.			
	Communication and Language	**Personal, Social, Emotional Development**	**Physical Development Enhancements***	**Literacy** **Autumn Term** **Spring Term**	**Mathematics**	**Expressive Arts & Design**	**Understanding of the World**

Week 2 (cont.)				R – Identify the rhyming words and record these. Highlight the spelling patterns that form the rhyme e.g. late and gate. R – Explain that we are going to be imaginative thinkers this week and we are going to imagine we are aboard the big, red bus. Imagine we are riding around on the big, red bus. What can we see? Record an 'I can see…' sentence(s).			

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Week 2 (cont.)				R – Through imaginative play, board the big, red bus and travel around the classroom. Look at different sights of London. Record key words linked to each sight (this will help the children with their fictional recount).			

	Communication and Language	Personal, Social, Emotional Development	Physical Development Enhancements*	Literacy Autumn Term Spring Term	Mathematics	Expressive Arts & Design	Understanding of the World
Week 2 (cont.)				R – Think of the different things you might see on your journey. Write a fictional recount' of your visit to London. Include feelings and what they would see e.g. *I felt scared,* *London was big.* *The bus was big and red. I saw the London Eye.* *It was up high.* *It made me feel sick!*			

	Communication and Language	Personal, Social, Emotional Development	Physical Development Enhancements*	Literacy Autumn Term Spring Term	Mathematics	Expressive Arts & Design	Understanding of the World
Week 3 **Why did The Great Fire of London happen?** Text – Master Bun the Bakers' Boy by Allan Ahlberg	N/R – Sing Five Currant Buns in a Baker's Shop. N/R – Talk about the role of a baker. Visit a local bakery.	N/R – Talk about safety when cooking. Discuss how we stay safe in school and how we can keep each other safe.	N/R – Add enhancements to the home corner so that children can re-create the Baker's Shop. N/R – Place flour, water and yeast in a tuff tray so that children can 'make their own bread'.	**Autumn Term** N/R – Read the text and discuss the meaning of a **baker.** R/N - Carry out pretend play to be a baker. N – Create a box of different items that a baker would use. Talk about the items and identify the initial sounds of these. N – Draw a baker. N – Sequence instructions for making bread (simplistic form).		N – Using different playdough and malleable materials, re-create different bakery goods. R – Use basic salt dough to create toy bread. Encourage the children to make different shapes and sizes. Decorate and glaze the salt dough.	N/R – Children to make bread.

	Communication and Language	Personal, Social, Emotional Development	Physical Development Enhancements*	Literacy Autumn Term Spring Term	Mathematics	Expressive Arts & Design	Understanding of the World
Week 3 (cont.)				R – Draw a baker and add the initial sound /b/ for baker. Orally discuss what a baker does and what their role entails. R – Draw pictures of the ingredients that a baker needs to make bread. Add marks for meaning/initial sounds. R – Sequence instructions on how to make bread using pictures. Orally describe each stage to their peer/an adult.			

	Communication and Language	Personal, Social, Emotional Development	Physical Development Enhancements*	Literacy Autumn Term Spring Term	Mathematics	Expressive Arts & Design	Understanding of the World
Week 3 (cont.)				R – Use a photograph of the bread they made. Add initial sound labels e.g. y for yummy or s for soft. **Spring Term** N/R – Read the text and discuss the meaning of a baker. What does a baker do? Explain that we will be bakers this week by making bread! N – Create a box of different items that a baker would use. Match the items to their initial sound (use the grapheme card).			
	Communication and Language	**Personal, Social, Emotional Development**	**Physical Development Enhancements***	**Literacy** **Autumn Term** **Spring Term**	**Mathematics**	**Expressive Arts & Design**	**Understanding of the World**

Week 3 (cont.)				N – Draw a baker and add an initial sound for baker /b/. N – Sequence instructions for making bread. Tell an adult what is happening at each stage. R – Draw a baker and write what they do. R – Write a list of things we'd need to make bread. R – Sequence making the bread and add labels. R – Write simple instructions for making the bread.			
	Communication and Language	**Personal, Social, Emotional Development**	**Physical Development Enhancements***	**Literacy** **Autumn Term** **Spring Term**	**Mathematics**	**Expressive Arts & Design**	**Understanding of the World**
Week 4	N/R – Learn and perform 'London's Burning'.	N/R – Talk about how the people would have felt	N/R – Provide the children with buckets of different	**Autumn Term**		N – Experiment with colour mixing	N – Children to re-enact being a firefighter from

What happened during The Great Fire of London? Text – The Little Red Hen	N/R – Talk about the dangers of fire and the impact that fire can have. R – Talk about fire safety plans – what would we do if a fire was in our house?	during the fire. Discuss different emotions – relate these to colour. N/R – Talk about how people helped one another. Discuss how we can help our friends.	sizes and allow them to practise putting out fires. N/R – Add red, orange, yellow, white and black paint to the creative area. Invite the children to take part in mixing colours. Add different sized brushes for the children to create paintings.	N/R - Listen and join in with the story. N – Make The Little Red Hen using craft materials and describe her orally. N – Retell the story using props/puppets. N – Think of another animal that could join the story. Make an animal mask.		to create fire pictures. R – Make Tudor houses from cereal boxes.	the past. How is this different to firefighters that we have now? R – Talk about firefighters in the past and now. Make comparisons and explain how they have changed. R – Create a timeline of The Great Fire of London to record the key events.

	Communication and Language	Personal, Social, Emotional Development	Physical Development Enhancements*	Literacy **Autumn Term** **Spring Term**	Mathematics	Expressive Arts & Design	Understanding of the World
Week 4 (cont.)			N/R – The Little Red Hen enhancements such as playdough mat or an investigation table based on wheat/flour.	R – Map the story using pictures. Discuss what is happening in the beginning, middle and end (spoken language). R – Draw The Little Red Hen and describe her adding labels. R – Create a new animal that could join the story. Draw them and add descriptive labels. **Spring Term** N/R - Listen and join in with the story.			

	Communication and Language	Personal, Social, Emotional Development	Physical Development Enhancements*	Literacy Autumn Term Spring Term	Mathematics	Expressive Arts & Design	Understanding of the World
Week 4 (cont.)				N – Make The Little Red Hen using craft materials. Write 'hen' and 'red' using marks or recognisable letters. N – Retell the story using props/puppets. Include the key refrains from the story. Perform this to an audience. N – Think of another animal that could join the story. Make an animal mask and describe the animal using spoken language.			
	Communication and Language	**Personal, Social, Emotional Development**	**Physical Development Enhancements***	**Literacy** **Autumn Term** **Spring Term**	**Mathematics**	**Expressive Arts & Design**	**Understanding of the World**

Week 4 (cont.)				HAPS – create a speech bubble with the key refrain from the story. R – Map the story using pictures and record key phrases for the beginning, middle and end. R – Draw The Little Red Hen and describe her adding labels. R – Draw the characters from the story and add speech bubbles of the key refrains "Who will help me?", said Little Red. "Not I", said the dog.			
	Communication and Language	**Personal, Social, Emotional Development**	**Physical Development Enhancements***	**Literacy** **Autumn Term** **Spring Term**	**Mathematics**	**Expressive Arts & Design**	**Understanding of the World**
Week 4 (cont.)				R – Create a new animal character that could join the story. Draw them			

				and add descriptive labels. R – Retell the story including a beginning, middle and end. **Include the new character.**			

	Communication and Language	Personal, Social, Emotional Development	Physical Development Enhancements*	Literacy Autumn Term Spring Term	Mathematics	Expressive Arts & Design	Understanding of the World
Week 5 **What happened after The Great Fire of London?** Text – Toby and The Great Fire of London	N/R – Talk about the meaning of a king. What is a king and why are they important? R – Introduce the children to the famous person, Samuel Pepys. What did he do during the fire? R – Talk about parliament. Link this to modern day. Show the children a picture of the Houses of Parliament in London. Discuss what parliament is and the role of MPs.	N/R – Talk about what it means to be brave. How were the people brave during the fire? N/R – Add a wig and costume to the home corner so that children can dress up as Samuel Pepys or an MP.	N/R – Add different sized chalks to the outdoor area. Encourage the children to draw flames. N/R – Provide the children with crown templates and creative materials to decorate their own crowns.	**Autumn Term** N/R – Read text and discuss the key events. R – Orally compose questions based on how people felt at the time. N/R – Use stick puppets to re-enact the fire. What did the people do during this time? N/R – As a group, create a story map to retell the story with actions and key phrases.		N – Create a large fire using different collage materials. Tear different coloured tissue paper to create flames. R – Create fire scenes using wax crayons or chalks. Teach the children blending techniques.	N/R – Discover how London houses were rebuilt after the fire to prevent it from happening again. N – Make houses similar to those that were rebuilt by using building blocks/Duplo. How are they stronger than wood? R – Draw a house made from brick and add a sentence to reflect the change in London.
	Communication and Language	**Personal, Social, Emotional Development**	**Physical Development Enhancements***	**Literacy** **Autumn Term** **Spring Term**	**Mathematics**	**Expressive Arts & Design**	**Understanding of the World**

Week 5 (cont.)				N – Make a fire from props or craft materials and collate describing words orally. R – Draw Toby and add a speech bubble using marks or recognisable sounds. **Spring Term** N/R – Read text and discuss the key events. N – Retell the events of the fire using stick puppets.			

	Communication and Language	Personal, Social, Emotional Development	Physical Development Enhancements*	Literacy Autumn Term Spring Term	Mathematics	Expressive Arts & Design	Understanding of the World
Week 5 (cont.)				N – Imagine you were alive during the fire. Draw a picture of yourself and add a speech bubble using recognisable marks or letters. N – Individually create story maps using drawing. Orally retell this to an adult. N – Make a fire from props or craft materials and add describing labels using recognisable marks/letters.			

	Communication and Language	Personal, Social, Emotional Development	Physical Development Enhancements*	Literacy Autumn Term Spring Term	Mathematics	Expressive Arts & Design	Understanding of the World
Week 5 (cont.)				R – Roleplay the fire and create a story map independently using drawing and key phrases. R – Sequence the story independently. R - Recall each event orally. Add key sentences. R – Hot seating as Toby. Discuss his feelings using spoken language. Draw Toby and add a written speech bubble. R – Write a simple diary entry as Toby. *Dear Diary,* *I feel scared. My house is on fire.* *Toby.*			

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Week 6 **How has London developed since the fire?** Text – Non-fiction books based on The Great Fire of London	N/R – Look at photographs of London now and then. Talk about how it has changed. What is the key difference? N/R – If we visited London now, what would we see? Reflect on this question after watching a video stimulus. R – Introduce the children to the famous person, Christopher Wren through non-fiction texts. Who was he and why was he important in 1666?	N/R – Talk about our own houses. If we had to rebuild it, what would we change and why?	N/R – Set up the craft area with different media and materials so that children can create their own London buses. R – Provide the children with different types of sketching pencils and pictures of famous London landmarks. Can the children draw the other half of the landmark? N/R – Provide the children with different sized sticks to make fires outside. N/R – Create collage fires using tissue paper.	**Autumn Term** N/R – Share a range of non-fiction books with the children. N – Think about a fire and what it is like. Collate describing words linked together. N – Use different resources that link to the fire. Show these to the children. Explore them first hand and verbally describe them using the senses. N – Make bonfire biscuits/cakes. Recall step-by-step instructions on how they were made.		N – Provide the children with different coloured paints (related to fire) and create marble paintings. R – Show the children a basic sketch of St. Paul's Cathedral. Discuss the use of line and shape. Encourage the children to create a replica sketch.	N – Paint/create London buses. Use these to travel around the classroom and look at different photographs of London now. How has it changed? R – Look at how London developed after the fire in more detail and complete a comparison.

	Communication and Language	Personal, Social, Emotional Development	Physical Development Enhancements*	Literacy Autumn Term Spring Term	Mathematics	Expressive Arts & Design	Understanding of the World
Week 6 (cont.)	Discuss the role of an architect.			N – Sequence events from the fire using a cut and stick activity. R – Create a group mind-map of adjectives to describe the fire. R – Think of the five senses. Use our senses to describe the fire/fire pictures. Next to sense pictures, record labels. R – Use our senses to make bonfire cakes/biscuits. R – Sequence how the cakes were made.			

	Communication and Language	Personal, Social, Emotional Development	Physical Development Enhancements*	Literacy **Autumn Term** **Spring Term**	Mathematics	Expressive Arts & Design	Understanding of the World
Week 6 (cont.)				R – Write simple instructions. **Spring Term** N/R – Share a range of non-fiction books with the children. N – Create a senses mind-map as a group. N – Make bonfire biscuits/cakes. Recall step-by-step instructions on how they were made. N – Sequence events from the fire using a cut and stick activity. Add key marks or recognisable letters.			

	Communication and Language	Personal, Social, Emotional Development	Physical Development Enhancements*	Literacy Autumn Term Spring Term	Mathematics	Expressive Arts & Design	Understanding of the World
Week 6 (cont.)				R – Mind-map adjectives to describe the fire. Record these independently. R – Focus on the fire senses. Write sentences beginning with the sentence stem 'I can…' R – Learn a verse from the poem 'The Great Fire of London' by Paul Perro. Perform this to an audience. R – Create acrostic poems based on the fire.			

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Week 7 **What are some famous London landmarks?** Text – Paddington's Guide to London	N/R – Make marmalade sandwiches. Follow the instructions and talk about each stage. N/R – Read famous Paddington stories. Which is their favourite and why? N/R – Look at Paddington's Guide to London. Which is their favourite place and why? How is this different to where we live?	N/R - Provide children with different teddy bears so that they can recreate scenes from Paddington stories. How would they take care of the bear? Talk about travelling to London. How would they feel in a city? Discuss how to stay safe in a busy place. N/R – Bring in their favourite teddy. Talk about why they are their favourite.	N/R – Provide playdough and other creative materials so that children can make Paddington. R – Add postcards to the learning environment to send to Paddington.	**Autumn Term** N/R – Take time sharing the book. Look carefully at the different landmarks and explore these together. N – Think about Paddington Bear. Make Paddington and describe what he is like. N – Make marmalade sandwiches. N – Recall the steps made to make these. N – Sequence instructions and orally discuss each stage.		N – Take part in imaginative play and imagine that they are at the top of the London Eye. What does it feel like to be high up? What can they see from the top? N – Create Big Ben or Tower Bridge using building blocks. R – Use lines and shapes to draw one of the London landmarks. Use different shades and tones for effect.	N – Create a tuff tray based on London and the key landmarks. Use toy vehicles to visit the different landmarks. Discuss what they are like. R – Look at different London landmarks. What are they like? Create a map of London and add the landmarks to the map. Can the children add labels?
	Communication and Language	**Personal, Social, Emotional Development**	**Physical Development Enhancements***	**Literacy** **Autumn Term** **Spring Term**	**Mathematics**	**Expressive Arts & Design**	**Understanding of the World**

Week 7 (cont.)				R – Use pictures of the landmarks and orally record facts based on these as a group. R – Think about the landmark they would like to visit and why. Record this through drawing and add marks for reference. R – Make a tourist information leaflet and add key words/labels to the landmarks.			

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Week 7 (cont.)				**Spring Term** N/R – Take time sharing the book. Look carefully at the different landmarks and explore these together. N – Make marmalade sandwiches. N – Recall the steps made to make these. N – Sequence instructions and add marks or recognisable letters underneath each picture.			

	Communication and Language	Personal, Social, Emotional Development	Physical Development Enhancements*	Literacy Autumn Term Spring Term	Mathematics	Expressive Arts & Design	Understanding of the World
Week 7 (cont.)				R – Look at pictures of the famous landmarks. Record facts about these independently. R – Draw the landmark they would like to visit and why. Record this using a sentence. R – Make a tourist information leaflet. Draw the different landmarks from the book and add key information for each.			

***Please continue to follow your PE plan for your class, but consider the above suggestions to enhance your provision to support children's fine and gross motor development.**

EYFS Areas of Learning Weekly Plan

Class:		Date:		Topic:	

Area of Learning	Indoor Enhancements	Outdoor Enhancements	Key Vocabulary and Questions	Children's Learning and Interests
Communication and Language				
Personal, Social and Emotional Development				
Physical Development				
Literacy				
Mathematics				
Understanding the World				
Expressive Arts and Design				

KEY STAGE 1

By the end of the piece of learning about **'The Great Fire of London'** children will be able to answer the following questions which cover the basic facts of the event (when, where, what), the immediate causes and consequences (why it spread, how it was stopped, what changed), and introduce early historical thinking skills like cause and effect and understanding the past:

1. **When and where did the Great Fire of London happen?** (Focuses on chronology and location - important historical foundations).
   - *Expected Answer:* It happened a long time ago, in 1666, in London. (Encourage them to understand it was in the past).

2. **What started the Great Fire of London?** (Focuses on cause and effect, a key historical skill).
   - *Expected Answer:* It started in a baker's shop on Pudding Lane. (Simple factual recall of the initial event).

3. **Why did the fire spread so quickly?** (Focuses on understanding the conditions that contributed to the event - early understanding of historical context).
   - *Expected Answer:* The houses were made of wood, they were very close together, and there was a strong wind. (Highlighting key factors).

4. **What did people do to try and stop the fire?** (Focuses on actions and responses to a significant event).
   - *Expected Answer:* They tried to put it out with buckets of water, and they pulled down some houses to make firebreaks. (Simple understanding of attempts to control the fire).

5. **How did the Great Fire of London eventually stop?** (Focuses on the conclusion of the event and the factors involved).
   - *Expected Answer:* The wind died down, and they blew up more houses to make bigger firebreaks, and then it rained. (Understanding the factors that led to the fire ending).

6. **How did the Great Fire of London change London?** (Focuses on the consequences and impact of a historical event).
   - *Expected Answer:* Lots of houses were burnt down, and when they rebuilt London, they made the houses out of brick and stone so it wouldn't happen again. (Understanding the immediate and longer-term impact).

Other questions to consider and information to recall:
Where did the Great Fire of London start? (This tests their recall of a fundamental fact and the origin of the event.)
Can you name one or two reasons why the fire spread so quickly? (This encourages them to think about the conditions that made the fire dangerous, such as wooden houses being close together or the wind.)
What was Samuel Pepys doing when the fire started, and how did he find out about it? (This introduces a key historical figure and how information about the fire began to spread.)
Can you name one way that people tried to stop the fire from spreading? (This explores their understanding of the efforts made to control the disaster, such as pulling down houses or using buckets of water.)
How did the Great Fire of London change the city afterwards? Can you name one thing that was different? (This encourages them to think about the long-term impact of the fire, such as new brick buildings or wider streets.)
Why do we still learn about the Great Fire of London today? (This prompts them to consider the historical significance and what we can learn from past events.)
When did the Great Fire of London happen? 1666
Where did the Great Fire of London start? A bakery in Pudding Lane, London
Why did the Great Fire of London happen? Sparks from the baker's oven set fire to the shop and the fire quickly spread.
Which famous landmark was destroyed in the fire? St Paul's Cathedral
How do we know The Great Fire of London happened? Because a man called Samuel Pepys wrote about it in his diaries.
How can you stop fires from happening in your home?

Key Vocabulary

Pupils should be able to use the following words:

Key People and Places:
London: The big city where the fire happened.
Pudding Lane: The street where the fire started in a bakery.
bakery: A shop where bread and cakes are made and sold.
Samuel Pepys: A man who wrote about the fire in his diary.
King Charles II: The King at the time of the fire.
St Paul's Cathedral: A very big church in London that was burnt down and then rebuilt.
River Thames: The river that runs through London. People tried to use water from it to put out the fire.

Words about the Fire:
fire: Burning flames and smoke.
smoke: The grey cloud that comes from something burning.
flames: The hot, bright part of a fire.
burning: When something is on fire.
spread: To move quickly from one place to another. The fire spread quickly.
wooden: Made of wood. Many houses were made of wood, which burned easily.
thatched roof: A roof made of straw or dry grass. These caught fire easily.
narrow streets: Streets that were very close together, which helped the fire spread.
destroyed: When something is broken or ruined completely. Many houses were destroyed.
damaged: When something is harmed, but not completely destroyed.

Actions and Consequences:
diary: A book where someone writes about what happens each day. Samuel Pepys wrote a diary.
escape: To get away from danger. People had to escape from the fire.
firefighters: People who help to put out fires (though there weren't official ones like today).
fire engine: A vehicle used to carry things for putting out fires (these didn't exist in 1666).
water buckets: Buckets used to carry water to try and put out the fire.
pulled down: When buildings were knocked down to try and stop the fire from spreading.
rebuilt: Built again after being destroyed. London was rebuilt after the fire.
homeless: Having nowhere to live because your home has been destroyed. Many people were left homeless.
17th century: The time from 1601 to 1700. The Great Fire happened in 1666, which was in the 17th century.

Art & Design

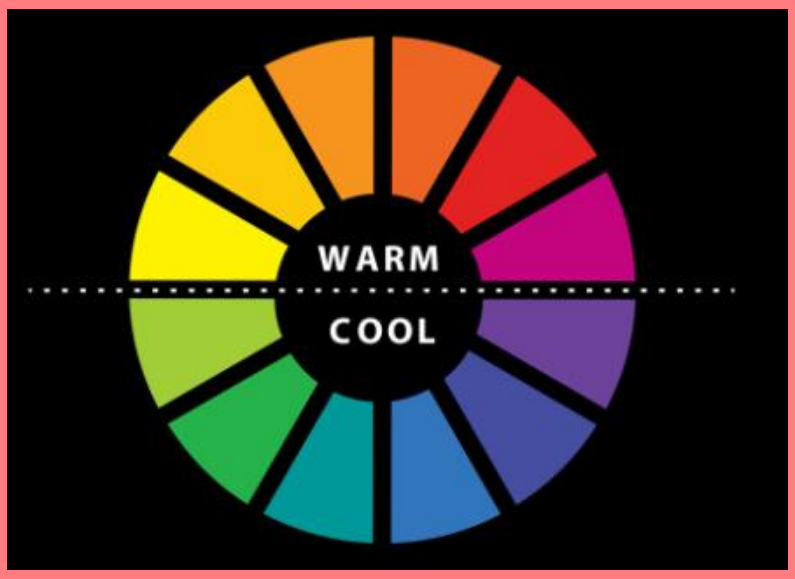
Substantive Knowledge

In Key Stage 1 Art & Design, **substantive knowledge** represents the foundational, explicit facts: the vocabulary of art, the physical properties of materials, the core techniques of manipulation, and the artistic history that children must learn. It is the practical "know-how" and factual "know-that." **The Great Fire of London (1666)** is an historical lens for this knowledge. It provides a striking contrast between the intense, chaotic energy of the fire and the stark, linear geometry of 17th-century timber-framed housing.

The 4 Pillars of Substantive Art Knowledge in KS1

1. Colour Theory (Warm vs. Cool Tones)

Substantive knowledge in colour theory means knowing that the colour wheel can be split into temperatures: **warm colours** (reds, oranges, yellows) and **cool colours** (blues, greens, purples). It also includes the mechanics of **mixing**—knowing that mixing two primary colours creates a secondary colour, and that adding white creates a **tint** (lighter) while adding black creates a **shade** (darker).



In the 'Great Fire of London' Learning Theme: Children learn that to depict a blazing inferno, they must explicitly isolate the warm side of the colour wheel. They learn the factual procedure that mixing yellow and red paint produces the brilliant orange needed for the flames, and that layering shades of black and charcoal over these warm tones creates the atmospheric effect of choking smoke.

Why it matters: Colour is a tool of emotional expression. If children do not master the factual mechanics of colour mixing, their paints blend into a muddy brown, leaving them frustrated and unable to intentionally control the mood of their artwork.

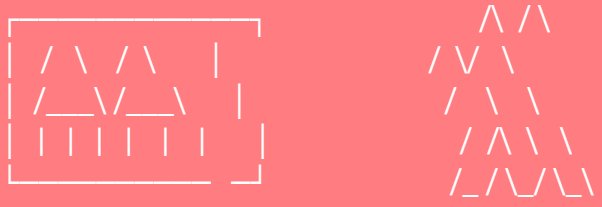
2. Line, Shape, and Form (The Silhouette of 1666 London)

This involves learning that a **line** can have different properties (thick, thin, horizontal, vertical, jagged, wavy) and that lines close up to form 2D geometric or organic **shapes**.

In 'The Great Fire of London' Learning Theme: Children learn the architectural features of Tudor and Stuart houses. They discover that these buildings were constructed using a grid of thick, straight black lines (timber frames) filled in with pale rectangles (wattle and daub walls). When creating artwork of the fire, they learn to contrast the rigid, sharp lines of the burning buildings against the unpredictable, fluid, jagged lines of the flames climbing into the sky.

[Rigid Lines & Geometric Shapes] vs. [Fluid, Jagged Lines]

Tudor House Silhouettes Climbing Flames



Why it matters: Line and shape are the building blocks of visual literacy. Recognising these elements allows young children to look at a complex real-world scene, break it down into manageable shapes, and translate it accurately onto paper.

3. Material Mechanics & Texture (Collage and Tactile Surfaces)

Substantive knowledge here involves understanding the physical properties of different mediums (tissue paper, cardboard, charcoal, pastels, paint) and how techniques like **tearing, cutting, layering, and smudging** alter a surface's **texture** (how it feels or looks).



The Great Fire of London, 1666. Source: Heritage Images / Heritage Images/Getty Images

In 'The Great Fire of London' Learning Theme: Children explore texture to represent the physical components of the disaster. They learn that smoothly *cutting* clean-edged black sugar paper creates a sharp silhouette of London's skyline. Conversely, *tearing* semi-transparent orange and red tissue paper and layering it loosely creates a feathered, tactile texture that beautifully mimics flickering fire. They also discover that *smudging* compressed charcoal with their fingers creates a soft, hazy texture perfect for replicating soot.

Why it matters: Children must learn that different materials behave in unique ways. Understanding these physical properties transforms them from accidental marksmen into deliberate creators who can select the exact material needed to achieve a specific visual goal.

4. Knowledge of Artists and History (The Contextual Record)
Children must learn that art is a historical record. They learn that artists use real events to capture stories and atmospheres, and they learn to observe historical details within artwork.

In 'The Great Fire of London' Learning Theme: Children study famous contemporary landscape paintings and woodcuts from 1666. They observe how historic artists positioned the River Thames in the foreground to create depth, and how they used contrasting values of light and dark (**chiaroscuro**) to show the bright city glowing against a pitch-black midnight sky.
Why it matters: Looking at historical art teaches children that art is a powerful form of communication that predates cameras. It connects them to human history, proving that creativity is a tool used to process, document, and remember major global events.

Why Substantive Knowledge Matters Most in Art
There is a common misconception that early childhood art should be entirely free-form expression without rules. However, **creativity requires a framework of knowledge.**
If we do not teach children **substantive artistic facts**—such as how colours mix, how materials behave, or how lines build shapes—they are limited to a cycle of trial and error. A child might have a brilliant, vivid idea in their head of London burning, but without knowing *how* to control a pastel or *why* tissue paper creates a better flame texture than thick poster paint, they cannot execute it. By teaching explicit **substantive knowledge** through the story of the Great Fire of London, we hand children the keys to their own imagination. They don't just make a mess; they gain an organised, practical vocabulary of techniques that empowers them to create powerful, intentional art across their school journey.

Disciplinary Knowledge

While **substantive knowledge** teaches a child the physical facts of art (e.g., *red and yellow make orange*), **disciplinary knowledge** teaches them how to *think, act, and make decisions* like an artist. It is the understanding of how art is generated, how an artist critiques their own work, how they choose to express a feeling, and how they interpret the visual world.
In Key Stage 1, **disciplinary knowledge** is about moving away from accidental marks toward **deliberate, purposeful choices**. Using the learning theme of '**The Great Fire of London'**, **disciplinary knowledge** transforms a child from someone who simply colours a historical picture into an active visual narrator who decides how to capture a historic tragedy through texture, contrast, and scale.

The 4 Pillars of Disciplinary Art Knowledge in KS1
1. Generating Ideas and Intentionality (The Artist's Choice)
Disciplinary knowledge means understanding that an artist doesn't just start painting randomly; they make an active plan to communicate a specific feeling or story. It involves exploring a theme through a sketchbook and choosing specific tools because they match an idea.

In 'The Great Fire of London' Learning Theme: Instead of a teacher telling a child exactly which crayon to pick up, the child applies disciplinary thinking: *"I want my artwork to look scary and hot. Should I use light watercolour paint or thick, scratchy oil pastels?"* They choose the oil pastels because the physical scratchiness feels more aggressive and chaotic, matching the energy of the fire.
Why it matters: This builds creative autonomy. If children only follow step-by-step instructions, they never learn to connect their inner thoughts and emotions with their outer physical movements.

2. Making and Refining (The Process of Trial and Correction)

This is the understanding that art is an ongoing process of experimenting, evaluating your progress, and making adjustments. It means realising that a "mistake" is just a new direction, and learning how to refine a technique to make it look right.

THE ARTISTIC DISCIPLINARY LOOP
↓
PROJECT
↓
Make Mark
↓
Evaluate
"Is it looking dark and smoky enough?"
↓
Refine
Smudge the charcoal further or layer black paint over it.

In 'The Great Fire of London' Learning Theme: A child is trying to show the dark smoke clouds over London using charcoal. They rub the stick on the paper, look at it, and realise the lines look too sharp and neat—not like real floating smoke. Applying disciplinary knowledge, they remember that charcoal is loose, so they use their fingers to purposefully smudge the hard edges, blending the lines together until it matches their visual goal.
Why it matters: This builds resilience and critical thinking. It teaches young children to look analytically at their own work, evaluate it against a goal, and try a different technique without getting frustrated.

3. Evaluating and Critiquing (The Language of Art)
Disciplinary knowledge allows a child to look at their own artwork—and the artwork of others—and explain what they see using an objective vocabulary, rather than just saying *"I like it"* or *"It looks pretty."*

In the Great Fire Theme: When looking at a peer's collage of the burning streets, a child practicing disciplinary reflection might say: *"I like how you used shiny foil at the bottom because it looks like the bright sparks flying out of the bakery, and the black paper creates a great contrast against the red sky."*
Why it matters: Developing an artistic vocabulary allows children to decode the visual-heavy world around them. It teaches them that art is an intentional language made of elements (line, shape, colour, value) that can be studied and understood.
4. Understanding Context and Meaning (Art as a Witness)
This is the understanding that art changes depending on *when* and *where* it was made, and that art can be used to tell stories about real-world history.

In the Great Fire Theme: Children look at 17th-century woodcuts and paintings of the fire. They don't just look at the colours; they question *why* the artist made those choices. They notice that the artist painted the River Thames filled with boats, and they reason that the artist did this to show how desperate the people of London were to escape the flames.
Why it matters: This connects art directly to human empathy and history. It shows children that art isn't just a classroom activity done on Friday afternoons—it is a powerful tool that humanity has used for thousands of years to record disasters, celebrate triumphs, and share human experiences.

Why Disciplinary Knowledge Matters Most

Without **disciplinary knowledge**, **substantive facts** are completely hollow. A child might know perfectly well that *red and yellow make orange* (substantive fact), but without disciplinary agency, they won't know *when* or *why* to use that orange to create a sense of danger, dramatic lighting, or scale. When we explicitly teach **disciplinary skills** through a rich, dramatic learning theme like **The Great Fire of London**, we take children out of a passive "copying" mindset. We hand them the critical power to make independent decisions, critique their own processes, and use their artistic tools to confidently voice their own ideas. This foundation shapes them into independent, deep thinkers as they transition into Key Stage 2 and beyond.

Learning Objectives

Overall Aim: To enable pupils to explore and express their understanding of 'The Great Fire of London' through various art and design techniques, developing their creativity, observational skills, and knowledge of historical events.

1. Exploring Materials and Techniques:
Objective: To experiment with a range of materials (e.g., paint, charcoal, pastels, collage materials, found objects) to create different effects related to fire, smoke, and destruction.
Example Activities: Using red, orange, and yellow paints for fire; black charcoal for smoke; ripping and layering paper for charred buildings.

Objective: To develop skills in cutting, sticking, tearing, and joining materials to construct simple 3D models or collages.
Example Activities: Creating simple house structures from cardboard boxes; tearing paper to represent flames; sticking fabric scraps for textures.

Objective: To explore different ways of applying paint (e.g., dabbing, swirling, dragging) to represent movement and texture.
Example Activities: Using sponges to dab paint for brick textures; swirling paint for smoke patterns.

2. Generating Ideas and Making:
Objective: To observe and discuss images and artworks related to fire, historical buildings, and the Great Fire of London, identifying key visual elements.
Example Activities: Looking at historical illustrations of the fire; discussing colours used to depict fire; noticing materials used in old buildings.

Objective: To use their imagination and knowledge of the Great Fire to create their own artistic responses.
Example Activities*:* Drawing what they imagine the fire looked like; designing a 'fireproof' house.

Objective: To plan and create simple artworks, considering the message or feeling they want to convey.
Example Activities*:* Deciding whether their artwork will show the fire starting, spreading, or the aftermath; choosing colours to reflect danger or sadness.

Objective: To develop their fine motor skills through precise cutting, drawing, and manipulating materials.

3. Evaluating and Developing Work:
Objective: To talk about their own artwork and the artwork of others, using simple art vocabulary (e.g., 'bright', 'dark', 'texture', 'shape').

Example Activities: Describing why they chose certain colours; explaining what their picture shows; saying what they like about a friend's artwork.

Objective: To make simple improvements to their work based on suggestions or their own reflection.
Example Activities: Adding more details to their drawing; trying a different way to make smoke; making their building taller.

Objective: To understand that art can be used to tell a story or record events.
Example Activities: Discussing how their artwork tells the story of the Great Fire; understanding that historical paintings can show us what things used to look like.

4. Knowledge and Understanding (Interdisciplinary Link):
Objective: To represent key elements of the Great Fire of London visually (e.g., fire, smoke, narrow streets, timber houses, people evacuating, the Monument).
Example Activities: Drawing or painting buildings from the period; including details like water buckets or baker's shops.

Objective: To understand how art can help us learn about history.
Example Activities: Discussing how images from the past help us understand what happened during the Great Fire.

Lesson Ideas

This 6-week Key Stage 1 medium-term plan balances **substantive knowledge** (the technical facts, vocabulary, and mechanics of art) with **disciplinary knowledge** (how to think, make choices, evaluate, and act like an artist). Through the lens of 1666 London, children shift from accidentally making marks to making deliberate, intentional artistic decisions.

Block 1: The Sky is on Fire — Colour & Atmospheric Emotion (Weeks 1-2)
Week 1: Capturing the Heat — Intentional Colour Mixing
Substantive Knowledge: Red, yellow, and blue are **primary colours**. Mixing two primary colours creates a **secondary colour** (Red + Yellow = Orange). Warm colours (reds, oranges, yellows) create an energetic or alarming feeling.
Disciplinary Knowledge: Intentionality. Artists choose specific colours from a palette to match the mood of a story. They test combinations to see how shifting ratios (more red vs. more yellow) alters the emotional intensity.

Activity:
The Artist's Choice: Show children an image of a calm blue ocean alongside a depiction of the Great Fire. Ask: *"If you want to make people feel the scorching heat of Pudding Lane, which side of the colour wheel will you choose?"*
The Investigation: Give children red, yellow, and white paint. In their sketchbooks, they experiment with mixing different ratios to create a personal "fire scale"—ranging from soft yellow-golds to deep, aggressive red-oranges.
The Flat Wash: Children paint a large gradient background sheet, transitioning smoothly from bright yellow up to deep red.

Outcome & Assessment: A warm-toned blended background. Children can verbally explain *why* they chose their custom orange shades to show danger.

Week 2: Choking Smoke — Tints, Shades, and Modifying Mediums
Substantive Knowledge: A **tint** is created by adding white to a colour. A **shade** is created by adding black. Charcoal is a loose, dry carbon medium that is highly responsive to physical pressure and friction.
Disciplinary Knowledge: Process & Refinement. Artists don't always leave a medium exactly as it lands on the paper. They manipulate its properties (like smudging hard lines into soft clouds) to achieve a desired visual texture.

Activity:
Analysing the Witness: Look at contemporary accounts of the fire making day look like night. Discuss how to create an atmospheric, smoky sky.
The Charcoal Test: Children draw harsh, heavy lines with willow charcoal. The teacher demonstrates the disciplinary act of critique: *"These lines look like solid sticks, not floating smoke. How can we fix it?"*
Smudge Manipulation: Children use their fingers to purposefully smudge, spread, and blow the charcoal dust, creating a soft, hazy texture. They layer grey paint (tints/shades of black and white) over the top to build heavy, multi-layered ash clouds.
Outcome & Assessment: A dramatic, smudged charcoal and paint smoke-scape. Children can demonstrate how to turn a hard line into a soft texture.

Block 2: Structural London — Lines, Architecture & Contrast (Weeks 3-4)
Week 3: Prehistoric Streets — Rigid Lines and Architectural Framing
Substantive Knowledge: Architecture means designing physical buildings. 17th-century London houses featured timber frames (thick, straight vertical/horizontal black lines) and plaster walls (white rectangles and triangles).
Disciplinary Knowledge: Visual Decoding. Artists look at complex real-world structures and break them down into simple geometric frameworks before they begin creating.
Activity:
Decoding 1666: Look closely at drawings of historical Tudor homes. Ask children to identify the hidden geometric shapes inside the buildings.
The Structural Grid: Using heavy black oil pastels, children draw a series of interconnected, leaning houses. They focus on executing bold, deliberate straight lines to represent the heavy oak beams.
Creating Rhythm: Children repeat geometric patterns (square window panes, cross-hatched timbering) across their structures, deciding how many houses are needed to make the street feel "crowded."
Outcome & Assessment: A stark, high-contrast drawing of a geometric Tudor street. Children can point out the specific vertical, horizontal, and diagonal lines they chose to build their structures.

Week 4: The Burning Silhouette — Composition and Contrast
Substantive Knowledge: A **silhouette** is a solid dark outline of an object viewed against a lighter background. **Contrast** is the striking difference between two opposite visual elements (e.g., solid black against blazing orange).
Disciplinary Knowledge: Composition. An artist decides how to arrange different layers of a piece to create depth and tell a clear story.

Activity:

The Spatial Puzzle: Children take their architectural line drawings from Week 3 and their fiery backgrounds from Week 1.
The Cutting Decision: Children cut along the top rooflines of their Tudor houses, completely discarding the original white background. The teacher discusses contrast: *"Why will placing this dark silhouette over your Week 1 fire background make the flames look incredibly bright?"*
The Assembly: Children turn their house cut-outs into solid black shapes (or trace them onto black paper) and mount them flush against the bottom edge of their fiery background wash.
Outcome & Assessment: A stunning, high-contrast silhouette artwork. Children can explain how the contrast between the dark houses and bright background makes the fire feel more intense.

Block 3: The Inferno — Material Mechanics & Collage (Weeks 5-6)
Week 5: The Tactile Bakery — Discovering Material Properties
Substantive Knowledge: Collage is artwork made by sticking different materials onto a flat surface. Materials have distinct physical textures: tissue paper is thin and *translucent* (light passes through it); cellophane is *reflective/shiny*; corrugated cardboard is *rough/ridged*.
Disciplinary Knowledge: Material Selection. Artists choose a material not just because it's available, but because its physical properties mimic what they are trying to represent in real life.

Activity:
The Texture Audit: Place a pile of mixed materials on tables. Children manipulate them, sorting them into categories using proper art terms: *opaque, translucent, rough, smooth, stiff, flexible*.
The Choice: Ask: *"If we want to build Thomas Farriner's bakery on Pudding Lane, which material feels like dry, rough wood? If we want to make sparks, which material catches the light?"*
Tearing Mastery: Children practice pinching and tearing paper toward themselves to create rough, frayed edges rather than clean cut lines, preparing their material palette.
Outcome & Assessment: A sorted collection of textures. Children can explicitly state why cardboard feels like wood and foil looks like a spark.

Week 6: Raising the Flames — Layering and Group Critique
Substantive Knowledge: Layering means placing materials on top of each other to create thickness, depth, and density. Stiff, *opaque* (non-see-through) materials form a solid base, while light, *translucent* materials go on top.
Disciplinary Knowledge: Reflective Critique. Artists review their work during and after production, using specific artistic language to evaluate whether their material choices successfully brought their initial idea to life.

Activity:
Building the Base: On a sturdy card backing, children glue down their rough cardboard and brown papers to construct the wooden foundations of London.
The Fire Layering: Children build the leaping fire. They layer the stiff, opaque red papers first. Over the top, they glue the torn, crumpled shapes of translucent orange tissue paper and shiny cellophane. Because the tissue is translucent, the layers blend visually when the light hits them, mimicking moving flames.
The Gallery Walk: Display all final collages. Children conduct an artist's critique, pointing out where a classmate used layering or texture effectively to capture the tragedy.
Outcome & Assessment: A deeply textured, multi-layered mixed-media collage. Children can evaluate their own work and peer work using terms like *layering*, *contrast*, and *translucent*.

Progress Trackers: Substantive vs. Disciplinary

Dimension	Key Stage 1 Milestones (What they will know and do)
Substantive (Facts & Skills)	Name primary/secondary colours and mix a vibrant orange. Identify and name architectural features (timber lines, rectangular doors). Use art vocabulary correctly (*tint, shade, silhouette, translucent*). Manipulate scissors safely to cut a clean, intricate line.
Disciplinary (Thinking & Evaluating)	Choose a specific medium or colour palette to match a desired mood. Refine a technique mid-activity (e.g., smudging charcoal when a line is too harsh). Explain the visual relationship between overlapping layers in a collage. Critique a peer's artwork using objective design criteria rather than personal bias.

Other Information, Ideas and Resources

Burning Houses Collage:
Activity: Provide pupils with cardboard strips (to represent timber frames), yellow, orange, and red tissue paper, and black paper for silhouettes of houses. Children can glue the cardboard strips onto a larger piece of paper to create the outline of Tudor-style houses. Then, they can tear and layer the tissue paper within the frames to create the effect of flames. Finally, they can glue black paper cut into simple house shapes behind the flames to create a silhouette effect of the burning buildings.
Design Element: Focuses on layering, colour mixing (through tissue paper), texture, and creating a sense of depth and movement (the flames).

Fire Spread Handprints:
Activity: On a long roll of paper or large sheets joined together, start with a few simple house outlines drawn in pencil. Children can then use yellow, orange, and red paint on their hands to create "flames" spreading from one house to another. Encourage them to think about how the fire jumped from building to building.
Design Element: Emphasises the concept of spread and scale, using repetition of colour and shape (handprints as flames) to visualise the event.

Tudor House Construction with Straw and Cardboard:
Activity: Using small cardboard boxes or milk cartons as the base, children can use brown or black felt-tip pens to draw the timber frames of Tudor houses. They can then glue small pieces of straw or thin strips of brown paper onto the cardboard to create a textured thatched roof.
Design Element: Explores 3D construction, texture (straw for thatch), and the visual characteristics of Tudor architecture.

"***Night of the Fire" Silhouette Pictures:***
Activity: Children can paint a background wash of dark blues and purples to represent the night sky. Once dry, they can cut out simple silhouettes of Tudor houses (with pointy roofs and timber frames) from black paper and glue them onto their background. They can then add small flicks of yellow and orange paint to represent the flames against the dark sky.

Design Element: Focuses on silhouette, contrast (dark sky vs. bright flames), and creating a dramatic atmosphere.

Clay or Playdough Fire and Houses:
Activity: Children can use brown or grey clay/playdough to create simple models of Tudor houses. They can then use red, orange, and yellow playdough to sculpt flames licking around the buildings. They can also add details like small windows or roof shapes.
Design Element: Explores 3D form, texture, and using different colours to represent different elements (houses and fire).

Pop-Up Fire Scene:
Activity: Children can draw simple Tudor houses on one piece of card. On another piece, they can draw and cut out flame shapes in yellow, orange, and red. By making a small fold at the bottom of the flames, they can glue this folded part to the house card so that the flames "pop up" when the card is opened.
Design Element: Introduces the concept of movement and dimension in design, creating an interactive representation of the fire.

Considerations for Implementation

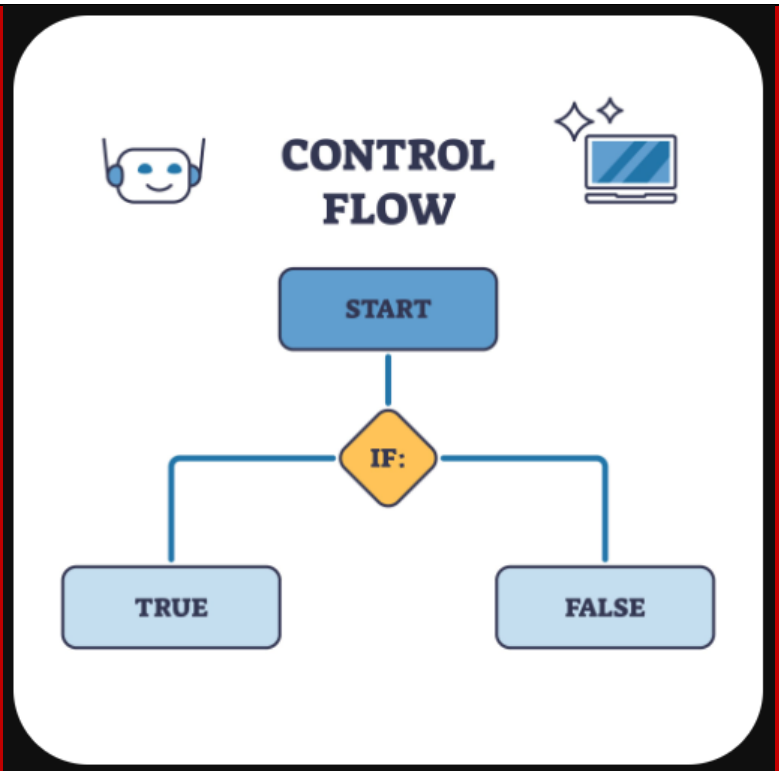
It is important to discuss the historical context before and during these activities, explaining why the houses were so flammable and how the fire spread. Encourage children to think about the colours and shapes that represent fire and Tudor buildings.

Computing

Substantive Knowledge

In Key Stage 1 Computing, **substantive knowledge** focuses on the concrete facts, functional vocabulary, and foundational skills required to understand how digital systems and programs operate. At this stage, the national curriculum breaks this down into three core areas: Computer Science (understanding algorithms and programming), Information Technology (using digital tools to create content), and Digital Literacy (staying safe online).
The Great Fire of London provides an exceptional tactile context for this knowledge. Because 17th-century London had a highly specific, linear geography (the progression of the fire from Pudding Lane to the River Thames), it is the perfect physical landscape for teaching young children how sequences, logical choices, and data work.

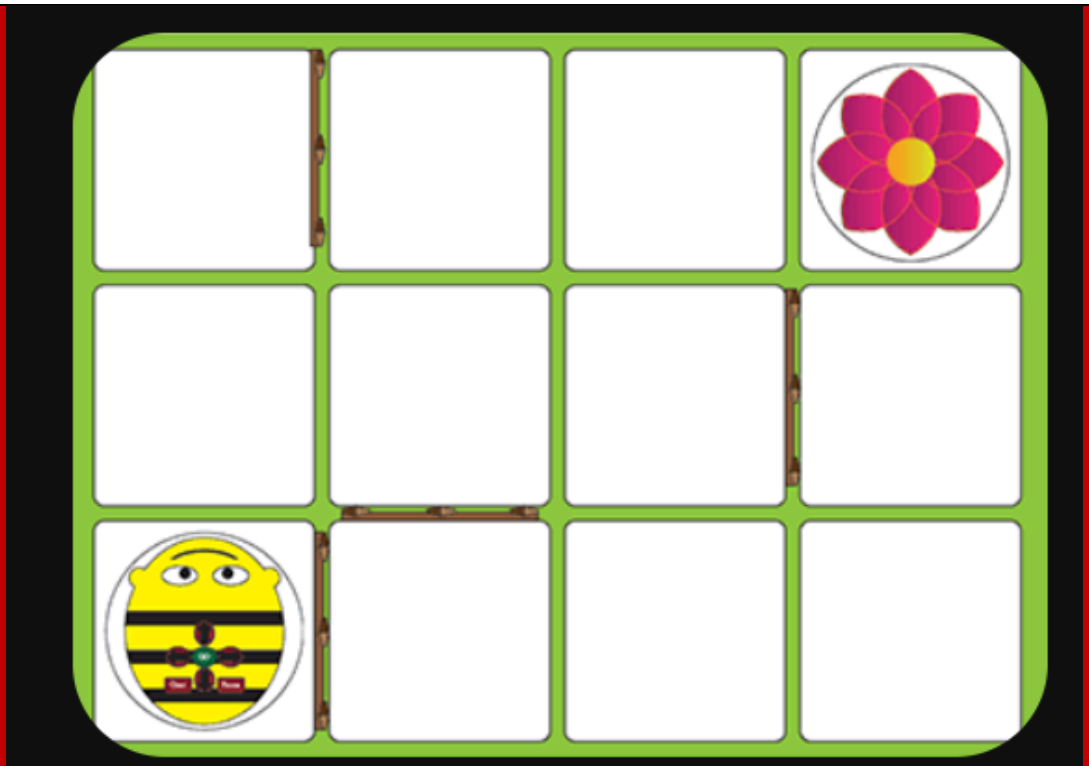
The 3 Pillars of Substantive Computing Knowledge in KS1
1. Computer Science: Algorithms and Programming
Substantive knowledge in this area means knowing that an **algorithm** is a precise, step-by-step set of instructions designed to solve a problem or achieve a goal. It also includes knowing that a computer cannot think for itself; it can only execute a program exactly as written, and if the instructions are out of order, the program will fail (**bug**).



The Logical Flow of an Algorithm. Source: VectorMine / Getty Images

In 'The Great Fire of London' Learning Theme: Children learn to program a floor robot (like a Bee-Bot) across a grid map of 1666 London. They learn the factual commands: Forward, Backward, Left Turn (90°), and Right Turn (90°).
The Procedure: To successfully navigate a cart away from the blazing bakery on Pudding Lane to safety at the River Thames, they must write a precise algorithm. If they input Forward, Forward, Right instead of Forward, Right, Forward, their robot crashes into a "burning" timber house. They learn that they must **debug** their code by systematically finding and fixing the incorrect command.
Why it matters: Computers are entirely literal. If children do not master the factual requirement of exact sequencing early on, they cannot build the logical foundation necessary for block programming (like ScratchJr) or future text-based coding languages.

2. Information Technology: Creating and Organising Digital Content
This involves learning that digital devices (computers, tablets, digital cameras) can be used to store, manipulate, retrieve, and present information. It includes learning the basic hardware functions—knowing how to type text, insert graphics, and save a digital file.



Using Grid Maps for Early Programming. Source: Kaleidoscope for Learning – WordPress.com

In 'The Great Fire of London' Learning Theme: Children act as historical reporters. They learn how to use a digital camera or tablet to take a stable photograph of their 3D cardboard Tudor house models. They then open a word processor or basic publishing app to combine their image with text, practicing typing a simple caption like: *"The fire started in a bakery on Pudding Lane."* They learn the physical procedure of selecting text to change its font colour to red or orange to match the theme.
Why it matters: Technology is a tool for communication. Learning how to organise information digitally transforms technology from a passive entertainment device into an active medium for creation and documentation.

3. Digital Literacy: Network Safety and Communication
Substantive knowledge in digital literacy means knowing that the internet connects computers globally, allowing people to share information. Crucially, it means knowing the definitive safety rules: that personal information must be kept private and that a trusted adult must be notified immediately if anything online feels strange, scary, or wrong.

In 'The Great Fire of London' Learning Theme: compare how news travelled in 1666 versus how it travels today. They learn that Samuel Pepys had to physically carry letters or dig a hole to bury his expensive cheese and wine to protect them. They contrast this with modern digital communication, learning that today, an emergency alert can travel through a digital network instantly. The teacher ties this to safety: just as 17th-century citizens had to protect their physical valuables from danger, children must learn to protect their digital identities (passwords, full names, school locations) online.
Why it matters: Children are navigating an interconnected world at an increasingly young age. They must know the foundational rules of privacy and reporting boundaries to safely use digital spaces.

Why Substantive Knowledge Matters in Computing

Computing is a highly structured discipline governed by rigid rules of logic. Without explicit substantive knowledge—such as knowing the exact function of a 90-degree turn button or knowing that data must be saved to be kept—children cannot effectively use technology.

By anchoring these technical concepts in a dramatic, highly narrative historical event like **The Great Fire of London**, abstract terms like *sequence*, *algorithm*, *input*, and *debugging* instantly become real and practical. A child isn't just pushing buttons on a toy; they are developing the precise computational thinking required to solve real-world problems in a digital landscape.

Disciplinary Knowledge

While **substantive knowledge** provides the mechanical facts of computing (e.g., knowing that an *algorithm* is a set of instructions or that pressing a specific button makes a robot turn 90 degrees), **Disciplinary Knowledge** is the cognitive strategy behind the tools. It teaches children how to *think, problem-solve, analyse data, and evaluate systems like an authentic computer scientist or systems analyst.*

In Key Stage 1, **disciplinary** computing is focused on **computational thinking**. It involves breaking complex systems down into smaller blocks (**decomposition**), recognising patterns, predicting how a program will behave (**logical reasoning**), and systematically identifying mistakes (**debugging**). **The Great Fire of London** provides an excellent, tactile simulation for this way of thinking. Because the historical fire spread through a predictable grid-like pattern of streets based on wind, building materials, and physical paths, children can use computational thinking to analyse, model, and map out the entire event.

The 4 Pillars of Disciplinary Computing in KS1

1. Logical Reasoning and Prediction (Predicting the Outcomes)

Disciplinary computer scientists do not just blindly press buttons to see what happens; they use logical reasoning to read a piece of code or an environmental situation and predict exactly what the final outcome will be *before* running the program.

In 'The Great Fire of London' Learning Theme: A child looks at a sequence of directional cards laid out on a table: Forward →Forward →Turn Left →Forward. The teacher displays a grid map of 1666 London. Before touching a floor robot, the child must mentally trace the path on the map. Using logical reasoning, they declare: *"This code will make the cart move away from the bakery on Pudding Lane, but it will turn too early and crash into St. Paul's Cathedral."*

Why it matters: It shifts computing from a guessing game into a deliberate cognitive process. It teaches children to read, interpret, and mentally simulate rules and systems, which is the foundational skill required for advanced software architecture.

2. Decomposition (Breaking Big Tasks into Tiny Steps)

Decomposition is the process of taking a massive, overwhelming problem and breaking it down into a series of small, manageable, bite-sized tasks that a machine can execute.

In 'The Great Fire of London' Learning Theme: Children are given a major mission: *"Program the rescue boat to sail down the River Thames, pick up Samuel Pepys, and carry him to safety at the Tower of London."* A disciplinary thinker breaks this giant goal down into logical phases:

Phase 1: Navigate the boat forward 3 steps to reach Pepys.
Phase 2: Pause for 2 seconds to simulate picking him up.
Phase 3: Turn 90 degrees right and move 4 steps to reach the Tower.

DECOMPOSING THE MISSION		
BIG GOAL → Save Samuel Pepys		
Step 1	Step 2	Step 3
Go to boat landing	Pick up diary	Sail to Tower

Why it matters: Decomposition is a vital life skill far beyond computing. It teaches children how to approach complex, intimidating problems (like organising a project or writing an essay) systematically, preventing anxiety and building structural confidence.

3. Systematic Debugging (The Science of Fixing Mistakes)
When a computer program fails, an untrained user often gets frustrated, deletes everything, or mashes random keys. A disciplinary computing practitioner views a failure as an interesting data point. They follow a deliberate, step-by-step strategy to isolate, evaluate, and fix the specific error (**the bug**).

In 'The Great Fire of London' Learning Theme: A child runs their floor robot map code, but the robot turns the wrong way and hits a burning bakery. Instead of wiping the memory or panicking, the child practices disciplinary debugging. They trace the program execution step-by-step alongside the physical robot's movements: *"Step 1 worked. Step 2 worked. Ah! Look at Step 3—I pressed the left turn button instead of the right turn button. That is where the bug is."* They fix only that single input line.
Why it matters: It reframes failure as information. It completely rewires a child's relationship with mistakes, teaching them that errors are not personal failures, but logical puzzles that can be systematically decoded and corrected.

4. Evaluating Digital Art and Artefacts (Audience Awareness)
Disciplinary knowledge in Information Technology means realising that digital creations (documents, videos, graphs) are built for a specific audience. It involves judging whether your choice of digital media layout effectively conveys an intended message.
In 'The Great Fire of London' Learning Theme: Children create a digital news report about the fire on a tablet. The disciplinary thinker evaluates their choice of layout: *"I want the reader to feel how scary the fire was, so I am choosing a bold, bright red font for my title rather than a calm green font, and I will place my photo right at the top so it catches their eye immediately."*
Why it matters: It transitions children from being passive digital consumers into critical, empathetic digital authors. They learn that design, typography, and media structures are powerful communication tools that impact how other humans think and feel.

Substantive vs. Disciplinary: The Computing Paradigm

Computing Strand	Substantive Knowledge (The Mechanical Facts)	Disciplinary Knowledge (The Computational Thinking)
Computer Science	Knowing that the directional buttons (↑, ↓, ←, →) input	Mentally decomposing a physical path across a 1666 London map grid into a sequence of

	movement commands into a robot's memory.	individual button clicks *before* pressing any keys.
Information Technology	Knowing how to select a font style, click a camera button, or insert an image into a document.	Critically judging whether your digital report layout, font colours, and photos effectively tell the historic story of the Great Fire to an outside reader.
Digital Literacy	Memorising the safety rule that you must never type your full name or school location into a web page.	Understanding *why* data privacy matters by comparing modern identity theft with Samuel Pepys burying his physical wealth to hide it from thieves.

Why Disciplinary Knowledge Matters Most

If we only teach *substantive* computing facts, children simply become machine operators. They can operate an app or type on a keyboard, but they lack the strategic thinking needed to adapt when technology shifts. **Disciplinary knowledge** unlocks **computational intelligence**. By framing these logical problem-solving strategies around the dramatic, physical simulation of '**The Great Fire of London**,' computing transforms into a way of viewing the world. Children leave Key Stage 1 not just knowing how to operate a device, but possessing the critical analytical minds required to decompose issues, predict systems behaviour, handle data, and build creative solutions in an increasingly digital future.

Learning Objectives

Overall Computing Aim: To use technology creatively and purposefully to explore and present information about the Great Fire of London.

Specific Learning Objectives (Pupils Will Be Able To):

1. Understanding and Using Digital Systems:

Log on and off a computer/tablet independently (or with minimal adult support).
Open and close simple applications (e.g., a painting program, a word processor, a presentation app).
Use a mouse or touchscreen to select and move objects.
Understand that computers can help us learn about the past.

2. Creating and Programming:

Use a simple drawing or painting program to create pictures related to the Great Fire of London (e.g., houses, fire, Pudding Lane).
Add text to their drawings to label parts or describe what they have drawn (e.g., 'Fire!', 'Old Houses', 'Pudding Lane').
Create a simple digital story or sequence of events about the Great Fire of London using a presentation tool (e.g., by adding images and short sentences to slides).
Experiment with simple coding concepts to make an object move or change on screen (e.g., using a block-based coding program like Scratch Jr. to animate a fire spreading or a character escaping).
***Scaffolding**:* Pupils could sequence a few simple instructions (e.g., move forward, turn) to make a character travel a short distance, representing an escape route.

3. Handling Data and Information:

Find and select appropriate images or icons from a pre-selected gallery to represent aspects of the Great Fire of London (e.g., a baker, a fire engine, a church).
Begin to understand that information can be found and shared digitally.
Talk about what they have created on the computer and how it helps them understand the Great Fire of London.

4. Digital Literacy and Online Safety (integrated where appropriate):
Understand that it's important to ask an adult before clicking on unknown things.
Recognise that some information on the internet is real, and some is pretend (in the context of stories vs. historical facts).
Share their work respectfully with others.

Examples of Activities that meet these objectives:
Digital Storytelling: Pupils use a simple presentation app to create a sequence of slides illustrating key events of the fire, adding their own drawings and short sentences.
Interactive Scene Creation: Using a drawing program, pupils can design their own street in 1666, adding details like timber-framed houses and then showing the fire spreading.
Simple Animation/Coding: Using Scratch Jr., pupils could animate a fire spreading across a town or a character (like Samuel Pepys) moving through the city.
Digital Timeline: Pupils drag and drop images or icons onto a pre-made digital timeline to show the order of events.
Fire Safety Message: Create a simple digital poster or presentation about what they learned from the fire regarding fire safety, using pictures and simple text.

Assessment:
Observation of pupils' engagement and independent use of technology.
Review of pupils' digital creations (e.g., drawings, presentations, simple coded sequences).
Pupil discussions and explanations of their work.

Lesson Ideas

This 6-week Key Stage 1 Computing medium-term plan integrates **substantive knowledge** (the technical terms, buttons, and tools) with **disciplinary knowledge** (the logical strategies of decomposition, prediction, and debugging). Using the historical geography of 1666 London, children step into the shoes of computational thinkers and digital content creators.

Block 1: Escape from Pudding Lane — Robot Algorithms (Weeks 1-2)
Week 1: Unplugged Pathways & Precise Commands
Substantive Knowledge: An **algorithm** is a precise, step-by-step set of instructions to solve a problem. Computers are literal and need exact directions: Forward, Backward, Left Turn (90° degrees), Right Turn (90° degrees).
Disciplinary Knowledge: Decomposition. Breaking a long, continuous physical journey down into a discrete sequence of individual steps before writing any code.

Activity:
The Human Robot: Create a giant physical grid on the classroom floor using masking tape. Mark one square as "Pudding Lane Bakery" and another as "The River Thames."

Decomposing the Path: One child plays the "Rescue Worker" (the programmer) and another plays the "Cart" (the robot). The programmer cannot say "walk to the river." They must decompose the path into precise steps: *"Forward 2 steps, Turn Right, Forward 3 steps."*
The Clear Command: Children learn that a robot needs a fresh start. They practice declaring a Clear command before giving a new instruction sequence.
Outcome & Assessment: Children can successfully direct a classmate across a physical grid using precise directional language.

Week 2: Programming the Bee-Bot Rescue
Substantive Knowledge: A floor robot (like a Bee-Bot) executes code exactly as inputted. The Go button runs the program memory. Each movement command moves the robot exactly one grid square or turns it on the spot.
Disciplinary Knowledge: Logical Reasoning & Prediction. Looking at a sequence of symbols and predicting exactly where the robot will land on a historical map *before* pressing the Go button.

Activity:
Mapping 1666: Group children around a grid map of old London featuring timber houses, the bakery, and safe zones.
The Prediction Challenge: Give children pre-written command cards (e.g., ↑ ↑ → ↑). Before touching the robot, children use their fingers to trace where that code *should* lead on the map.
Writing the Code: Children input their written algorithms into the Bee-Bot to navigate a citizen from the fire zone to a safe boat on the river.
Outcome & Assessment: A programmed journey on a map grid. Children can accurately predict the robot's destination based on a sequence of commands.

Block 2: Rebuilding London — Systematic Debugging (Weeks 3-4)
Week 3: Spotting the Fire Bugs
Substantive Knowledge: A mistake or error in a computer program is called a **bug**. Finding and fixing that mistake is called **debugging**.
Disciplinary Knowledge: Systematic Debugging. Tracing a program step-by-step alongside the machine's actions to isolate the exact moment an error occurs, rather than wiping out the entire code out of frustration.

Activity:
The Planted Bug: The teacher deliberately programs a Bee-Bot to save a diary from Samuel Pepys' house, but makes it turn into a "burning house" instead.
Step-by-Step Tracking: The teacher demonstrates the disciplinary strategy: *"Don't press clear! Let's watch it move. Step 1 was right. Step 2 was right. Look at Step 3—the robot turned left but it needed to turn right. There is our bug!"*
Fixing the Grid: Children are given "broken" algorithms on cards. They test them on their maps, identify the single incorrect command card, and swap it for the correct one.
Outcome & Assessment: Children can explain what a "bug" is and demonstrate how to watch a robot move to find the exact command that caused the failure.

THE DEBUGGING PIPELINE

Press GO ⟶ Watch Robot ⟶ Spot Crash ⟶ Trace Code

Done! ◄—— Retest Code ◄—— Swap Command ◄——┘

Week 4: Multi-Step Escape Missions
Substantive Knowledge: Complex tasks require longer strings of instructions. Programs can be built, tested, and added to incrementally.
Disciplinary Knowledge: Iterative Testing. Building a solution in small blocks, testing it immediately, fixing errors, and then adding the next block of code.

Activity:
The Advanced Rescue: The robot must now start at Pudding Lane, pick up a leather bucket at the water pump, and then carry it to the fire line. This requires an 8 to 10 step code sequence.
The Build-and-Check Method: Instead of entering all 10 steps at once, children learn to program the first 3 steps (to the water pump), test it, debug it, and *then* input the remaining commands to reach the fire line.
Outcome & Assessment: Successful completion of a multi-step map navigation. Children demonstrate the habit of testing their code incrementally rather than writing giant, unchecked sequences.

Block 3: The London Gazette — Digital Publishing (Weeks 5-6)
Week 5: Capturing History — Digital Text & Tools
Substantive Knowledge: Digital devices (tablets/computers) capture and store data. A keyboard is an **input device** used to type text. Text can be formatted by changing its **font size** and **font colour**.
Disciplinary Knowledge: Intentionality in Design. Choosing digital styling tools purposely to make information stand out or match the emotional mood of a story.

Activity:
The Input Task: Children open a basic word processor or publishing app (like Book Creator or Google Slides). They practice typing a factual headline: "THE FIRE OF LONDON!"
Formatting for Impact: Show children a title written in tiny, calm green letters, and one in giant, bold red letters. Ask: *"Which one makes you feel like an emergency is happening?"*
The Technical Skill: Children learn how to click and drag to highlight their text, change the font size to make it large, and switch the font colour to bright red or orange. They type a short sentence explaining how the fire started.
Outcome & Assessment: A digital document containing a formatted, high-impact headline and a short typed sentence.

Week 6: Media Assembly & Audience Evaluation
Substantive Knowledge: Images can be imported into a digital document to support text. A digital document can be saved and shared with an **audience** (the people reading it).
Disciplinary Knowledge: Audience Awareness & Evaluation. Judging whether the visual layout and combination of text and images effectively communicate a real-world story clearly to a reader.

Activity:
Inserting Media: Children import a photograph of the 3D cardboard Tudor houses or the collage artwork they created in their Art & Design lessons into their digital news page.
Composing the Layout: Children move the image so it sits neatly underneath their bold headline, organising the page so it looks like a real newspaper front page (The London Gazette).

The Peer Review: Children share their screens or pass their tablets to a partner. They evaluate each other's work based on clarity: *"Can I read the words easily? Does the picture match the story?"*
Outcome & Assessment: A completed single-page digital historical report. Children can explain why they arranged their text and image in that specific layout for their reader.

Progress Trackers: Substantive vs. Disciplinary

Dimension	Key Stage 1 Computing Milestones (What they will know and do)
Substantive (Technical Skills)	Accurately press directional buttons (↑, ↓, ←, →) to enter data into a robot. Identify and define the terms **algorithm**, **bug**, and **debugging**. Type text using a keyboard, spacebar, and backspace button. Change font size and text colour using a digital formatting menu. Insert an image from a digital gallery into a page template.
Disciplinary (Systems Thinking)	Decompose a long map journey into clear, single-step chunks before coding. Use logical reasoning to predict where a program will lead before running it. Isolate a programming error systematically instead of deleting all code. Build and test programs in small, manageable blocks (iterative design). Evaluate a digital layout to ensure it communicates an emergency theme effectively to an audience.

Other Information, Ideas and Resources

Digital Storytelling with Images and Sound:
Activity: Children can use a simple presentation software (like PowerPoint or Google Slides) or a digital storytelling app (like Storybird or Book Creator) to create a short story about the Great Fire of London. They can insert images of old London, houses, fire, and people. They can also record their own voices to narrate parts of the story or add simple sound effects (crackling fire, shouting).
Computing Skills: Using a mouse/touchscreen, inserting images, recording audio, sequencing slides/pages, basic navigation of software.

Creating a Pixel Art Scene:
Activity: Using a simple pixel art editor (many free online tools are available, or even drawing on grid paper), children can create a pixelated image of a scene from the Great Fire of London, such as burning houses, the River Thames, or people escaping.
Computing Skills: Understanding pixels as building blocks of digital images, using digital drawing tools, colour selection, developing fine motor skills with digital input.

Interactive Timeline:
Activity: With teacher support, children can create a simple interactive timeline of the key events of the Great Fire of London using a tool like Timetoast (teacher-led) or a simplified drag-and-drop timeline maker. They can add short text descriptions and relevant images to each event.
Computing Skills: Understanding the concept of a timeline, sequencing events, using drag-and-drop interfaces, associating text and images.

Coding a Simple Fire Animation:

Activity: Using a block-based coding platform like ScratchJr, children can create a simple animation of fire spreading. They can use character sprites (houses, flames), and simple code blocks to make the flames move and grow.
Computing Skills: Introduction to basic coding concepts (sequencing, loops), using visual programming blocks, understanding cause and effect in code.

Digital Drawing and Labelling:
Activity: Children can use a simple drawing program (like Paint or a tablet drawing app) to draw a picture related to the Great Fire of London (e.g., a Tudor house, a fire bucket). They can then use text tools to label different parts of their drawing.
Computing Skills: Using digital drawing tools (brush, shapes, colour palette), using text input, associating labels with parts of an image.

Researching Images and Facts (with supervision):
Activity: With careful teacher guidance and pre-selected websites or image libraries, children can learn to search for age-appropriate images and simple facts about the Great Fire of London. They can then save these images or copy short sentences into a document or presentation.
Computing Skills: Basic internet navigation (with strict boundaries), using search terms, identifying relevant information, saving digital content, understanding online safety (not sharing personal information).

Considerations for Implementation

Adult Support: Many of these activities will require significant adult support and guidance.
Keep it Simple: Focus on basic skills and avoid overly complex software or tasks.
Clear Instructions: Provide clear, step-by-step instructions.
Focus on Learning Outcomes: Ensure the computing activity reinforces their understanding of the Great Fire of London.
Safety First: Emphasise online safety and supervise internet use closely.

Design & Technology

Substantive Knowledge

In Key Stage 1 DT, **substantive knowledge** encompasses the foundational technical facts, material vocabulary, tool techniques, and structural concepts that children must learn to physically build functional products. It is the practical "know-how" of construction and design. When linked to **'The Great Fire of London',** DT shifts from abstract crafting into engineering. By constructing 3D models of 17th-century houses, children explore the mechanical realities of the past. They discover that the historic disaster was deeply tied to the building materials, structural features, and design flaws of the era.

The 3 Pillars of Substantive DT Knowledge in KS1
1. Materials and Joining Techniques
Substantive knowledge requires children to learn the properties of different materials (such as stiffness, strength, and flexibility) and master the physical mechanics of joining them securely together.

In 'The Great Fire of London' Learning Theme: Children examine how 1666 houses were made of wood and thatch (flammable materials) and compare this to modern materials. When building their own cardboard models, they learn how to manipulate materials by cutting, folding, and scoring. They master diverse **joining techniques** to fix walls and roofs together, experimenting with:

- *Temporary joins:* Tape and paperclips.

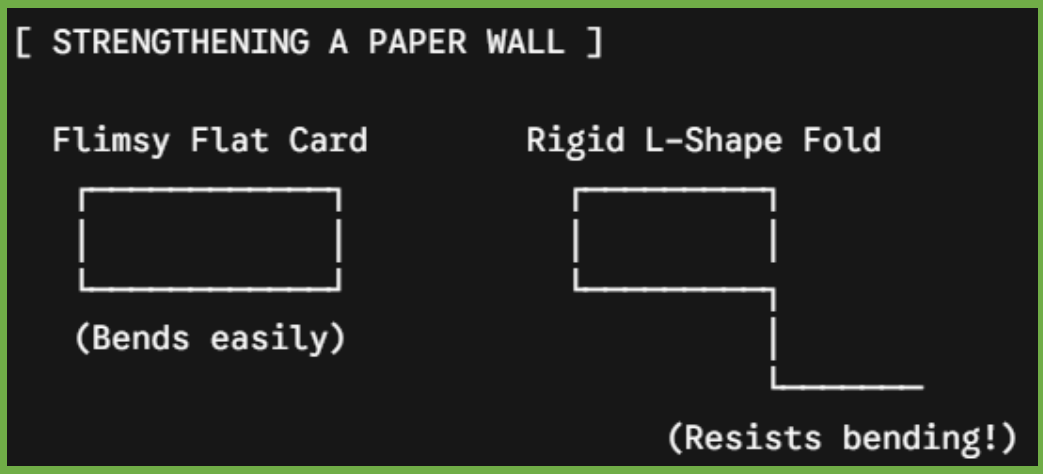
- *Permanent joins:* PVA glue, glue sticks, or slot-and-tab mechanisms.

Why it matters: Understanding how materials behave and connect is the bedrock of fabrication. It teaches children that material choice dictates whether a structure stands up, falls down, holds weight, or fails.

2. Structures and Strengthening

Children must learn factual methods to make freestanding structures more stable, strong, and stiff. This includes understanding how to reinforce flat materials so they do not buckle under a load.

In 'The Great Fire of London' Learning Theme: Children replicate the iconic **jettying** of 1666 architecture—where upper floors projected wider than the ground floor. They learn the substantive mechanics of keeping a top-heavy structure stable. They practice strengthening their cardboard houses by adding internal supports like triangular braces, paper cylinders (columns), or folding card corners into rigid L-shapes.



Why it matters: Triangles and folds are universal engineering principles. Learning how to manipulate flat sheets into load-bearing, rigid shapes builds early structural engineering literacy, showing children how geometric form directly creates physical strength.

3. Using Tools and Mechanisms safely

This involves identifying, naming, and safely operating specific hand tools (such as scissors, hole punches, and rulers) to measure, cut, and score materials accurately.

In 'The Great Fire of London' Learning Theme: To recreate Tudor window frames, timber beams, and pitched roofs, children must select and use tools intentionally. They learn the mechanical difference between cutting all the way through a piece of card versus **scoring** (cutting halfway through to create a crisp, clean hinge for a sloped roof).

Why it matters: Tool mastery is about precision and safety. Teaching children exactly how to hold, angle, and press a tool transforms them from messy crafters into deliberate makers who can accurately manifest the designs in their minds.

The Core Designing & Making Loop

Substantive knowledge in DT is split across four functional stages. The Great Fire theme provides a clear purpose for each:

DT Stage	Substantive Knowledge Applied to the Great Fire
Design	Drawing a labelled design plan of a 1666 house, identifying which parts will be the walls (cereal box), beams (black paper), and roof (corrugated card).
Make	Executing the plan by cutting windows out of the base, scoring the roof tab, and gluing the components together cleanly.
Evaluate	Testing the finished house against a design criteria: *"Is it freestanding? Are the joins strong enough to hold up the overhanging second floor?"*
Technical	Knowing that a folded corner tab creates a wider surface area for glue, making the wall join significantly stronger than gluing a raw card edge.

Why Substantive DT Knowledge Matters
Without substantive DT knowledge, making models in primary school degenerates into "junk modelling"—shoving random recycling together with masses of sticky tape without any structural understanding. DT training turns it into structural engineering. By learning the physical rules of joining, folding, and strengthening card to build historical houses, children develop spatial design intelligence. They realise that the built world around them is intentionally engineered, and they gain the hands-on technical vocabulary to design, fix, and invent structures in their own daily lives.

Disciplinary Knowledge

While **substantive knowledge** teaches children the technical facts of design and technology (such as knowing that a folded tab strengthens a joint or naming a permanent adhesive), **Disciplinary Knowledge** teaches them *how to behave and think like an active designer or engineer.* In Key Stage 1, **disciplinary knowledge** is not about memorising facts; it is about the **iterative process**. It teaches children how to generate creative design ideas, solve structural problems when their model collapses, make deliberate technical choices, and critique their own work honestly. When linked to **'The Great Fire of London'**, disciplinary thinking allows children to explore structural mechanics by stepping into the shoes of 17th-century architects. They don't just build a random craft house; they problem-solve the specific structural challenges of historic architecture and learn how to design out the fatal flaws of the past.

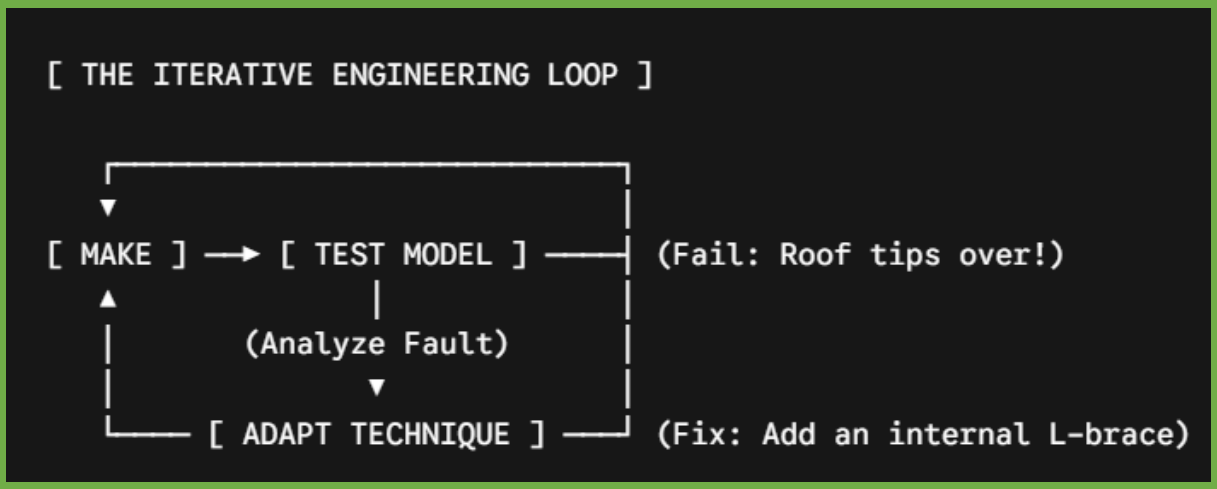
The 4 Pillars of Disciplinary DT Knowledge in KS1
1. Designing with Purpose (Meeting User Needs)
Disciplinary knowledge means moving past "making what I feel like" and learning to design against a strict **design brief** and a specific set of **design criteria** to fulfil a real-world purpose.

In 'The Great Fire of London' Learning Theme: Children act as master builders tasking themselves to construct a miniature street scene of 1666 London. They design a house against an engineering brief: *The model must be freestanding, it must feature a jetty (an overhanging upper story), and it must stay securely joined when lined up closely next to other houses.*
Why it matters: This teaches intent and constraint. In the real world, design is always bound by limitations (budget, materials, safety). Learning to plan within explicit rules prepares children for any form of structured problem-solving.

2. Iterative Making and Material Problem-Solving

An engineer rarely gets a design right on the first attempt. Disciplinary knowledge is the practical resilience to try a technique, analyse why it failed, and adapt it. This is often called the **"Test-Fail-Fix" cycle**.

In the Great Fire Theme: A child builds a top-heavy, overhanging second floor onto their cardboard house, and the structure tips over or the paper glue fails to hold it.



Instead of scrapping the project or drowning it in massive layers of plastic tape, the child applies disciplinary thinking: they evaluate the failure and intentionally adapt their technique. They might swap a weak glue stick for wet PVA glue, or score a support tab to prop up the overhang.
Why it matters: This reframes "failure" as necessary data collection. Building this resilience early equips children to handle setbacks across all subjects, shifting them from frustration to strategic troubleshooting.

3. Evaluating and Critiquing Existing Products
Disciplinary knowledge involves looking critically at products in the world around us—both historical and modern—to figure out what makes them successful or fundamentally flawed.

In 'The Great Fire of London' Learning Theme: Children analyse the real architectural designs of 1666 London. They critique the choices of the historical builders: *"Why was using straw thatch for roofs and pitch-tar for walls a dangerous material choice? Why did building the jetties so wide that they touched across the narrow streets cause a structural safety problem?"* They then evaluate their own completed model houses against those exact parameters.
Why it matters: By recognising the structural design flaws that allowed the Great Fire to destroy a city, children realise that design has massive, real-world consequences. It teaches them that the human-built environment is something that can and should be constantly critiqued and improved.
4. Communicating Technical Ideas
Designers must be able to explain their abstract concepts to other people using visual and verbal technical language before construction begins.

In 'The Great Fire of London' Learning Theme: Children practice annotating their design drawings with simple labels and arrows pointing out structural features (e.g., *"Folded roof tab here"*, *"Cardboard support pillar inside"*). They explain their choices verbally to a peer using design vocabulary: *"I chose corrugated card for the base because it is stiffer than plain paper and will keep the house upright."*

Why it matters: Brilliant ideas are useless if you cannot communicate them. Teaching children to label, explain, and pitch their physical plans builds vital visual literacy and clear verbal articulation.

Substantive vs. Disciplinary: The DT Paradigm

Substantive Knowledge (The Concrete Facts)	Disciplinary Knowledge (The Design Strategy)
Knowing that scissors cut card, a ruler measures lines, and a glue stick joins paper.	Selecting the most effective tool or adhesive for a specific job—e.g., choosing liquid PVA glue over a glue stick because the joint needs to carry a heavy load.
Knowing how to fold an L-shape into a strip of card to make it stiff.	Spotting that your model house is leaning to one side and actively deciding to insert that L-shaped strip inside the frame to steady it.
Identifying wood, straw, and brick as different building materials.	Comparing historical materials to modern ones to explain why structural design choices changed after a catastrophic failure.

Why Disciplinary DT Knowledge Matters

If primary school children only learn the *substantive* components, they are simply following a recipe. A teacher hands out pre-cut card, tells everyone where to glue, and twenty identical houses are built. No real design or technology has occurred—it is just an assembly line.

Disciplinary knowledge changes everything. It allows children to control the process. By planning, testing, failing, reinforcing, and evaluating their own Great Fire house models, they learn to navigate ambiguity and think like inventors. They leave the lesson understanding that everything around them—from the chairs they sit on to the safety of the houses they live in—is the result of continuous, creative human engineering.

Learning Objectives

Overarching Aim: Understanding how design and technology helped people in the past and how we can learn from it, focusing on the context of the Great Fire of London.

1. Designing

1.1. User & Purpose:

Pupils can identify a user and purpose for a product related to the Great Fire (e.g., a safer house, a tool for firefighting, a baker's oven).

Pupils can describe what makes a Tudor house different from a modern house, considering why these differences might have contributed to the fire.

1.2. Generating Ideas:

Pupils can suggest simple design ideas for a product to prevent or fight fires, drawing on knowledge of the Great Fire.

Pupils can communicate their design ideas through drawing, talking, and making simple models.

1.3. Design Criteria:
Pupils can begin to identify some simple criteria for their design (e.g., "it needs to be strong," "it needs to be safe from fire").

2. Making
2.1. Tools & Equipment:
Pupils can safely use a range of simple tools and equipment to make their products (e.g., scissors, glue, rulers, simple cutting tools for card/paper).
Pupils can explain why certain tools are used for specific tasks (e.g., "I used scissors to cut the paper because it's soft").

2.2. Materials:
Pupils can choose and use a range of materials, including everyday materials and construction materials, to make their products (e.g., cardboard, paper, wood offcuts, fabric, plastic bottles).
Pupils can explain why some materials are more suitable for certain parts of their design (e.g., "I used cardboard for the walls because it's stiff, and paper for the roof because it's lighter").
Pupils can understand that some materials are flammable and others are less so, relating this to Tudor houses (e.g., wood vs. brick/stone).

2.3. Joining & Assembling:
Pupils can join and combine a range of materials and components accurately, using appropriate techniques (e.g., gluing, taping, slotting, folding).

3. Evaluating
3.1. Evaluating Products:
Pupils can evaluate their own products against their initial design criteria (e.g., "Does my house stand up? Is it strong?").
Pupils can suggest simple ways to improve their own products.

3.2. Evaluating Ideas & Products of Others:
Pupils can talk about what they like and dislike about existing products related to the Great Fire (e.g., pictures of Tudor houses, firefighting equipment of the time).
Pupils can offer constructive suggestions for improving the designs of others.
4. Technical Knowledge
4.1. Structures:
Pupils can explore and understand how simple structures work (e.g., how to make a freestanding house model, understanding the importance of a strong base).
Pupils can identify features of existing structures that make them strong and stable (e.g., wide bases, reinforced corners).

4.2. Mechanisms (Optional, depending on project focus):
Pupils can explore simple mechanisms if relevant to their project (e.g., a lever for a simple water pump model, wheels for a fire cart).

4.3. Understanding the Context:

Pupils can explain how design and technology played a role in the Great Fire of London (e.g., the materials used in houses, the lack of effective firefighting equipment).
Pupils can understand how design and technology have changed over time in relation to safety and fire prevention.

Lesson Ideas

This 6-week Key Stage 1 DT medium-term plan guides pupils through the complete iterative design loop: **Design, Make, and Evaluate**. By stepping into the shoes of 17th-century apprentices, children will learn how to manipulate card, strengthen structures, and build a freestanding model house from 1666 London.

Block 1: Investigating & Designing (Weeks 1-2)
Week 1: Exploring 1666 Architecture & Material Strength
Substantive Knowledge: Materials have different properties (e.g., paper is flexible; corrugated cardboard is stiff). A "freestanding" structure stands up on its own without being held.
Disciplinary Knowledge: Critiquing Existing Products. Investigating historical design choices, identifying their structural flaws, and evaluating material suitability.

Activity:
Architectural Analysis: Look at illustrations of Tudor timber-framed houses. Identify key design features: the pitched (sloped) roof and the **jetty** (the overhanging upper floor).
Material Testing: Give children different materials (tissue paper, printer paper, thin card, thick corrugated card). Task them to make each piece stand vertically on the table. Discover that flat paper flops, but card can stand if it is folded or thick.
The Design Brief: Introduce the project challenge: *Design and make a stable, freestanding 1666 house model out of card that features a clear overhanging upper floor.*
Outcome & Assessment: Children can select the stiffest material from a selection and explain that a model must be rigid to stand by itself.

Week 2: Drawing and Labelling the Plan
Substantive Knowledge: A design plan is a drawing that shows what a product will look like before it is built. Labels and arrows point out specific materials and components.
Disciplinary Knowledge: Communicating Technical Ideas. Translating an idea from the imagination onto paper using descriptive visual notes.

Activity:
Modelling Exploded Views: Show how a cardboard box can be unfolded flat (a net) and folded back up into a 3D house base.
Drafting the Plan: Children draw a clear front-on design of their 1666 house. They must explicitly draw the overhanging second floor and the sloped roof.
Technical Annotation: Guide children to add labels with arrows specifying their materials and features (e.g., *"cereal box for strong walls"*, *"black paper for wooden beams"*, *"folded tabs for glue"*).
Outcome & Assessment: A completed, labelled design drawing featuring a list of chosen tools and materials.

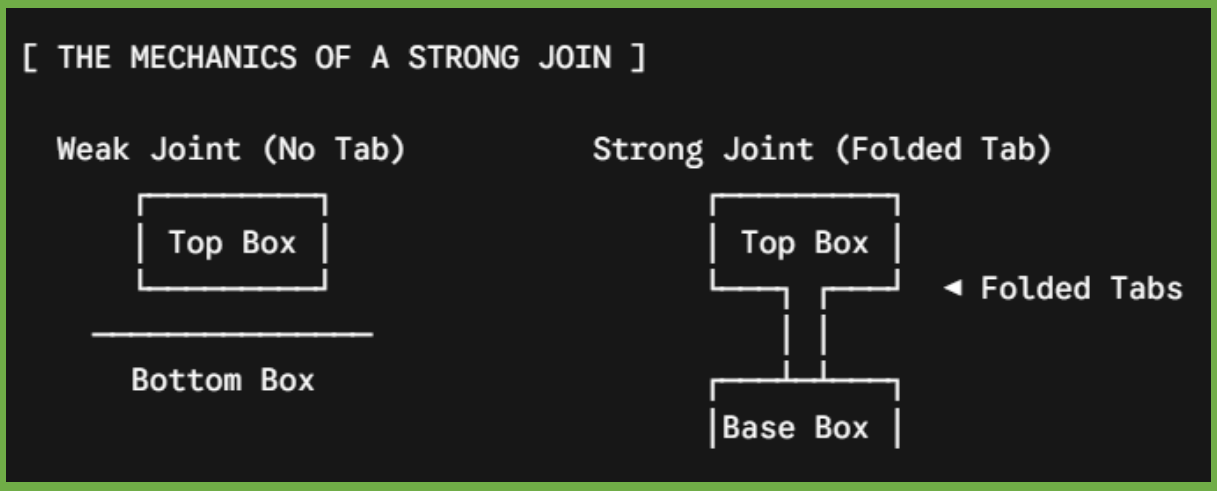
Block 2: Mastering Tools & Making (Weeks 3-4)
Week 3: Cutting, Scoring, and Making the Base

Substantive Knowledge: Cutting separates materials completely. **Scoring** is creasing or cutting halfway through a thick material to make it fold into a perfectly crisp, straight edge.
Disciplinary Knowledge: Safe Tool Operation. Selecting and using tools intentionally and safely to achieve a precise manufacturing result.

Activity:
Tool Safety Demo: Demonstrate the safe grip and posture for using scissors. Introduce the technique of scoring using the edge of a ruler and a plastic tool or closed scissors to crease card easily.
Fabricating the Main Frame: Children use reclaimed boxes or thick card to construct the main rectangular base of their house. They practice cutting out square window gaps.
Folding the Corners: Children score and fold the corner lines of their house frames, ensuring the walls stand squarely at right angles to the table.
Outcome & Assessment: A freestanding, neat four-sided cardboard base that stands straight without wobbling.

Week 4: Engineering the Overhang (The Jetty) & Roof
Substantive Knowledge: A join attaches two separate components together. A **folded tab** creates a wide surface area, making a glued joint significantly stronger than trying to glue a thin raw edge.
Disciplinary Knowledge: Iterative Making (The Test-Fail-Fix Cycle). Solving the balance and attachment issues that occur when building a top-heavy structure.

Activity:
The Jetty Challenge: Children construct a slightly wider cardboard box to act as their overhanging upper story.
Fixing the Overhang: Show children that trying to glue the top box directly onto the bottom box edge fails. Teach them to cut **joining tabs** onto the base of the upper floor.



Outcome & Assessment: Children successfully join two distinct building sections using tabs, creating a stable, top-heavy historical overhang.

Block 3: Assembling & Evaluating (Weeks 5-6)
Week 5: Assembling Pudding Lane
Substantive Knowledge: Structures can be combined to form systems. In 1666, houses were built immediately adjacent to one another, which created a continuous path for fire.

Disciplinary Knowledge: Spatial Collaboration. Coordinating multiple independent products into a shared physical environment to test how they function together.

Activity:
Façade Decoration: Children add the iconic finishing substantive touches to their houses—gluing down strips of black paper to represent the timber frames and colouring in the white plaster gaps.
Street Assembly: Bring the entire class's models together on a long table to assemble "Pudding Lane". Line the houses up so their overhanging jetties are closely packed and nearly touching across the narrow street gap.
Visual Evaluation: Stand back and observe the collective layout. Ask the children to trace a path down the street and identify how easily a fire would skip from house to house.
Outcome & Assessment: A finished, fully decorated 1666 house model placed properly within a collaborative street layout.

Week 6: The Grand Evaluation
Substantive Knowledge: Evaluation means measuring the success of a completed product against its original design criteria.
Disciplinary Knowledge: Honest Self-Critique. Reflecting on technical successes and identifying exactly what structural changes would be made if rebuilding.

Activity:
The Stability Test: Children subject their houses to a simple wind test (a gentle fan or blow) to ensure they are stable and freestanding.
The Evaluation Review: Children fill out a simple, structured reflection worksheet matching their build against the Week 1 criteria.
Engineering Reflection: Discuss: *"If you were a 17th-century builder rebuilding London after the fire, how would you change your design plans to make the houses safer?"* (Change materials to stone/brick, remove the overhanging jetties, make streets wider).
Outcome & Assessment: A completed evaluation sheet detailing which join was the strongest, what went wrong during construction, and how they fixed it.

Progress Trackers: Substantive vs. Disciplinary

Dimension	Key Stage 1 DT Milestones (What they will know and do)
Substantive (Technical Facts)	Name and describe the properties of card, paper, glue, and tape. Explain that **scoring** makes card fold easily and neatly. State that a **folded tab** creates a stronger glued join than a flat edge. Identify and safely hold scissors when cutting straight and curved lines. Identify the structural elements of a 1666 house: **pitched roof** and **jetty**.
Disciplinary (Design Thinking)	Draw and annotate a design plan with material choices before building. Solve structural balancing issues independently when a model tips over. Choose the correct adhesive or material based on how much strength is needed. Critique historical buildings to identify why their shapes and materials failed in a fire.

	Evaluate a finished item against a checklist and explain how to improve it.

Other Information, Ideas and Resources

Building Tudor Houses (Simple Structures):
Design Brief: To design and build a model of a Tudor house like the ones that were in London during the Great Fire.
Activity: Children can use cardboard boxes (different sizes), cardstock, straws, and glue to create basic 3D house structures. They can focus on the timber-framed look by drawing or gluing on strips of black paper or card. They can add simple pitched roofs made of card.
DT Skills: Joining materials (gluing), cutting, shaping, understanding basic structures, following instructions.

Creating a "Burning" House Model (Simple Mechanisms/Effects):
Design Brief: To design a Tudor house model that shows how the fire might have spread.
Activity: Build a simple cardboard Tudor house (as above). Then, use red and yellow cellophane or tissue paper to represent flames. Children can poke holes in the roof and sides and poke the "flames" through, or create flaps that can be opened to show the fire inside.
DT Skills: Using materials to represent effects, simple manipulation, understanding cause and effect (fire spreading).

Making Firefighter Buckets (Containers):
Design Brief: To design and make a bucket that could have been used to carry water to put out the fire.
Activity: Children can use small plastic containers or sturdy paper cups. They can decorate them to look like old-fashioned buckets using paint or paper. They can then design and attach a simple handle using string or pipe cleaners.
DT Skills: Shaping and decorating containers, joining materials (attaching handles), understanding the purpose of a tool.

Designing a Firefighting Tool (Simple Tools/Levers):
Design Brief: To design a simple tool that could help firefighters pull down burning buildings.
Activity: Discuss simple levers (like a see-saw). Children can then design a long tool using sturdy cardboard tubes or sticks. They could add a "hook" at the end made from bent card or a pipe cleaner. This is more about the design and understanding the need for such a tool rather than a fully functional lever.
DT Skills: Understanding the purpose of tools, designing for a specific function, joining materials.

Constructing a Simple Water Pump Model (Basic Systems):
Design Brief: To create a model that shows how people might have tried to get water to the fire.
Activity: This can be a very simplified model. Children can use a plastic bottle with a straw inserted. By squeezing the bottle, they can make water (or pretend water) come out of the straw. Discuss how a bigger pump would work to move more water.
DT Skills: Understanding simple systems, cause and effect, manipulating materials to achieve a function.

Creating a Map of Pudding Lane (Representation and Planning):
Design Brief: To design a simple map showing where the fire started on Pudding Lane and how it might have spread.

Activity: Using large paper, children can draw simple shapes to represent houses and the bakery on Pudding Lane. They can use arrows or coloured lines to show the direction the fire travelled. This combines design (layout) with understanding the historical event.
DT Skills: Planning a layout, representing information visually, understanding spatial relationships.

Other Ideas & Resources:
Making a fire engine – exploring wheels and engines this can be in the form of a 'big build' group project – creating a fire engine from large boxes.

Making bread (based on where the fire started in the bakery).

Considerations for Implementation

Emphasise the "design, make, and evaluate" process throughout these activities. Encourage children to talk about their ideas, choose appropriate materials, build their creations, and then think about what worked well and what could be improved. Safety is also important when using tools and materials.

Geography

Substantive Knowledge

In Key Stage 1 Geography, **substantive knowledge** consists of the foundational, factual information that children learn about the world. This includes core geographic vocabulary, spatial awareness, map skills, and the distinction between human and physical features.
While **'The Great Fire of London'** is standardly approached as a history topic, the event is fundamentally governed by **geography**. The fire behaved the way it did because of weather patterns, urban layout, resource locations, and proximity to water. Using this learning theme allows children to learn abstract geographical concepts by anchoring them to a dramatic, real-world landscape.

The 4 Pillars of Substantive Geography Knowledge in KS1
1. Locational Knowledge and Space
Substantive knowledge here means knowing the names and locations of the world's four nations and capital cities, specifically identifying **London** as the capital city of England and the United Kingdom. It also means recognising its location on a map of the UK.



Historical Layout of London Along the Thames. Source: Archive Photos / Getty Images

In 'The Great Fire of London' Learning Theme: Children learn where London is located within the UK. They map the exact, localised spatial relationship of 1666 landmarks, identifying **Pudding Lane** where the fire began, **St. Paul's Cathedral** in the centre, and the **River Thames** bordering the southern edge of the city. **Why it matters:** Young children struggle with scale. Knowing that a specific street exists inside a specific city, which sits inside a specific country, helps build the structural "nested" spatial awareness they need to comprehend the wider world.

2. Human and Physical Features

Children must learn to sort the world into **human features** (things built by people, like houses, bridges, and roads) and **physical features** (things that occur naturally, like rivers, weather, and hills).

In 'The Great Fire of London' Learning Theme: Children categorise the elements of the disaster. They learn that the tightly packed wooden houses, narrow cobblestone streets, and London Bridge are *human features*. They learn that the **River Thames** and the strong easterly **wind** that blew the sparks are *physical features*.

Human Features (1666 London)	Physical Features (1666 London)
Timber-framed houses	The River Thames
Pudding Lane bakery	Strong easterly wind
London Bridge / St. Paul's	Hot, dry summer weather

Why it matters: This categorisation is a basic building block of geographical analysis. Understanding how these two types of features interact helps children see that human activities are constantly shaped, restricted, or altered by the natural environment.

3. Geographical Skills and Fieldwork (Map Work)
This involves learning how to read basic maps, understand bird's-eye views (aerial perspectives), use simple keys/symbols, and navigate using the four cardinal compass directions: **North, South, East, and West**.



In 'The Great Fire of London' Learning Theme: Children use simple historical maps of London to track the fire's movement over four days. They apply compass directions to explain its path: *"The strong wind blew from the **East**, which pushed the flames tracking westward across the city."* They learn to identify a blue line on a map key as a river, understanding it as a barrier to the fire.
Why it matters: Maps are highly abstract representations of reality. Using a dynamic narrative (tracking an active fire) gives children an immediate, functional reason to decode map symbols and directions, turning a dry academic skill into a practical survival puzzle.

4. Weather and Climate Patterns
Substantive knowledge at this stage involves identifying basic weather patterns, understanding how seasons change in the UK, and knowing how specific weather elements (like wind and lack of rain) physically impact environments.

In 'The Great Fire of London' Learning Theme: Children learn the factual conditions leading up to September 1666. London had experienced a long, exceptionally hot, dry summer with very little rainfall. This dried out the wooden buildings, turning the human environment into tinder. When combined with a strong wind, the weather conditions directly dictated the speed and scale of the disaster.
Why it matters: It introduces the concept of cause and effect in physical geography. Children see that weather is not just an everyday inconvenience, but an environmental force that can radically change human lives and urban structures.

Why Substantive Geography Knowledge Matters

If children only study the Great Fire of London historically (focusing on dates and famous figures like Samuel Pepys), they miss *why* the event escalated into a historic catastrophe.

Geography provides the physical explanation. By learning the substantive facts of urban layouts, weather, and river boundaries, children realise that the disaster was a perfect storm of environmental factors. This foundation teaches them to look at contemporary cities and environments through the same lens—understanding how climate, location, and human design constantly impact safety, planning, and everyday survival.

Disciplinary Knowledge

While **substantive knowledge** teaches children the concrete facts of geography (such as naming the River Thames, identifying London on a UK map, or defining a "human feature"), **Disciplinary Knowledge** teaches them *how to think and work like a real geographer.*

In Key Stage 1, disciplinary geography is about learning how to observe, ask geographical questions, investigate maps, gather evidence, and explain why things happen where they do. It shifts children from simply memorising places to actively analysing **spatial relationships** and environmental impact. **The Great Fire of London** serves as a brilliant laboratory for early disciplinary thinking. Instead of treating the fire as a story that just happened, children act as geographical detectives, investigating how the layout of the land, human construction, and natural elements collided to cause a catastrophe.

The 4 Pillars of Disciplinary Geography in KS1

1. Asking Geographical Questions ("The Where and the Why")

A historian asks *"When did it happen and who was there?"* A geographer asks **"Where did it happen, why did it happen there, and what is it like?"** Disciplinary knowledge means training children to look at an event through a spatial lens.

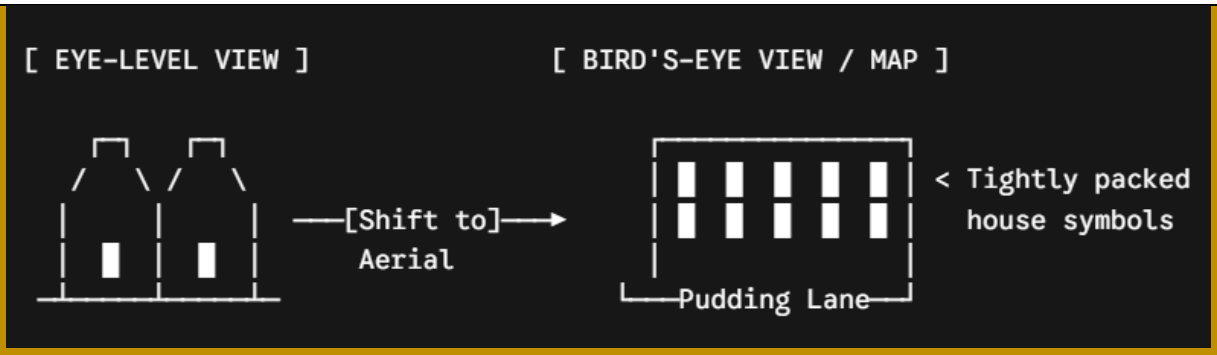
In 'The Great Fire of London' Learning Theme: Children don't just learn that a bakery caught fire. They investigate its *location*. They look at 1666 maps and ask: *"Why did the fire spread so quickly on Pudding Lane but couldn't cross the River Thames into Southwark?"* They notice that the river acted as a giant physical boundary, while the tightly packed streets acted as a human fuel corridor.

Why it matters: This trains children to look at the world analytically. They begin to understand that human events do not occur in a vacuum—they are heavily dictated by where they take place.

2. Map Analysis and Perspective (Decoding Aerial Views)

Disciplinary knowledge involves understanding that a map is not just a drawing; it is a highly specialised, bird's-eye view data tool used to represent reality from above. Children practice changing their perspective from eye-level to an aerial view and interpreting spatial patterns.

In 'The Great Fire of London' Learning Theme: Children look at regular illustrations of timber houses with overhanging upper floors (called jetties) and then try to locate those exact, cramped street patterns on a 17th-century aerial map grid. They trace the physical distance from Pudding Lane to the Tower of London, using the map data to judge how far the fire travelled over four days.



Why it matters: Translating a 3D world into a 2D map requires high-level spatial reasoning. Mastering this early on allows children to navigate, visualise spatial data, and comprehend geographic scale as they grow.

3. Analysing Environmental Interaction (Cause and Effect)
This is the core disciplinary skill of examining how **human features** and **physical features** interact with one another. Children learn to identify how a change in the natural environment directly forces a change or reaction in the human environment.

In 'The Great Fire of London' Learning Theme: Children analyse the data of the event: a hot, dry summer (physical) + wooden houses built too close together (human) + a strong gale from the east (physical). They synthesise these points to explain the pattern of destruction. They also look at how humans *changed* the geography to stop the fire—by blowing up rows of houses to create an artificial gap (a firebreak), removing the human features so the physical fire had no path forward.
Why it matters: It teaches systems thinking. Children realise that weather, climate, and geography are dynamic forces that human beings must constantly plan for, adapt to, and build around.

4. Geographical Fieldwork and Comparison (Then vs. Now)
Fieldwork and comparison involve gathering real-world data, observing changing environments, and comparing different localities to spot shifts over time or distance.

In 'The Great Fire of London' Learning Theme: Children use modern aerial photographs (like Google Earth) alongside 1666 maps to observe how London's geography changed *because* of the fire. They compare the cramped, winding streets of the old city with the wider, brick-and-stone layouts built afterward. If local to London, fieldwork involves visiting the Monument to the Great Fire, measuring distances, and observing how modern urban planning keeps people safe from the same geographic risks.
Why it matters: It connects historical learning directly to the tangible world the child stands in today. It shows them that the geography of their modern towns and cities is a direct result of lessons learned from past environmental challenges.

Substantive vs. Disciplinary: The Geography Paradigm

Substantive Knowledge (The Concrete Facts)	**Disciplinary Knowledge (The Geographic Strategy)**
Knowing that **London** is the capital city of England and locating it on a map of the UK.	Asking *why* London grew alongside a river, and exploring how that river location influenced its trade, safety, and ultimate survival during a crisis.

Identifying a **river** as a physical feature and a **bridge** as a human feature.	Explaining how the physical feature (the Thames) stopped the fire, while the human feature (London Bridge) nearly allowed it to cross until a gap in the houses saved the southern side.
Knowing that **East** and **West** are compass directions.	Using a compass to actively trace and describe the spatial path of the fire, proving that a strong *easterly* wind forces an environmental threat to travel *westward*.

Why Disciplinary Geography Matters

If we only teach children *substantive* facts, they learn about geography as a static list of definitions. They might know what a river is, but they won't understand its power as an environmental boundary. Disciplinary knowledge turns children into **active investigators**. By exploring 'The Great Fire of London' through geographic inquiry, they learn to look at an environment, see patterns, map out pathways, and identify risks. This is the exact toolkit modern geographers, urban planners, and climate scientists use to design safer, smarter cities for the future.

Learning Objectives

Understanding Location and Place:

Locating London: Pupils should be able to locate London on a map of the United Kingdom and understand it as the capital city of England. They can also locate their own town/city in relation to London (e.g., "London is far away from us," or "London is a big city in the south of England").

Identifying Key Features of London (Then and Now):

Past: Identify key geographical features and landmarks of London in 1666, such as the River Thames, Pudding Lane (where the fire started), and prominent buildings of the time (e.g., St Paul's Cathedral before it burnt down, the Tower of London).

Present: Compare and contrast these historical features with modern-day London, recognising how some features (like the River Thames) remain, while others (like the style of buildings) have changed significantly.

Understanding the Physical Environment of London in 1666:

Discuss how the close-packed, wooden buildings of 17th-century London contributed to the spread of the fire.

Recognise the role of the River Thames as a geographical feature used for escape and a source of water (albeit limited for firefighting).

Understand the impact of weather (strong winds) on the fire's spread.

Developing Geographical Skills:

Using Simple Maps and Plans:

Use simple maps or plans of London (then and now) to identify where the fire started and how it spread across the city.

Use pictorial representations or simple symbols to mark key locations related to the fire.

Understanding Scale (Simple Concepts): Begin to grasp the idea of how large an area the fire affected by looking at maps showing the burnt-out areas of London.

Comparing and Contrasting: Identify similarities and differences between London in 1666 and London today in terms of its appearance, buildings, and how people moved around.

Human and Physical Geography:
Human Impact on the Environment: Understand how the Great Fire of London dramatically changed the human landscape of the city, leading to new building regulations (e.g., building with brick and stone) and the development of organised fire services.

Physical Features and Their Influence: Recognise how natural physical features (like the wind and the river) influenced the course of the fire.

Lesson Ideas

This 6-week Key Stage 1 Geography medium-term plan brings the dramatic story of 1666 to life by treating children as geographic investigators. It perfectly balances **substantive facts** (compass points, feature vocabulary) with **disciplinary skills** (aerial map work, spatial analysis, and geographic comparison).

Block 1: Locating the Capital & Decoding the Map (Weeks 1-2)
Week 1: Where in the World is London?
Substantive Knowledge: The United Kingdom is made up of four countries. **London** is the capital city of England and the United Kingdom. A map is a bird's-eye view representation of a physical space from directly above.
Disciplinary Knowledge: Understanding Scale & Perspective. Changing viewpoint from a ground-level picture to an aerial map, tracking from national scale (the UK) to local scale (a city street).

Activity:
The Big Picture: Locate the UK on a world map, then pinpoint London on a UK map.
Bird's-Eye View Shift: Show children a 3D photograph of modern London buildings, then fade into a 2D digital aerial map (like Google Earth). Practice matching 3D objects (like a bridge or river) to their flat, 2D map shapes.
1666 vs. Today: Look at an old 1666 map. Identify that it shows the same basic river curve, but the city space inside the old defensive walls was much smaller.
Outcome & Assessment: Children can identify and colour London on a map of the UK and explain that a map shows a space looked down upon from the sky.

Week 2: Mapping Pudding Lane
Substantive Knowledge: A map key uses symbols to represent real-world objects. A street map shows paths, roads, and buildings in relation to one another.
Disciplinary Knowledge: Decoding Spatial Data. Interpreting abstract map lines and symbols to find specific locations and understand a physical neighbourhood layout.

Activity:
Navigating the Key: Introduce a child-friendly historical map of London 1666. Create a map key together: a brown rectangle = a timber house, a blue line = the River Thames, a loaf of bread symbol = Thomas Farriner's bakery.
Finding the Landmarks: Children use their map key to hunt for and circle key starting points: **Pudding Lane**, the nearby water wheel, and the city wall.
Analysing the Layout: Discuss how close together the brown rectangles (houses) are drawn on the map. Ask: *"What does this tell us about the streets?"* (They were narrow and cramped).

Outcome & Assessment: A completed historical map worksheet with an accurate, self-made key identifying at least three major landmarks.

Block 2: Human, Physical, and the Blazing Wind (Weeks 3-4)
Week 3: Sorting 1666 — Human vs. Physical Features
Substantive Knowledge: A **human feature** is something built or altered by people. A **physical feature** is an object or environmental element that occurs naturally.
Disciplinary Knowledge: Categorisation and Interaction. Sorting environmental elements into logical groups to analyse how they clash during a crisis.

Activity:
The Feature Sort: Provide children with cards showing various parts of the 1666 landscape (wooden houses, the River Thames, London Bridge, cobblestone streets, dry summer grass, a strong wind).
Categorising: Children physically sort the cards onto a T-chart divided into *Human* (man-made) and *Physical* (natural).
The Catalyst Discussion: Connect them together. Discuss how the hot, dry physical summer weather directly changed the human features (made the wooden houses bone-dry and easy to burn).
Outcome & Assessment: Children can accurately sort at least 4 features into Human or Physical columns and explain the difference between them.

1666 LONDON GEOGRAPHY SORT	
HUMAN (Built by People)	PHYSICAL (Naturally Occurs)
Timber Houses Bakery Oven London Bridge	River Thames Strong Wind Dry Summer Weather

Week 4: Catching the Easterly Gale — Compass Directions
Substantive Knowledge: The four cardinal compass directions are **North (N), South (S), East (E), and West (W)**. Wind direction is named after where the wind *blows from*.
Disciplinary Knowledge: Spatial Tracking. Using grid coordinates and directional vectors to trace and explain the path of an environmental threat across a landscape.

Activity:
The Compass Rose: Teach the compass points using a mnemonic (e.g., *"Never Eat Shredded Wheat"*). Have children draw a compass rose directly onto their 1666 London maps.
Tracking the Wind: Explain that a powerful gale was blowing from the **East**. Children draw long orange chalk arrows moving from the East side of their map toward the West side.
Directing the Escape: Give children directional prompts: *"The fire is moving West! Which direction must the citizens run to reach the safety of the river?"* (South).
Outcome & Assessment: Children use arrows and compass terms correctly to show that an easterly wind pushes a fire westward across a city map.

Block 3: The Changing Face of the City (Weeks 5-6)
Week 5: Physical Barriers & Human Firebreaks
Substantive Knowledge: Physical features, like wide bodies of water, can act as natural barriers that stop or alter environmental paths. Humans can intentionally modify layouts to manage geographic risks.

Disciplinary Knowledge: Analysing Environmental Solutions. Evaluating how changes made to physical spacing can disrupt a dangerous chain reaction.

Activity:
The River Defence: Look at the map of London Bridge. The fire tried to cross to the South side of the river, but a gap in the houses on the bridge stopped it. The physical river itself blocked the fire from spreading South.
Creating Firebreaks: Model a "firebreak" using dominoes or small blocks representing houses. Show that when houses touch, the fire travels continuously. Remove a middle row of blocks (creating an intentional gap). Knock down the first block—the path stops at the gap.
Mapping the Gaps: Children shade in the areas on their map where King Charles II ordered houses to be blown up to create these life-saving gaps.
Outcome & Assessment: Children can verbally or visually explain how a gap in human features (a firebreak) or a wide physical feature (the river) stops a threat from spreading.

Week 6: London Transformed — Then and Now
Substantive Knowledge: The physical and human layouts of urban areas change over time, often to make them safer or more efficient. Modern London looks different because of the lessons of 1666.
Disciplinary Knowledge: Geographic Comparison. Contrasting two historical periods using map data to draw conclusions about safety and urban planning.

Activity:
Side-by-Side Analysis: Display a map of London's street layout *before* the fire (cramped, winding, narrow lanes) right next to a map of London *after* it was rebuilt (wider streets, open public squares, brick and stone buildings instead of wood).
The Detective Hunt: Spot the differences. Have children highlight the wide roads on the new map. Ask: *"Why did the geographers and builders design the new city with wide stone streets instead of narrow wooden ones?"*
Fieldwork Connection: If possible, look up a live street view map of the Monument to the Great Fire of London today, noticing the wide, open concrete plaza around it.
Outcome & Assessment: A comparative drawing or simple writing frame where children state two clear ways the human geography of London was changed after the fire to keep its citizens safe.

Progress Trackers: Substantive vs. Disciplinary

Dimension	Key Stage 1 Geography Milestones (What they will know and do)
Substantive (Geographic Facts)	Locate and name **London** as the capital city of England on a map of the UK. Correctly use the words **human feature** and **physical feature**. Identify the four cardinal compass directions: **North, South, East, West**. State that an *easterly* wind blows from the East toward the West. Identify map symbols using a simple **map key**.

Disciplinary (Geographic Thinking)	Interpret a flat 2D bird's-eye view map and match it to 3D real-world spaces. Ask geographic questions about *why* things happen in specific locations. Analyse how human construction and physical weather systems interact to create risks. Use compass vectors to track and describe the movement of an environmental event. Compare historical maps across different time periods to identify urban planning patterns.

Other Information, Ideas and Resources
Mapping the Fire (Simple): **Activity**: Provide a simple map of modern London with key landmarks (e.g., the River Thames, St. Paul's Cathedral - even if the current one is different). Introduce a basic symbol for the fire. As you tell the story, children can place the fire symbol near where Pudding Lane was (explain it was near the river). Discuss how the fire spread along the river and through the city. **Geography Link:** Understanding a simple map, identifying a key location (Pudding Lane), and understanding the concept of spread and direction (along the river, through the city). ***Then and Now - Building Materials:*** **Activity**: Discuss the types of houses in 1666 (wooden, thatched roofs, close together) and compare them to houses today (brick, stone, tile). Use pictures. Talk about why the old materials were more likely to catch fire and how the way we build now is safer. **Geography Link:** Understanding how human-made environments (buildings) have changed over time and the reasons for those changes (safety). Comparing past and present landscapes. ***The River Thames and its Importance:*** **Activity**: Emphasise the River Thames as a key geographical feature of London, both then and now. Discuss how it was used for transport (boats), water supply (though often dirty!), and how the fire spread along the wharves and buildings near the river. **Geography Link:** Identifying a significant geographical feature (river) and understanding its importance for people and events in the past. ***Where Did People Go? (Simple Migration):*** **Activity**: Discuss how people had to flee their homes as the fire spread. Use simple language to explain that they moved to areas outside the burning city. You could have a large outline of London and have children move toy figures from the "fire zone" to safer areas. **Geography Link:** Introducing the basic concept of migration (movement of people) due to a significant event. Understanding the idea of a "safe" and "unsafe" location. ***Comparing London to Our Local Area:***

Activity: Discuss the differences between London in 1666 and Blakeney/Hindringham/Kelling/Walsingham (or even London today). Consider the size of the settlements, the types of buildings, and how close together they are. This helps children understand that places are different.
Geography Link: Developing a sense of place by comparing and contrasting different locations and understanding that settlements have different characteristics.

Mapping Escape Routes (Imaginative):
Activity: Provide a very simplified map of the area around Pudding Lane and the River Thames. Ask children to draw a safe route that someone might have taken to escape the fire. Discuss why they chose that route (e.g., away from the river, towards open spaces - even if those spaces aren't explicitly marked).
Geography Link: Developing basic map skills (drawing a route), understanding the concept of direction and safety in a geographical context, and imaginative application of spatial awareness.

Considerations for Implementation

Keep the language simple, use lots of visuals, and make the activities interactive for Key Stage 1 pupils. The focus should be on introducing basic geographical concepts through the engaging story of The Great Fire of London.

History

Substantive Knowledge

In Key Stage 1 History, **substantive knowledge** consists of the concrete, factual details children learn about the past. It encompasses the specific dates, names of key historical figures, chronologies of events, and direct causes and consequences of an era. When applied to **The Great Fire of London**, **substantive knowledge** moves children away from seeing the fire as a vague fairy-tale and introduces it as a real, seismic event in British history that radically altered a major city.

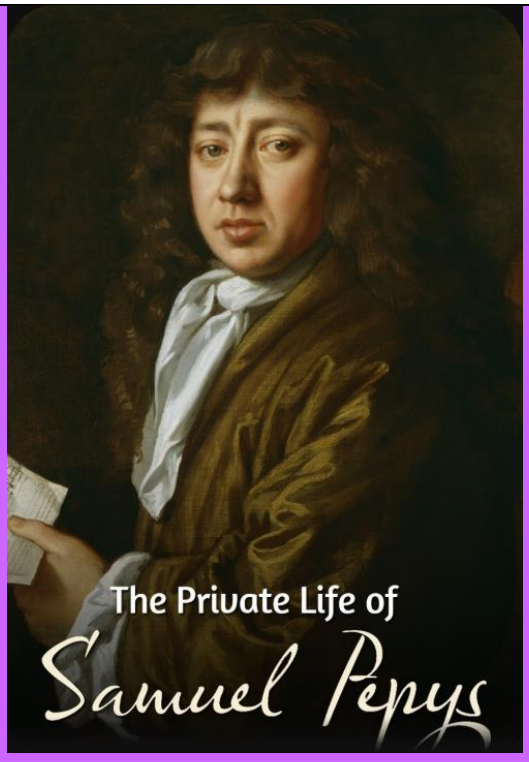
The 4 Pillars of Substantive Historical Knowledge in KS1
1. The Timeline and Chronology of Key Events
Children must learn exactly *when* and *where* the fire occurred, understanding the specific sequence of events over those fateful days in September 1666.



The Great Fire of London, September 1666. Source: Print Collector / Print Collector/Getty Images

The Facts: The fire broke out on **Sunday 2nd September 1666** at Thomas Farriner's bakery on **Pudding Lane**. It raged for four days, finally being brought under control on **Thursday 6th September 1666**.
Why it matters: Chronology is the framework of history. By learning the days of the week and the precise sequence of the fire's spread, young children build an early understanding of **historical duration**—realising that this monumental disaster unfolded rapidly over a single, terrifying week rather than months or years.

2. Historical Figures and Eyewitnesses
Substantive knowledge means learning about significant individuals who played a major role in the event or left behind evidence that helps us understand it today.



The Facts:
Samuel Pepys: A government official who wrote a famous, highly detailed daily account (diary) of the fire, famously burying his expensive cheese and wine to protect them.
King Charles II: The monarch who took charge of the crisis, sending in guards to fight the fire and ordering houses to be pulled down to halt the flames.
Thomas Farriner: The royal baker whose bakery oven started the spark.
Why it matters: Putting names and faces to the narrative humanises history. It shows children that history is not made of abstract concepts, but of real people making high-stakes decisions under immense pressure.

3. Causes: Why Did the Fire Spread So Quickly?
Children need to know the specific factual conditions of 17th-century London that allowed a small bakery spark to escalate into a catastrophic inferno.

The Facts:
Materials: Houses were built out of timber (wood) and coated in flammable pitch/tar, with thatched roofs made of straw.
Weather: London had suffered a long, hot summer drought, making the wood bone-dry. A strong wind (gale) blew from the East, pushing the flames from house to house.
Layout: Houses were packed tightly together on incredibly narrow streets, with overhanging upper floors nearly touching across the road.
Infrastructure: There was no official fire brigade. People had to use leather buckets, primitive hand squirts, and water axes to fight the flames.
Why it matters: This teaches children that major events have multiple, overlapping causes. It connects physical environments with human design flaws, building a foundations for critical analysis.

4. Consequences: How Did London Change?

Substantive knowledge requires learning the immediate and long-term aftermath of the fire—what was lost, and how the city adapted.

The Facts:
The Damage: An estimated 13,200 houses, 87 parish churches, and the medieval St. Paul's Cathedral were completely destroyed. Remarkably, very few people died.
The Rebuild: London was rebuilt using safer materials like brick and stone instead of wood. Streets were made significantly wider, and thatched roofs were banned inside the city.
The Legacy: Sir Christopher Wren redesigned and built the new St. Paul's Cathedral. The first commercial property fire insurance and organised fire brigades emerged as a direct result.
Why it matters: This teaches children about **historical significance** and change over time. It helps them look at the modern world around them—noticing brick buildings and fire engines—and trace those modern safety features directly back to an event that happened hundreds of years ago.

Why Substantive History Knowledge Matters
Without a firm grasp of substantive facts, historical learning loses its grounding. Children cannot think critically or evaluate historical evidence if they do not know the basic realities of the period. By mastering the concrete facts of the Great Fire of London, Key Stage 1 pupils develop a rich, detailed mental schema of life in the 17th century. It gives them the foundational building blocks required to understand larger historical themes down the line, such as urbanisation, public safety, and how societies continuously reinvent themselves in the wake of disaster.

Disciplinary Knowledge

While **substantive knowledge** teaches children the concrete facts of history (such as the date 1666, the name Samuel Pepys, and the location Pudding Lane), **Disciplinary Knowledge** teaches them *how to think and work like an active historian.* In Key Stage 1, **disciplinary history** is focused on **historical inquiry**. It introduces young children to the concept of evidence, teaching them how to interrogate primary sources, identify historical changes, understand cause and effect, and piece together clues to form an objective picture of a world that no longer exists. **The Great Fire of London** is the ultimate classroom laboratory for disciplinary history. Because the event is incredibly rich in surviving physical and written clues, children don't just sit and listen to a story—they become historical detectives investigating a real-world crime scene.

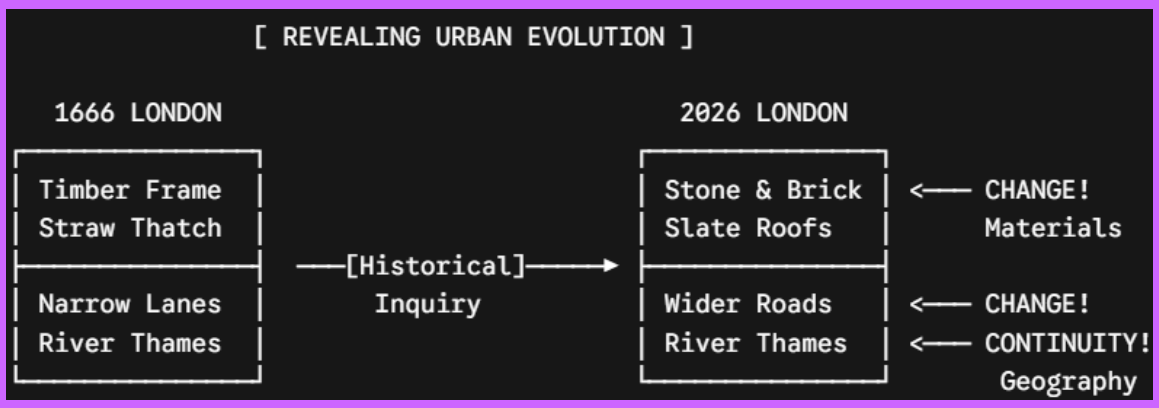
The 4 Pillars of Disciplinary History in KS1
1. Interrogating Historical Sources (How Do We Know?)
The core question of a disciplinary historian is: **"How do we know what happened in the past?"** Children learn that we rely on **historical sources** (clues left behind), and they practice distinguishing between things created *at the time* (**primary sources**) and things created *later* (**secondary sources**).

In 'The Great Fire of London' Learning Theme: Instead of a teacher just telling them that people were terrified, the teacher hands them an extract from **Samuel Pepys' diary** or a copy of an original 1666 woodcut illustration. Children look at the evidence and ask: *"Who wrote this? Why did he bury his cheese? What can this drawing tell us about how people escaped?"* They realise that our knowledge of the fire is built directly on Samuel's preserved thoughts.
Why it matters: This builds early media literacy and critical thinking. It teaches children that information doesn't just appear—it comes from a source, and we must look at the evidence carefully to understand the truth.

2. Identifying Cause and Effect (The Multi-Layered Trigger)
Disciplinary knowledge means moving away from a simple "this happened, then that happened" narrative and exploring **why** things happened. Children learn that major historical turning points are usually caused by a perfect storm of multiple, overlapping reasons.

In 'The Great Fire of London' Learning Theme: A child might initially think the fire spread simply because Thomas Farriner left his oven on. A disciplinary historian challenges them to dig deeper. They look at clues about weather (the dry summer) and architecture (narrow wooden streets). The child synthesises the evidence to say: *"The oven spark started the fire, but it was the dry wood and the strong wind that actually destroyed the whole city."*
Why it matters: This teaches children complex problem-solving. It helps them see that big events—both in history and in their own lives—rarely have a single, simple cause, encouraging them to look for systemic factors.

3. Understanding Change and Continuity (Then vs. Now)
This involves analysing what has changed over time and, crucially, what has stayed the same. It helps young children grasp the abstract concept of deep historical time.



In 'The Great Fire of London' Learning Theme: Children look at images of 17th-century life and compare them directly with modern London. They look for massive **changes** (fire engines instead of leather buckets; brick walls instead of wood) but they also spot **continuity**—noticing that the River Thames is still flowing in the exact same place and St. Paul's Cathedral still dominates the skyline, even if it was rebuilt.
Why it matters: It builds a child's spatial and temporal orientation. It reveals that the world they live in today is not permanent or accidental—it was directly constructed and modified based on lessons learned by humans in the past.

4. Constructing Historical Interpretations
Disciplinary knowledge teaches children that history is not just a single, undisputed script. Different people experienced the same event in completely different ways, and historians construct different interpretations based on whose perspective they look through.

In 'The Great Fire of London' Learning Theme: Children explore the disaster from diverse perspectives. They look at how King Charles II saw the fire (a threat to his kingdom requiring guards and explosives), how a poor citizen saw it (a desperate scramble to pack a cart and run to the river), and how a modern firefighter views it today. They learn to retell the event using empathetic, multi-perspective language.

Why it matters: This is the bedrock of empathy. Understanding that different historical actors had completely distinct experiences, fears, and motives helps children understand that there are multiple sides to every human story.

Substantive vs. Disciplinary: The History Paradigm

Substantive Knowledge (The Concrete Facts)	**Disciplinary Knowledge (The Historian's Strategy)**
Memorising that the fire began on **Sunday 2nd September 1666**.	Placing that date on a timeline to calculate exactly how many hundreds of years ago the event happened compared to their own lifetime.
Knowing that **Samuel Pepys** wrote a famous diary.	Examining an extract of the diary to find clues about what items were considered valuable to people living in the 17th century.
Stating that **13,200 houses** were burned down during the disaster.	Asking *why* so few people physically lost their lives despite so many homes being completely destroyed, investigating evacuation routes.

Why Disciplinary History Matters Most

If we only teach *substantive* history facts, children treat history as a closed, dusty book of trivia to be memorised for a test. They become passive consumers of stories. **Disciplinary knowledge turns them into active researchers.** By investigating the Great Fire of London as a riddle of primary sources, cause-and-effect pipelines, and shifting timelines, children learn how to evaluate arguments, spot bias, question assertions, and think independently. These analytical habits form the foundational tools they need to navigate information critically throughout their schooling and as citizens in a complex world.

Learning Objectives

Knowledge and Understanding:

Chronology:

To know when the Great Fire of London happened (1666) and place it within a simple timeline.
To use words and phrases relating to the passing of time, such as 'past', 'present', 'before', 'after', 'old', 'new', 'years ago'.

Key Events and People:

To know where the Great Fire of London started (Pudding Lane) and how it spread.
To identify key people involved, such as Samuel Pepys and King Charles II, and understand their roles.
To describe what happened during the Great Fire, including how it affected Londoners and the city itself.
To understand how the fire eventually stopped.

Cause and Consequence:

To identify reasons why the fire spread so quickly (e.g., wooden houses, narrow streets, dry weather, no organised fire service).
To understand some of the effects of the fire on London and its people (e.g., destruction of homes, rebuilding efforts, new building materials).

Similarities and Differences:
To compare and contrast life in London in 1666 with life today (e.g., housing, fire safety, transport, communication).

Historical Skills:
Asking and Answering Questions:
To ask simple questions about the past (e.g., "When did it happen?", "Who was involved?", "What was it like?").
To answer questions using information gathered from stories, pictures, and other sources.

Using Sources:
To understand that we can find out about the past from different sources (e.g., Samuel Pepys' diary, old paintings, artefacts).
To use parts of stories and other sources to show what they know about the Great Fire.

Communication:
To communicate their understanding of the Great Fire through various means (e.g., drawing, writing, role-play, telling a story).

Developing Historical Vocabulary:
To use a wider range of historical vocabulary related to the Great Fire (e.g., Pudding Lane, thatched roofs, diary, baker, fire hook, river, St Paul's Cathedral, monument).

Lesson Ideas

This 6-week Key Stage 1 History medium-term plan treats children as real historical detectives. It balances **substantive facts** (the events of 1666, key figures, and dates) with **disciplinary skills** (chronology, source interrogation, and multi-layered cause-and-effect analysis).

Block 1: Clock, Calendars, and Chronology (Weeks 1-2)
Week 1: Locating 1666 on the Timeline
Substantive Knowledge: The Great Fire of London happened a very long time ago, in the year **1666**. History is a record of real past events that can be plotted on a **timeline**.
Disciplinary Knowledge: Chronological Understanding. Conceptualising deep historical time by calculating the distance between the present day and a past century, and sorting past generations.

Activity:
The Human Timeline: Stretch a long washing line across the classroom. Place a label for the current year at one end. Ask children where their birthdays sit, then their grandparents' birthdays.
The 1666 Jump: Walk backward down the timeline to show how many hundreds of years you have to travel to reach 1666. Emphasise that cars, electricity, tablets, and modern fire engines did not exist.
Then vs. Now Visual Sort: Look at pictures of 17th-century objects (quill pens, horse-drawn carts, oil lamps) versus modern equivalents, arranging them chronologically.

Outcome & Assessment: Children can correctly place a marker for 1666 far behind the current year on a blank timeline worksheet.

Week 2: Four Terrifying Days — The Fire's Chronology
Substantive Knowledge: The fire began on **Sunday 2nd September 1666** and was finally stopped on **Thursday 6th September 1666**. It unfolded day-by-day across a precise sequence of events.
Disciplinary Knowledge: Sequencing Narrative. Structuring an event into a clear operational timeline to understand duration and pace.

Activity:
Day 1 (Sunday): The spark at Thomas Farriner's bakery on Pudding Lane. People panic.
Day 2 & 3 (Monday/Tuesday): The wind pushes the fire across the city. St. Paul's Cathedral catches fire. Samuel Pepys buries his things.
Day 4 (Wednesday/Thursday): The wind drops, houses are blown up, and the fire stops.
The Day Sort: Children arrange four illustrated diary pages representing Sunday through Thursday into the correct order, matching captions to the correct days.
Outcome & Assessment: A successfully ordered 4-day sequence of the fire. Children can state which day the fire started and which day it ended.

Block 2: The Historical Detective — Interrogating Sources (Weeks 3-4)
Week 3: Reading Samuel Pepys' Secret Diary
Substantive Knowledge: Samuel Pepys was a government official who lived through the fire and wrote a detailed daily account called a **diary**. A **primary source** is a clue that was written or made at the exact time an event happened.
Disciplinary Knowledge: Source Interrogation. Extracting reliable information and clues about human emotions and values from a primary text.

Activity:
Meeting Samuel: Introduce a replica of Samuel Pepys' diary book and portrait. Explain that he wrote in a secret code because it was private.
Decoding the Text: Read a short child-friendly extract: *"Up at 3 in the morning... saw the fire... the wind mighty high... people carrying their goods into the river."*
The Clue Hunt: Ask the children: *"What clues does Samuel give us about how people felt? Why did he bury his cheese and wine?"* (Because they were expensive and precious to him).
Outcome & Assessment: Children can name Samuel Pepys, identify his diary as a "primary source," and state one fact they learned directly from his writing.

INTERROGATING THE EVIDENCE	
THE SOURCE:	THE HISTORIAN'S DECODING:
"People carrying their goods into the river"	Citizens were using boats on the Thames to escape.
"The wind mighty high"	Weather played a key role in

Week 4: Woodcuts and Pictures — Visual Sources
Substantive Knowledge: Historical clues are not just written words; they can also be objects, paintings, maps, or **woodcuts** (ink prints stamped from carved blocks of wood in the 17th century).
Disciplinary Knowledge: Visual Literacy and Cross-Referencing. Analysing historical illustrations for data and cross-checking them against written texts to see if the clues match.

Activity:
The Woodcut Analysis: Project an original 1666 woodcut print showing people escaping in boats on the River Thames.
The Detail Spotter: Give children magnifying glasses or digital zoom options. Task them to find three specific details: families carrying bundles, smoke clouds, and people using small buckets.
Cross-Referencing: Compare the visual woodcut with Pepys' written diary from Week 3. Ask: *"Does the picture show the same thing Samuel wrote about?"* (Yes, both show boats on the Thames).
Outcome & Assessment: Children can locate and explain key details in an old illustration and explain how drawings help us understand history.

Block 3: The Perfect Storm — Causes and Effects (Weeks 5-6)
Week 5: Why Did London Burn? — The Multi-Layered Causes
Substantive Knowledge: A **cause** is *why* something happens. The Great Fire spread due to three distinct causes: **Materials** (dry wooden houses coated in tar), **Weather** (hot summer drought and a strong easterly wind), and **Layout** (narrow, tightly packed streets).
Disciplinary Knowledge: Causal Analysis. Moving beyond a single point of blame to understand that massive events are caused by multiple, overlapping factors.

Activity:
The Blame Game: Start with a question: *"Is it only the baker's fault that London burned down?"*
Building the Case: Introduce three "Evidence Boxes."
Box 1 (Materials): Strips of wood and straw.
Box 2 (Layout): Toy houses grouped so closely that roofs touch.
Box 3 (Weather): A fan simulating a powerful wind.
Synthesising: Guide children to see that while the bakery oven was the spark, the other three factors were the real *reasons* the fire spread across the entire city.
Outcome & Assessment: A multi-causal diagram or worksheet where children draw or label three distinct reasons why the fire spread so quickly.

Week 6: The Rebuilt City — Immediate and Long-Term Effects
Substantive Knowledge: An **effect** or **consequence** is what happens *because* of an event. Because of the fire, London was rebuilt out of brick and stone instead of wood, streets were made wider, and the first fire brigades were invented.
Disciplinary Knowledge: Identifying Change and Continuity. Evaluating how a catastrophic event forced humans to change their lifestyle and safety behaviours over time.

Activity:
The Action and Reaction: Discuss the immediate consequences: 13,200 families lost their homes, but very few people physically died.
The New Blueprint: Examine Sir Christopher Wren's rebuilding rules ordered by King Charles II. Show a modern picture of London. Ask: *"What rules from 1666 can you still see working today?"* (Brick walls, slate roofs, wide open streets).
The Summary Critique: Children complete a "Then and Now" summary framework, illustrating how fire safety completely changed after 1666.
Outcome & Assessment: Children can state two permanent changes made to London after the fire to keep citizens safe, demonstrating an understanding of historical consequence.

Progress Trackers: Substantive vs. Disciplinary

Dimension	Key Stage 1 History Milestones (What they will know and do)
Substantive (Historical Facts)	State that the Great Fire happened in **1666**. Name **Pudding Lane**, **Samuel Pepys**, and **King Charles II**. List three clear reasons why the fire spread (wood, wind, packed streets). State two consequences of the fire (brick houses, wider roads). Correctly use the terms **past, timeline, primary source, diary, cause, effect**.
Disciplinary (Historical Thinking)	Place historical eras in chronological order on a linear timeline. Identify a **primary source** and explain that it is an eyewitness clue from the time. Interrogate historical texts and images to find hidden details and answers. Explain that a historical event can have multiple, overlapping causes. Contrast past human design choices with modern ones to identify **change over time**.

Other Information, Ideas and Resources

Know some similarities and differences between things in the past and now, drawing on their experiences and what has been read in class. Compare what fire men looked like then to today – look at fire engines from past to now.

Timeline of Key Events (Picture-Based):
Activity: Create simple picture cards representing the key events of the fire: the bakery, the spread of the fire, people fleeing, Samuel Pepys burying his cheese and wine, the fireboats, and the rebuilding.
Learning: Introduce the concept of a timeline and the sequence of events. Children can order the pictures and discuss what happened at each stage.

Role-Playing the Fire Spreading:
Activity: Use building blocks or cardboard boxes to represent the wooden houses of 1666. Start a "fire" (perhaps a red cloth) in one "house" (the bakery) and then physically move it to nearby "houses" to demonstrate how quickly the fire spread due to the close proximity of buildings and materials.
Learning: Understand why the fire spread so rapidly and the dangers of wooden buildings close together.

Exploring Tudor and Stuart Houses:
Activity: Show pictures and discuss the features of houses in 1666: wooden frames, thatched roofs, narrow streets. Compare these to modern houses. Children can then draw or build their own model of a Tudor/Stuart house.
Learning: Identify key characteristics of buildings in 1666 and compare them to their own homes, understanding why the fire was so destructive.

Samuel Pepys and Eyewitness Accounts (Simplified):

Activity: Introduce Samuel Pepys as someone who saw the fire and wrote about it. Read short, simplified excerpts from his diary (or create your own based on his writings) focusing on key observations like the flames, smoke, and people's reactions.
Learning: Understand that historical events are recorded by people who were there and introduce the concept of a primary source in an accessible way.

The Role of Firefighters (Then and Now):
Activity: Discuss how people tried to put out the fire in 1666 (bucket brigades, pulling down houses) and compare this to modern firefighters and their equipment. Children can draw pictures of firefighters from both periods.
Learning: Understand the challenges of fighting the fire in the past and appreciate the advancements in firefighting technology.

Rebuilding London (Design Activity):
Activity: Discuss how London was rebuilt after the fire, with some buildings made of brick and wider streets. Provide children with materials (blocks, paper, crayons) to design their own "new" London buildings, thinking about how to make them safer from fire.
Learning: Understand the impact of the fire and how it led to changes in building materials and city planning.

Considerations for Implementation

Use visual aids, keep the language simple, and encourage discussion and questions throughout these activities.

Music

See also Charanga Schemes of work.

Substantive Knowledge

In Key Stage 1 Music, **substantive knowledge** focuses on the foundational, technical building blocks of musical notation and performance. This includes understanding the **interrelated dimensions of music** (the formal terms for musical elements) and mastering basic instrumental control, vocal accuracy, and notation. When linked to **'The Great Fire of London'**, music moves from abstract sound-making into vivid, dramatic storytelling. The theme provides a visceral, high-contrast narrative—shifting from the quiet crackle of a bakery oven to the roaring chaos of an inferno, and finally to the sombre silence of an ash-covered city. This allows children to map technical musical terms onto real, dramatic concepts.

The 4 Pillars of Substantive Music Knowledge in KS1
1. The Interrelated Dimensions of Music (Musical Elements)
Substantive knowledge at this stage requires children to accurately identify, describe, and manipulate the core elements of sound using correct vocabulary:

Dynamics (Loud/Quiet): Children learn that dynamics describe the volume of a sound.
In 'The Great Fire of London' Learning Theme: They explore *piano* (quiet) sounds to represent the initial flickers of flame in Pudding Lane, and *forte* (loud) sounds to represent collapsing timber buildings and exploding structures.

Tempo (Fast/Slow): Knowing that tempo dictates the speed of the beat.
In 'The Great Fire of London' Learning Theme: They use a slow, steady tempo to mimic citizens rhythmically passing water buckets from the river, accelerating to a frantic, fast tempo as the easterly wind picks up speed and pushes the fire across the city grid.

Pitch (High/Low): Understanding that pitch measures how high or low a sound is.
In 'The Great Fire of London' Learning Theme High pitches (triangle taps, glockenspiel strikes) mimic falling sparks and hissing smoke, while low pitches (drum strikes, bass xylophones) mimic the heavy thud of axes chopping down houses to make firebreaks.

Timbre (Sound Quality): Recognising that different instruments have unique "sonic colours" or textures.
In 'The Great Fire of London' Learning Theme: Scraping a guiro or shaking maracas sounds like crackling timber and burning wood, whereas a metallic triangle sounds like a ringing warning bell.

2. Vocal Performance and Historical Repertory
Children must learn how to sing accurately, controlling their breathing, pitch, and diction to perform collectively as a choir.

In 'The Great Fire of London' Learning Theme: Children learn to sing the traditional 17th-century round **"London's Burning."**

The Technical Application: They learn the substantive mechanics of singing a *round*—where one group starts singing the melody, and a second group starts the same melody a few beats later. This musical structure requires children to hold their own vocal pitch against a competing harmony, mimicking the overlapping, chaotic cries of the historic streets.

[THE STRUCTURE OF A MUSICAL ROUND]

Group 1: ♫ "London's burning... London's burning..." ──┐
▼ (Overlapping Layers)
Group 2: ♫ "London's burning... London's burning..."

3. Instrumental Mechanics and Physical Control
Substantive knowledge involves learning how to handle, strike, shake, or scrape untuned percussion instruments (drums, shakers, woodblocks) and tuned instruments (glockenspiels) to produce a crisp, intentional sound rather than uncontrolled noise.

In 'The Great Fire of London' Learning Theme: Children select instruments based on their mechanical properties to build a "Soundscape of 1666." They learn that striking a tambourine softly creates a completely different effect than hitting it hard with a fist. They learn how to use mallets precisely to hit a specific metal bar on a glockenspiel to represent a warning siren.
Why it matters: Physical control turns a child from someone making noise into a deliberate musician who can accurately express a planned idea.

4. Graphic Notation and Composition
This involves learning that music can be recorded, written down, and read using visual symbols. At Key Stage 1, this focuses on **graphic scores**—using invented symbols or pictures to represent specific sounds.

In 'The Great Fire of London' Learning Theme: Children draw a timeline of the fire and invent visual symbols for notation: red squiggles mean "shake the maracas wildly for the fire," while a series of heavy black dots means "beat the drum slowly for the rescue carts." They read their graphic score from left to right to perform their piece collectively.

Why it matters: Graphic scores are the critical bridge to formal staff notation (treble clefs, crotchets, minims). It introduces the abstract concept that a visual mark on a page dictates a physical sound in time .

Why Substantive Music Knowledge Matters

Without explicit substantive music knowledge, classroom music during a history topic easily descends into chaotic "banging on instruments" without any artistic progression.

By grounding technical terms like *timbre*, *dynamics*, *tempo*, and *notation* in the dramatic, high-stakes story of **The Great Fire of London**, music training becomes highly disciplined. Children realise that music is a structural language used to build atmosphere, communicate emergency, and evoke deep empathy for human stories. It equips them with the analytical vocabulary to listen to, decode, and compose music intentionally throughout their lives.

Disciplinary Knowledge

While **substantive knowledge** teaches children the mechanical facts of music (such as defining *loud and quiet*, naming a glockenspiel, or memorising the lyrics to "London's Burning"), **Disciplinary Knowledge** teaches them *how to think, act, and create like an active musician.* In Key Stage 1, disciplinary music is focused on the creative processes of **composing, performing, improvising, and critically appraising sound.** It teaches children how to make intentional artistic choices, listen deeply to details, and manipulate sound structures to express a specific mood, narrative, or emotion. **The Great Fire of London** serves as a brilliant creative catalyst for early disciplinary thinking. Instead of just making random noises, children act as sound designers and composers, using musical elements strategically to translate a historical narrative of panic, destruction, and eventual peace into a structured auditory experience.

The 4 Pillars of Disciplinary Music Knowledge in KS1

1. Intentional Composition (Curation Over Chaos)

A disciplinary musician does not grab an instrument and hit it repeatedly at random. They select sounds deliberately to represent an idea, constantly asking: *"Does this specific sound match the story I am trying to tell?"*

In the Great Fire Theme: Children are tasked with composing the sound of a small spark growing into a massive fire. A disciplinary thinker realises they cannot start by banging a drum loudly. They must *curate* the progression: they choose a tiny metal triangle or scrape a guiro gently to mimic the quiet crackle of the bakery oven. They make a deliberate artistic decision to slowly increase the volume (**crescendo**) to build tension as the fire spreads.

Why it matters: It shifts music from a physical reflex into a thoughtful, creative act. It teaches children that composition is a disciplined form of storytelling where every single sound must justify its place on the timeline.

2. Analytical Listening and Appraising (Decoding the Mood)

Disciplinary knowledge involves learning how to listen to music critically, identifying the subtle changes in instruments or speed that make a listener feel scared, excited, or calm.

In the Great Fire Theme: The teacher plays two distinct musical pieces (e.g., a frantic, clashing orchestral track with rapid brass notes versus a slow, quiet, mournful cello piece). Children listen analytically and

describe the artistic effects: *"The first piece sounds like the frantic panic of people running to the River Thames because the tempo is so fast and chaotic. The second piece sounds like the sad, empty streets covered in ash after the fire stopped."*
Why it matters: This builds auditory literacy and emotional intelligence. Children learn to look beneath the surface of media, understanding exactly how composers use specific audio tools to influence human emotions and reactions.

3. Collaborative Performance (Ensemble Coordination)
Musicians rarely work in total isolation; they must listen to others, adjust their own playing, and maintain a collective rhythm. This involves developing **ensemble awareness**.

In the Great Fire Theme: When singing the round "London's Burning," children must practice the disciplinary skill of musical independence within a group. Group A must look at their conductor and confidently sing their line (*"Fetch the engines..."*) while completely tuning out Group B who is simultaneously singing a different line directly next to them (*"Fire, fire!"*). They must also adjust their volume so they do not drown out their classmates.

THE ENSEMBLE COORDINATION BALANCE		
MY PERFORMANCE		THEIR PERFORMANCE
◄──[Tune]──►		
Singing "Fire, fire"	Balance	Singing "Pour on water"
KEEP THE SAME BEAT		

Why it matters: Collaborative performance is an exercise in intense focus, teamwork, and active listening. It teaches children how to hold onto their individual responsibilities while remaining deeply connected to a wider community goal.

4. Interpretation and Improvisation (Making Artistic Choices)
Disciplinary knowledge recognises that music can be played in multiple ways to change its meaning. There is no single "correct" speed or volume for a song; it depends on the performer's interpretation.

In the Great Fire Theme: Children take the familiar nursery rhyme "London's Burning" and deliberately manipulate it to tell different parts of the history. The teacher challenges them: *"Improvise a way to sing this song that sounds like the fire has finally been put out and everyone is safe."* The children adapt their style, singing it much slower (**ritardando**), softly (**diminuendo**), and with a gentle tone.
Why it matters: It unlocks creative agency. Children realise that they are not just human record players designed to repeat songs exactly as written—they are expressive artists who have the power to reinvent, alter, and interpret sound creatively.

Substantive vs. Disciplinary: The Music Paradigm

Substantive Knowledge (The Musical Building Blocks)	Disciplinary Knowledge (The Musician's Practice)
Knowing that *piano* means quiet and *forte* means loud.	Intentionally choosing to transition from *piano* to *forte* over 30 seconds to sonically mimic a spark erupting into a roaring blaze.
Identifying a tambourine, maracas, and a drum by their physical appearance and sound.	Critically selecting the maracas to represent hissing smoke and a drum to represent a warning alarm based on their specific **timbres**.
Memorising the words and basic melody of "London's Burning."	Cooperatively singing the song in a multi-part round, adjusting your own volume to blend smoothly with the contrasting vocal layers.

Why Disciplinary Music Matters
If music lessons only focus on *substantive* facts, children simply copy patterns. They sing a song when told, tap an instrument on command, and memorise definitions for a worksheet.
Disciplinary knowledge gives children ownership over the sound. By using **The Great Fire of London** as a rich narrative landscape, children learn to use sound as an expressive medium. They learn to listen deeply, evaluate structures, solve acoustic problems, and collaborate under tight rhythms. These creative problem-solving and deep communication habits form an analytical foundation that helps them decode expression, art, and media for the rest of their lives.

Learning Objectives

Overall Aim: To use music to explore and express understanding of 'The Great Fire of London', developing fundamental musical skills and concepts.

I. Listening and Appraising:
Objective (Sound Recognition): Pupils will be able to identify and describe different sounds associated with the Great Fire of London (e.g., crackling flames, bells ringing, shouting, water splashing) and discuss how these sounds can be represented musically.
Differentiation*:* Y2 could discuss the *timbre* of instruments that might best represent these sounds.

Objective (Emotional Response): Pupils will be able to express how different pieces of music (or musical excerpts) make them feel, linking these feelings to the events or atmosphere of the Great Fire (e.g., fear, chaos, sadness, hope).

Objective 3 (Dynamics): Pupils will be able to recognise and respond to changes in dynamics (loud/quiet) in music, linking them to events in the story (e.g., quiet build-up, sudden loud fire, quiet after the fire).

Objective (Tempo): Pupils will be able to recognise and respond to changes in tempo (fast/slow) in music, linking them to the pace of events (e.g., slow beginning, fast spread of fire, slow rebuilding).

Objective (Storytelling through Music): Pupils will be able to identify how music can be used to tell a story or create a scene related to the Great Fire of London.

II. Performing:
Objective (Vocal Exploration): Pupils will be able to use their voices to create sound effects (e.g., crackling, whooshing, shouts) and simple vocal patterns inspired by the Great Fire.

Objective (Body Percussion/Movement): Pupils will be able to use body percussion (clapping, stamping, patting) and simple movements to represent elements of the fire (e.g., flames spreading, buckets of water, people running).
Objective (Instrumental Exploration): Pupils will be able to explore and experiment with a range of untuned percussion instruments to create sounds and textures related to the Great Fire (e.g., shakers for crackling, drums for bells or running, woodblocks for footsteps).

Objective (Simple Rhythmic Patterns): Pupils will be able to perform simple rhythmic patterns (e.g., using 'ta' and 'ti-ti') that could represent words or ideas from the story (e.g., "fire, fire," "run, run, run").

Objective (Singing Simple Songs): Pupils will be able to learn and sing simple songs related to the Great Fire of London, focusing on clear diction and following the melody. This could include traditional rhymes or newly composed songs.

Objective (Following a Conductor): Pupils will be able to follow simple instructions from a 'conductor' (teacher or peer) to start, stop, get louder/quieter, or faster/slower, when performing their Great Fire music.

III. Composing:
Objective (Creating Soundscapes): Pupils will be able to contribute ideas to and create a simple soundscape using voices, body percussion, and/or untuned instruments to represent different stages of the Great Fire (e.g., bakery fire, spread of flames, people escaping, aftermath).

Objective (Musical Storytelling): Pupils will be able to choose and sequence sounds to create a short musical sequence that tells a part of the Great Fire story (e.g., a short section of music to show the fire getting bigger).

Objective (Responding to Stimuli): Pupils will be able to create short musical ideas in response to visual stimuli (pictures of the fire, key characters) or spoken words from the story.

Objective (Exploring Elements): Pupils will be able to begin to make simple choices about dynamics and tempo when creating their own musical ideas, linking these choices to the mood or event they are depicting.

IV. Interrelated Dimensions of Music:
Objective (Understanding Dynamics): Pupils will demonstrate understanding of 'loud' and 'quiet' (dynamic) and be able to apply them in their listening, performing, and composing related to the fire.

Objective (Understanding Tempo): Pupils will demonstrate understanding of 'fast' and 'slow' (tempo) and be able to apply them in their listening, performing, and composing related to the fire.

Objective (Understanding Timbre): Pupils will begin to understand that different instruments and voices make different sounds (timbre) and how these can be used to represent different elements of the fire story.

Lesson Ideas

This 6-week Key Stage 1 Music medium-term plan guides children through the creative journey of becoming composers, performers, and critical listeners. Using **'The Great Fire of London'** as a dramatic canvas, children will learn to manipulate the **interrelated dimensions of music** (dynamics, tempo, pitch, timbre), perform a historic vocal round, and record their ideas using visual **graphic scores**.

Block 1: Vocal Mastery & The Historic Round (Weeks 1-2)
Week 1: Singing "London's Burning" with Expression
Substantive Knowledge: A melody is a sequence of musical notes that tune together to create a song. Singing requires clear **diction** (pronouncing words sharply) and breath control to hold notes.
Disciplinary Knowledge: Interpretation. Using vocal expression, posture, and facial performance to convey a dramatic narrative through song.

Activity:
Learning the Line: Introduce the lyrics of the traditional 17th-century song: *"London's burning, London's burning. Fetch the engines, fetch the engines. Fire, fire! Fire, fire! Pour on water, pour on water."*
Diction Training: Practice crisp consonant sounds for words like *"fe**tch**"* and *"**pour**"*. Explain that out in the smoky streets of 1666, emergency calls had to be perfectly clear.
Adding Dynamics: Children analyse the words. They make a collective decision to sing *"London's burning"* at a medium volume, explode into a loud volume (*forte*) during *"Fire, fire!"*, and drop to a lower volume (*piano*) for *"Pour on water"*.
Outcome & Assessment: Group performance of the song with explicit, intentional changes in volume to match the lyrics.

Week 2: Passing the Torch — Singing in a Round
Substantive Knowledge: A **round** is a vocal piece where two or more groups sing the exact same melody, but start at different times, creating overlapping layers of harmony.
Disciplinary Knowledge: Ensemble Coordination. Maintaining individual pitch and rhythmic stability when surrounded by a competing vocal melody.

Activity:
The Steady Pulse: Establish a firm, continuous clapping rhythm across the room to act as the shared heartbeat of the song.
The Layered Entrance: Divide the class into two groups. The teacher leads Group 1 to start the song. When Group 1 finishes the first line (*"London's burning..."*) and moves to line two, the teacher cues Group 2 to enter with line one.
Vocal Independence: Children practice the disciplinary skill of looking straight at their group leader, blocking out the sound of the adjacent group, and keeping to the steady pulse.
Outcome & Assessment: A successful two-part vocal round execution of "London's Burning" without the groups drifting or stopping.

Block 2: Structural Soundscapes & Musical Elements (Weeks 3-4)

Week 3: From Spark to Inferno — Dynamics and Tempo
Substantive Knowledge: Dynamics measures volume (loud/quiet). **Tempo** measures speed (fast/slow). A **crescendo** is a gradual increase in volume from quiet to loud.
Disciplinary Knowledge: Intentional Composition. Choosing and manipulating elements of sound systematically to mimic a physical timeline or acceleration.

Activity:
The Bakery Spark (Piano/Largo): Children scrape sand blocks or whisper softly to mimic the tiny, slow-burning embers inside Thomas Farriner's oven.
The Gale Picks Up (Crescendo/Accelerando): Introduce untuned percussion. As the teacher simulates the easterly wind blowing harder, children gradually shake maracas and tap triangles faster (**accelerando**) and louder (**crescendo**).
The Raging Inferno (Forte/Presto): The composition hits maximum volume and speed as drums, woodblocks, and cymbals crash together to show the absolute height of the disaster.
Outcome & Assessment: An instrumental performance where children demonstrate a collective, controlled transition from slow/quiet to fast/loud on command.

THE FIRE BLOCKS PROGRESSION		
DAY 1: SPARK	DAY 2: WIND	DAY 3: INFERNO
Piano (Quiet)	Crescendo	Forte (Loud)
Largo (Slow)	Accelerando	Presto (Fast)

Week 4: The Rescue Efforts — Pitch and Timbre
Substantive Knowledge: Pitch describes how high or low a sound is. **Timbre** is the specific texture or quality of a sound that makes an instrument unique (e.g., metallic, wooden, rattling).
Disciplinary Knowledge: Acoustic Matching. Selecting specific instruments based on their sonic properties to creatively illustrate physical objects or actions.

Activity:
Auditory Selection: Display an array of instruments (drums, triangles, glockenspiels, guiros). Ask children: *"Which instrument's timbre sounds most like an iron warning bell ringing?"* (Triangle). *"Which sounds like a heavy wooden beam collapsing?"* (Bass drum).
Structuring Pitch:
Children use **high pitches** (glockenspiels struck near the top) to show sparks jumping into the sky.
Children use **low pitches** (heavy drum thuds) to mimic the rhythmic strike of axes chopping down house timbers to make firebreaks.
The Rescue Symphony: Layer the timbres together—the triangle rings continuously while the low drums break up the sound with heavy, timed beats.
Outcome & Assessment: Children can choose an instrument and justify why its specific pitch or timbre matches a specific element of the Great Fire historical narrative.

Block 3: Recording History — Graphic Notation (Weeks 5-6)
Week 5: Creating the 1666 Graphic Score
Substantive Knowledge: Music can be captured, stored, and shared using visual symbols. A **graphic score** uses shapes, colours, and pictures instead of traditional notes to tell a performer what sound to make.
Disciplinary Knowledge: Graphic Coding. Inventing and standardising a logical system of symbols to represent specific auditory data.

Activity:
The Score Blueprint: Lay out a long scroll of paper across the floor. Divide it into three distinct horizontal blocks: *The Bakery, The Spread, The Ash*.
Inventing the Symbols: Work as a class to design a musical key code:
Tiny red dots = soft, quick triangle taps.
Jagged orange zig-zag lines = a loud, continuous rattle on the maracas.
A single giant black square = one heavy, booming crash on the drum.
Drawing the Score: Small groups of children draw their musical sequences onto the timeline scroll from left to right.
Outcome & Assessment: A completed collective graphic score page featuring an explicit key linking visual marks to structural instruments.

SAMPLE KEY FOR THE GRAPHIC SCORE		
SYMBOL:	INSTRUMENT:	HOW TO PLAY:
• • • •	Triangle	High, Quiet, Fast
▲ ▲	Bass Drum	Low, Loud, Slow
~~	Maracas	Sustained Shaking

Week 6: Conducting the Final Performance
Substantive Knowledge: A conductor uses physical gestures to guide an ensemble's tempo and dynamics. A score is always read from left to right.
Disciplinary Knowledge: Ensemble Literacy and Appraisal. Reading a visual score in real-time while matching performance inputs to a conductor's signals, followed by self-critique.

Activity:
Reading the Tracks: Group children by their instruments according to the graphic score created in Week 5.
Following the Conductor: The teacher or a child acts as the conductor, moving a physical pointer slowly from left to right along the timeline scroll. When the pointer crosses the jagged lines, the maraca group plays. If it touches a giant black square, the drum group crashes instantly.
The Appraisal: Record the soundscape. Play the audio back to the children and evaluate: *"Did our dynamics start quietly enough? Did our graphic symbols successfully help us play together?"*
Outcome & Assessment: A fully realised recorded performance of the "Great Fire Soundscape," read straight from a graphic notation layout.

Progress Trackers: Substantive vs. Disciplinary

Dimension	**Key Stage 1 Music Milestones (What they will know and do)**
Substantive (Musical Building Blocks)	Accurately sing the melody of "London's Burning" using clear diction. Define the terms **dynamics, tempo, pitch, timbre, round,** and **crescendo**. Identify the difference between *forte* (loud) and *piano* (quiet) sounds. Physically operate percussion instruments to produce clean, deliberate sounds.

	Recognise that symbols on a **graphic score** tell a musician how to play.
Disciplinary (Musical Artistry)	Manipulate volume and speed strategically to tell a dramatic story. Choose specific instrument textures (**timbres**) to depict real objects or environments. Maintain vocal pitch independently while another group sings an overlapping line. Read an original graphic notation chart from left to right in sync with a conductor. Critically appraise an audio performance and identify how to adjust its texture or timing.

Other Information, Ideas and Resources

Creating "Fire Sounds":
Activity: Explore different ways to make sounds that represent fire. This could involve:
Body Percussion: Clicking fingers for small sparks, clapping for crackling flames, stamping feet for the fire spreading.
Untuned Percussion: Shaking shakers or maracas for the flickering flames, tapping wooden blocks for the wood burning, scraping sandpaper blocks for the rough sound of fire.
Vocal Sounds: Whispering "hiss," making "whoosh" sounds for the wind carrying the fire, and louder "crackle" and "roar" sounds.
Musical Focus: Exploring dynamics (loud/quiet), tempo (fast/slow), and timbre (different sound qualities) to represent the changing nature of the fire.

"The Bakery's Burning" Song:
Activity: Create a simple, repetitive song about the fire starting in Pudding Lane. For example:
"Baker, baker, bread so sweet, / Fire started on the street! / Crackle, crackle, flames so high, / Smoke is rising to the sky!"
Children can sing this song and add their "fire sounds" at appropriate moments.
Musical Focus: Developing a sense of pulse and rhythm through singing, and linking music to a narrative.

"The Wind Blows the Fire" Movement Piece:
Activity: Use music with a sense of movement (perhaps something with a rising and falling dynamic or a flowing melody) to represent the wind carrying the fire. Children can move freely, using scarves or ribbons to show the direction and intensity of the wind and flames.
Musical Focus: Responding to music through movement, interpreting musical dynamics and tempo.

"Water, Water Everywhere!" Soundscape:
Activity: Contrast the sounds of the fire with the sounds of people trying to put it out. This could involve:
Water Sounds: Gentle tapping on drums or triangles for trickling water, swishing sounds with hands or cloths for pouring water.
Exclamations: Simple chanted phrases like "Water, water, quick, quick!"
Combine these sounds to create a soundscape depicting the efforts to extinguish the fire.
Musical Focus: Exploring contrast in music, creating a soundscape to tell a story.

"The Great Escape" Rhythm Game:
Activity: Use simple rhythms to represent people escaping the fire. For example:
Short, quick claps for running.
Longer, slower sounds for carrying belongings.
Children can listen to a rhythmic pattern played on a drum or by clapping and then copy it. This can represent different stages of the escape.
Musical Focus: Developing rhythmic accuracy and memory.

Creating a "Safe New City" Song:
Activity: After learning about how London was rebuilt, create a simple, more positive song about the new city. This could have a calmer, more melodic feel. For example:
"New houses built, strong and tall, / No more fire to burn them all. / Streets are wider, safer now, / A happy city, hear it vow!"
Musical Focus: Exploring contrasting moods in music and linking music to the resolution of a historical event.

Considerations for Implementation

Encourage them to explore sounds, express their ideas, and work together creatively. You can also use visual aids and actions to support their understanding.

Physical Education

Substantive Knowledge

In Key Stage 1 PE, **substantive knowledge** focuses on the foundational rules, movement techniques, safety mechanics, and physical patterns that children must master to control their bodies safely and effectively. This involves fundamental movement skills (FMS) like running, jumping, balancing, changing direction, and coordinating travel pathways. When linked to **'The Great Fire of London'**, PE moves from abstract exercise into **narrative dance, movement storytelling, and cooperative invasion games**. The historical events provide a dynamic framework for children to learn and apply physical concepts—using their bodies to replicate the flickering of flames, the rhythmic passing of water buckets, or navigating paths through a crowded city.

The 4 Pillars of Substantive PE Knowledge in KS1
1. Fundamental Movement Skills (FMS) and Pathways
Substantive knowledge requires children to learn how to change their speed, direction, and posture while traveling, using distinct space pathways (**straight, zig-zag, curving**).
In 'The Great Fire of London' learning Theme: Children apply these movements to the escape narrative. They practice **speed control**, sprinting rapidly to mimic fleeing the flames toward the River Thames, then transitioning into a low, careful crawl to simulate navigating through thick smoke.
They use **zig-zag pathways** to dodge imaginary falling debris or navigate through the narrow, twisting grid of 1666 London streets.
Why it matters: FMS is the "alphabet" of physical literacy. Learning how to cleanly accelerate, decelerate, and change direction prevents injury and builds the core coordination needed for any sport, gym activity, or dance later in life.

2. Body Control, Balance, and Levels
Children must learn how to hold their bodies completely still using **static balances** (on one foot, on patches, or on points) and manage transitions between high, medium, and low **spatial levels**.

In 'The Great Fire of London' learning Theme: Children use levels to build a movement sequence about the environment:
High Level: Extending fingers and arms upward, twisting and shaking to represent roaring, climbing flames.
Medium Level: Bending knees to move like citizens rhythmically lifting and swinging heavy leather water buckets.
Low Level: Dropping to the floor, holding a rigid, frozen shape to represent a timber house that has collapsed to form a firebreak.
Why it matters: Balance and level control develop core strength and spatial awareness. It teaches young children how to consciously engage their muscles to stabilise themselves, which is fundamental to gymnastics, dance, and general spatial safety.

3. Rhythm, Pattern, and Expressive Gesture
This involves understanding that bodily movements can be structured to follow a steady **tempo** or beat, and that abstract physical gestures can communicate a specific emotion or story to an audience.

In 'The Great Fire of London' learning Theme: Children learn the mechanics of a motif—a sequence of movements that tells a story. They learn to perform a rhythmic, 4-beat pattern representing the community effort: *Step right, scoop water, swing bucket, pour.* They repeat this pattern to a steady drumbeat, matching their physical tempo to the speed of the music.
Why it matters: Coordinating movement to a rhythm bridges the gap between physical exertion and cognitive patterning. It builds timing, coordination, and the ability to work in synchronicity with other people.

4. Space Awareness and Safety Tactics
Substantive knowledge includes understanding **personal space** (the bubble around your body) and **general space** (the shared room), alongside the tactical rules of tag and invasion games.
In 'The Great Fire of London' learning Theme: Children participate in tag-based invasion games (e.g., "The Sparks and the Carts").
The Rules: 2–3 children act as "Sparks" (the taggers). The rest are "Carts" attempting to carry precious items to safety.
The Strategy: Children must scan the room while running, using peripheral vision to find "open space" away from the taggers, adhering to the safety rule of never colliding with a classmate.
Why it matters: Spatial awareness is essential for situational safety. Learning how to move at high speeds in a crowded room without bumping into others directly trains a child's brain to process spatial hazards in real time.

The Physical Movement Palette of 1666
Substantive PE vocabulary is mapped directly onto the historical narrative to give movements explicit technical meaning:

Physical Element	Substantive PE Action	Historical Metaphor
Pathway	Traveling in sharp, sudden **zig-zags**	Dodging falling timbers in the narrow streets

Dynamics	Exploding from a **static freeze** into a rapid leap	A sudden flare of a spark catching the wind
Level	Dropping down from a high reach to a **low crouch**	Houses being intentionally pulled down into flat gaps
Coordination	A coordinated **side-step and swing** pattern	Passing water buckets along a human chain

Why Substantive PE Knowledge Matters
Without explicit substantive focus, primary school PE can devolve into unstructured running around or chaotic games where children simply burn off energy. By framing physical milestones within **'The Great Fire of London'**, body mechanics become purposeful. Children aren't just jumping; they are exploring explosive power. They aren't just walking; they are practicing low-level weight distribution. This approach teaches them that their bodies are highly capable instruments that can be controlled, balanced, and directed with absolute intention, laying a healthy foundation for lifelong physical fitness and creative expression.

Disciplinary Knowledge

While **substantive knowledge** teaches children the physical facts of movement (such as how to hop on one foot, change levels, bend into an L-shape, or run along a zig-zag line), **Disciplinary Knowledge** teaches them *how to think, strategize, evaluate, and create like an active athlete, dancer, or tactician.* In Key Stage 1 PE, **disciplinary knowledge** is not about building muscle; it is about building **movement intelligence**. It focuses on the processes of **performance appraisal, strategic decision-making, creative choreography, and tactical awareness.** Using '**The Great Fire of London'** learning theme transforms PE from standard fitness drills into an interactive strategy game and choreographic studio. Children don't just move on command—they decode spatial problems, evaluate their peers' movements, and make real-time tactical decisions to navigate a dynamic physical environment.

The 4 Pillars of Disciplinary PE Knowledge in KS1
1. Creative Choreography and Expression (The Dancer's Lens)
Disciplinary knowledge in dance means understanding that body movements can be intentionally selected, altered, and linked together to communicate an abstract idea or emotional narrative to an audience.
In 'The Great Fire of London' Learning Theme: Instead of just copying the teacher's movements, children act as choreographers. Given the prompt "the easterly wind fuelling the fire," a child applies disciplinary thinking to create a physical phrase: they select an explosive leap, transition into a rapid, spinning turn, and end in a high, trembling freeze. They must choose these actions specifically because they evoke the texture and threat of an expanding flame.
Why it matters: This builds creative agency and artistic literacy. Children discover that their bodies can be used as tools for communication, shifting physical movement from a reflex into an artistic language.

2. Strategic and Tactical Decision-Making (The Athlete's Lens)
This involves learning how to evaluate space, anticipate an opponent's movements, and adjust physical behaviour in real time to achieve a tactical goal.

DISCIPLINARY SPATIAL INQUIRY	
THE PROBLEM:	THE TACTICAL SOLUTION:
Two "Sparks" (Taggers) blocking the direct path to the River Thames.	De-accelerate, change to a curving pathway to exploit the open space on the right.

In the Great Fire Theme: In a strategic chase game like "Escaping the Fire Grid," children must dodge across the hall to carry a beanbag "treasure" to safety without being tagged by a classmate acting as a "Spark." A disciplinary thinker doesn't just sprint blindly forward. They scan the space, recognise that their direct path is blocked, purposefully de-accelerate, switch to a curving pathway, and exploit an open pocket of space on the flank.
Why it matters: This develops critical cognitive skills under pressure. It trains a child's brain to read moving environments, assess risks, and change a physical plan in a split second—the exact foundation required for all invasion sports (soccer, netball, rugby).

3. Performance Appraisal and Peer Critique (The Coach's Lens)
Disciplinary knowledge requires children to look critically at physical performances—both their own and their peers'—to analyse what makes a movement successful, stable, or expressive.

In 'The Great Fire of London' Learning Theme: Half the class performs their "Bucket Brigade" teamwork motif while the other half acts as analytical judges. Using PE vocabulary, the judges evaluate the performance: *"I knew they were working hard because their levels were low and their bucket-swinging gestures were perfectly synchronised to the beat. To make it better, they need to hold their final freeze completely still without wobbling."*
Why it matters: It builds an objective eye for quality and technical form. By learning how to observe and respectfully critique others, children develop a deep mental model of movement mechanics, which helps them identify how to adjust and improve their own physical form.

4. Evaluating Physical Impact and Health Literacy
This involves developing an early awareness of how physical exertion changes the body internally, and recognising how specific body parts adapt to different types of movement.

In 'The Great Fire of London' Learning Theme: After an intense, high-speed chase game simulating escaping the burning streets, children drop to a seated position and check their physical markers. They feel their hearts pounding and notice their breathing is heavy. The disciplinary discussion focuses on *why*: *"Why does running fast to escape the fire make our hearts beat so quickly? Which muscles did we use to stay low when crawling under the imaginary smoke?"*
Why it matters: This introduces basic health and physiology literacy. It teaches children to listen to their bodies and understand that physical exertion is a biological system that improves heart health, muscle strength, and lung capacity.

Substantive vs. Disciplinary: The PE Paradigm

Substantive Knowledge (The Physical Actions)	Disciplinary Knowledge (The Strategic Practice)
Knowing how to transition cleanly from a high reach down to a low-level crouch.	Selecting that specific level change to dramatically communicate a timber house collapsing during a choreographed group performance.
Mastering the physical skill of running in a zig-zag line without tripping.	Actively choosing a zig-zag pathway to weave through oncoming taggers during a strategic game, manipulating space to avoid being caught.
Knowing the safety rule of keeping your head up and looking around while running.	Using peripheral vision to scan the entire hall, calculating where the "open space" is, and directing your team to move into it safely.

Why Disciplinary PE Knowledge Matters Most
If PE lessons only focus on *substantive* drills, children are merely following orders: they run when the whistle blows, stand on one leg on command, and play games based on pure physical instinct. **Disciplinary knowledge puts children in control of their own physical literacy.** By exploring **'The Great Fire of London'** through a tactical and expressive lens, they learn to treat physical activity as a thought process. They learn to compose choreography, solve spatial riddles, coach their friends, and understand their own biology. These critical-thinking and self-evaluation habits give them the confidence to engage with dance, sports, and fitness thoughtfully and safely throughout their lives.

Learning Objectives

Overarching PE Aims for KS1 (from the National Curriculum):
Develop fundamental movement skills, become increasingly competent and confident and access a broad range of opportunities to extend their agility, balance and coordination, individually and with others.
Engage in competitive (both against self and against others) and co-operative physical activities, in a range of increasingly challenging situations.
Be physically active for sustained periods of time.
Lead healthy, active lives.

Specific PE Objectives for 'The Great Fire of London' for Key Stage 1 Pupils:
1. Mastering Basic Movements and Coordination:
Running: Pupils will be able to run at different speeds (e.g., a slow start representing the small fire, then fast, frantic running as the fire spreads) with control and awareness of space, avoiding collisions with others (representing people fleeing).
Jumping: Pupils will be able to jump in different ways (e.g., jumping over "rubble" or "burning embers") demonstrating control and landing safely.

Throwing and Catching: Pupils will be able to throw and catch objects (e.g., beanbags representing buckets of water or possessions being rescued) with increasing accuracy and control, both individually and with a partner.

Balance and Agility: Pupils will be able to maintain balance in different poses (e.g., balancing on one leg like someone carefully moving through a crowded street) and change direction quickly and smoothly (mimicking navigating burning streets).

2. Developing Movement Patterns and Sequences (Dance/Gymnastics):
Creating movement sequences: Pupils will be able to create and perform short movement sequences inspired by the events of the fire, such as:
The baker waking up and discovering the fire (slow, stretching movements).
The fire spreading from house to house (fast, expanding movements).
People carrying their belongings (carrying actions, walking with varying speeds).
Firefighters passing buckets of water (coordinated passing movements).
The wind blowing (swaying, swirling movements).
London being rebuilt (building movements, strong, steady actions).

Responding to music/rhythm: Pupils will be able to respond to different rhythms and tempos with appropriate movements (e.g., slow, creeping music for the start of the fire, fast, urgent music for the spread). They could also perform "London's Burning" through movement.

3. Participating in Team Games and Co-operative Activities:
Working collaboratively: Pupils will be able to work effectively with a partner or in a small group to achieve a common goal (e.g., in a "water bucket chain" relay, or safely evacuating "belongings" from a designated "house").

Developing simple tactics: Pupils will begin to understand and apply simple tactics in small-sided games or challenges related to the fire (e.g., working together to "put out" a designated "fire" area, or strategizing how to move through an obstacle course representing the burning city).

Fair play and respect: Pupils will demonstrate fair play, respect for others, and good sportsmanship during all activities, even when engaging in simulated "competitive" scenarios (e.g., racing to "save" items).

4. Understanding Health and Fitness (implicitly through activity):
Sustained physical activity: Pupils will engage in continuous physical activity for a sustained period, building stamina and endurance through movement-based tasks related to the fire.

Understanding the importance of movement: Through active participation, pupils will begin to understand how movement helps them to stay healthy and how it was essential for people during historical events like the Great Fire (e.g., fleeing to safety, carrying items, fighting the fire).

Lesson Ideas

This 6-week Key Stage 1 Physical Education medium-term plan bridges creative, expressive movement with rigorous physical skill development. Using **The Great Fire of London** as a dramatic stimulus, children develop **Fundamental Movement Skills (FMS)**, build spatial and tactical awareness through strategic chase games, and work as choreographers to compose a narrative dance piece.

Block 1: Spatial Tactics & Navigating the City Grid (Weeks 1-2)

Week 1: Escaping the Narrow Streets — Spatial Awareness & Pathways
Substantive Knowledge: General space is the entire room shared with others; **personal space** is the physical bubble immediately around your body. Pathways can be *straight, curved, or zig-zag*.
Disciplinary Knowledge: Tactical Decision-Making. Using peripheral vision to scan a crowded room, calculating where open space is, and changing pathways to avoid collisions.

Activity:
The London Grid (Warm-Up): Set out cones to form narrow, grid-like paths representing 1666 London. Children travel through the lanes using different movements (walking, side-stepping, skipping) without touching the cones or their peers.
Pathway Escapes: Introduce the hazard—imaginary falling embers. On a drumbeat signal, children must change their direction and travel pathway instantly:
Straight pathways: Sprinting open roads toward the river.
Zig-zag pathways: Dodging and weaving around obstacles.
Game — "The Streets of London": Taggers (the fire) try to tag citizens. Citizens can only evade by altering their speed and switching to curved or zig-zag pathways to dodge into open space.
Outcome & Assessment: Children can travel safely at variable speeds within general space, altering their pathway intentionally to exploit open areas.

Week 2: Under the Smoke — Speed, Agility, and Levels
Substantive Knowledge: Movements can be performed at different spatial **levels**: *high* (stretching upward), *medium* (standing/bent knees), and *low* (on the floor).
Disciplinary Knowledge: Evaluating Physical Impact. Recognising how changing body levels changes weight distribution and identifying which muscles help them balance.

Activity:
Level Changes (Warm-Up): Children move around the hall. On a whistle, they must match the called level: High (stretch to the sky), Medium (ready stance), or Low (flat to the floor).
Crawl and Dash (FMS Drill): Explain that smoke rises, so escaping citizens had to stay low. Set up low obstacles (benches or mats). Children must transition from a medium-level run to a low-level crouch or crawl under the "smoke" boundary, then explode back up into a sprint.
Tactical Game — "The Sparks & The Carts": "Carts" try to carry beanbag treasures from one side of the hall to the other. "Sparks" (taggers) can only tag people who are standing. To be safe, a Cart must drop to a low-level static balance shape.
Outcome & Assessment: Clean transitions from high-speed travel to a low-level, controlled stop or crawl while maintaining body balance.

Block 2: Expressive Narrative Dance & Motif Building (Weeks 3-4)
Week 3: Spark to Inferno — Choreographing Dynamic Actions
Substantive Knowledge: A **motif** is a sequence of themed movements linked together to tell a story. **Dynamics** in dance describes *how* a movement is performed (e.g., sharp, smooth, explosive, heavy).
Disciplinary Knowledge: Creative Choreography. Selecting and combining contrasting dynamic movements to express a changing historical storyline.

Activity:
The Tiny Spark (Piano/Smooth): Children start curled up at a low level. Using tiny, sharp, trembling finger and arm movements, they slowly grow and expand upwards as the flame catches.

The Raging Fire (Forte/Explosive): Introduce jumping, leaping, and spinning. Children practice high-level explosive movements—leaping into the air with sharp, jagged arm shapes to represent a blazing roof collapsing.
Linking the Motif: Guide children to connect three actions into a phrase: *Curled twist (low)* →*Spinning travel (medium)* →*Explosive leap (high)* →*Frozen shape.*
Outcome & Assessment: Performance of a short, continuous dance phrase that clearly communicates a transformation from a quiet spark into an aggressive flame.

THE 3-STAGE DANCE MOTIF		
ACTION 1: THE SPARK →	ACTION 2: THE WIND →	ACTION 3: INFERNO
Low-level curl	Medium-level spin	High-level leap
Sharp, quiet gesture	Fast, continuous travel	Sudden, heavy freeze

Week 4: The Bucket Brigade — Rhythm & Unison Teamwork
Substantive Knowledge: Unison means performing the exact same movement at the exact same time as a partner or group. A **gestural phrase** uses stylised real-world actions to communicate meaning.
Disciplinary Knowledge: Performance Appraisal. Observing a peer group's movement timing and evaluating how effectively they maintain unison rhythm.

Activity:
The Rhythmic Pulse (Warm-Up): Play a steady drumbeat. Children march to the beat, focusing on dropping their feet precisely on the rhythmic accent.
The Human Water Chain: Arrange children into small groups of 4–5, standing in a straight line. Together, they invent a stylised 4-beat gestural motif based on fighting the fire:
Beat 1: Bend low and scoop an imaginary heavy bucket from the river.
Beat 2: Swing the arms across the body to pass it to the side.
Beat 3: Twist to receive the next imaginary bucket.
Beat 4: Push arms forward to throw the water onto the flames.
The Unison Challenge: Groups practice performing this 4-beat sequence repeatedly, synchronising their timing perfectly to the drumbeat.
Outcome & Assessment: Groups can execute a multi-step movement sequence together in unison without breaking timing or losing rhythm.

Block 3: Composition, Review & Biological Evaluation (Weeks 5-6)
Week 5: The Rebuilt City — Balance and Control
Substantive Knowledge: A **static balance** is holding the body completely still on a specific base of support (**points** like feet/hands, or **patches** like knees/bottoms).
Disciplinary Knowledge: Structural Performance. Using physical tension and muscle engagement to represent rigid, solid structures following a historical disaster.

Activity:
The Great Collapse (Warm-Up): Children travel creatively. On a sudden cymbal crash, they must drop to a low level and freeze in a strong, twisted shape to represent a collapsed timber beam. They must hold it for 5 seconds without wobbling.
Building the New Stone City: Introduce the historical concept of rebuilding London out of strong stone and brick. Children work in pairs to design symmetrical, rigid balance shapes that touch, forming wide stone archways, tall monument towers, or strong brick walls.

The Performance Fusion: Combine the weeks of learning into a whole-class performance timeline: *The peaceful city →The spreading fire motif (Week 3) →The co-operative water chain (Week 4) →The final collapse and emergence of the strong, stone-balanced city.*
Outcome & Assessment: Holding a creative partner balance securely for 5 seconds, displaying muscle tension and steady control.

Week 6: The Grand Show & Health Inspection
Substantive Knowledge: Physical exercise causes immediate internal changes to the body, including an **increased heart rate** (pounding chest) and **faster respiration** (heavy breathing).
Disciplinary Knowledge: Health Literacy & Peer Appraisal. Monitoring personal physiological changes post-exertion and coaching peers using technical movement vocabulary.

Activity:
The Performance: The class is split in half. Group 1 performs the complete Great Fire narrative dance sequence from start to finish while Group 2 acts as the audience and evaluation judges.
The Coach's Appraisal: Group 2 evaluates the performers using a structured feedback frame: *"I thought their performance was brilliant because their levels changed from low to high during the fire scene. To improve, they need to make sure their bucket brigade actions are in perfect unison."* Swap roles.
The Pulse Check: Immediately after performing, everyone sits down and places a hand over their heart. Lead a discussion: *"What has happened to our breathing and heart rate? Why does moving like a raging fire or escaping the city lanes make our bodies react this way?"*
Outcome & Assessment: Children can describe two physical changes that happen to their bodies during exercise and offer one accurate critique of a peer's movement performance.

Progress Trackers: Substantive vs. Disciplinary

Dimension	Key Stage 1 PE Milestones (What they will know and do)
Substantive (Physical Building Blocks)	Travel safely at different speeds using **straight, curved, and zig-zag pathways**. Perform movements clearly across three spatial **levels (high, medium, low)**. Link distinct movements together to form a repeatable narrative **motif**. Maintain a continuous physical rhythm matching an external musical tempo. Hold a **static balance** securely on different bases of support for 5 seconds.
Disciplinary (Movement Intelligence)	Scan general space while sprinting, adjusting paths to exploit open pockets. Select expressive body actions based on how well they depict historical themes. Co-ordinate with an ensemble to execute movement sequences in synchronised **unison**. Appraise peer performances accurately using technical terms like *levels, dynamics,* and *control*.

	Explain how high-intensity movement impacts heart rate, breathing, and muscle use.

Other Information, Ideas and Resources

Fire Spreading" Game: Children start in a huddle (Pudding Lane) and gradually expand their movements and spread out across the hall as if the fire is spreading, making burning sounds.

"Bucket Chain" Relay: Children work in teams to pass "water" (beanbags or soft balls) in a chain, practising throwing and catching and working cooperatively.

"Evacuation Obstacle Course": Set up an obstacle course with "rubble" (cushions, mats) and "burning buildings" (cones) that children have to navigate safely, carrying a "possession" (small object) to a designated "safe area."

"Rebuilding London" Movement Sequence: Children work in pairs or small groups to create a dance sequence showing people working together to rebuild the city, focusing on strong, balanced movements.

"Samuel Pepys' Journey": Children follow a movement pathway, performing actions to represent different parts of Pepys' diary (e.g., tiptoeing to hide his cheese, running from the fire, jumping over debris).

"Spreading Fire" Tag:
Activity: One or two children are designated as the "fire." They chase the other children. When tagged, a child "catches fire" and must hold the tagged body part (e.g., arm, leg). To become "unburnt," they need another untagged child to gently touch their "burnt" spot.
Link to History: Represents how quickly and easily the fire spread from house to house.
PE Skills: Running, chasing, dodging, spatial awareness, cooperation.

"Buckets of Water" Relay Race:
Activity: Divide the children into teams. Set up a "water source" (e.g., a blue hoop or a designated area) and a "fire" (e.g., a red cone or marker) a distance away. Children take turns running with a small beanbag or soft toy ("bucket of water"), carrying it carefully to the "fire," and placing it down before running back to tag their teammate. The first team to "put out" the fire (all team members have taken a turn) wins.
Link to History: Represents the people trying to put out the fire using buckets of water.
PE Skills: Running, carrying, teamwork, coordination, following instructions.

"Falling Buildings" Balance Challenge:
Activity: Use mats or marked areas as "buildings." Children walk along the "buildings" (practicing balance). On a signal (e.g., a whistle or a shout of "Fire!"), they must carefully step off their "building" and find a safe space (a designated area). You can make it more challenging by having them balance in different ways (one leg, tiptoes) before the "fire" signal.
Link to History: Represents the houses collapsing during the fire.
PE Skills: Balance, coordination, reaction time, spatial awareness.

"Escape from Pudding Lane" Obstacle Course:
Activity: Set up a simple obstacle course using cones to weave through (narrow streets), low hurdles to step over (debris), and a tunnel to crawl through (escaping smoke). Children navigate the course as quickly and safely as possible.
Link to History: Represents the people trying to escape the burning city.

PE Skills: Agility, coordination, problem-solving (navigating the course), gross motor skills.

"Pulling Down Houses" Team Pull:
Activity: Divide the children into two teams. Give each team one end of a long rope or a large, soft scarf. Place a marker in the middle. On a signal, each team tries to pull the marker over their designated line.
Link to History: Represents the Lord Mayor eventually ordering houses to be pulled down to create firebreaks.
PE Skills: Teamwork, pulling, strength (in a safe way), coordination.

"Wind and Fire" Ribbon Dancing:
Activity: Give each child a ribbon or scarf. Play music that changes tempo. When the music is fast, they move their ribbons quickly and erratically, representing the spreading fire. When the music slows down or stops, they move their ribbons gently or hold them still, representing the wind changing or the fire dying down in areas.
Link to History: Represents how the wind played a significant role in spreading the fire.
PE Skills: Creative movement, coordination, following the rhythm, expressing ideas through movement.

Considerations for Implementation

Emphasise safety throughout all activities and explain the historical link to The Great Fire of London before and after each game.

Adapt the activities to the space and resources you have available.

Science

Substantive Knowledge

In Key Stage 1 Science, **substantive knowledge** consists of the core, foundational scientific facts, classifications, and material properties that children must learn. In the National Curriculum, this centres heavily on the **Everyday Materials** strand (identifying, naming, and comparing common materials) and basic **Seasonal Changes**. When paired with '**The Great Fire of London**,' science steps out of the abstract lab and directly explains the mechanics of a historical catastrophe. By evaluating the material world of 1666, children discover that the Great Fire wasn't an unavoidable act of magic—it was a logical, physical chemical reaction driven by the properties of the materials and weather conditions of the time.

The 4 Pillars of Substantive Science Knowledge in KS1
1. Identifying and Classifying 1666 Materials
Substantive knowledge requires children to look at the world around them, distinguish between an object and the material it is made from, and name common materials like **wood, stone, brick, paper, plastic, fabric, glass, and straw**.

In 'The Great Fire of London' Learning Theme: Children look at the components of a 17th-century street and identify what everything was made of. They learn that the main structural frames of the houses were made of **wood (timber)**, the roofs were made of **straw (thatch)**, and the protective coatings were made of **pitch (tar)**.
Why it matters: Classification is the fundamental language of science. Before children can analyse complex scientific systems, they must be able to accurately sort and label the physical matter that makes up their environment.

2. Exploring Material Properties & Flammability

Children must master the vocabulary used to describe how a material behaves. This includes properties like **hard/soft, stiff/bendy, rough/smooth, waterproof/absorbent**, and crucially within this theme, **flammable/non-flammable** (combustible).
In 'The Great Fire of London' Learning Theme: Children test and compare the properties of historical materials against modern alternatives.

MATERIAL PROPERTIES GRID		
MATERIAL:	PROPERTY:	1666 ROLE / FIX:
Wood	Flammable ⟶	Main building material
Straw	Flammable⟶	Used for roofs (Thatch)
Brick	Non-flammable⟶	Rebuilt city safety rule
Stone	Non-flammable⟶	Rebuilt city safety rule

They learn that wood and straw are strong and stiff enough to build with, but carry the hazardous property of being highly **flammable** (they catch fire easily). They learn that **brick and stone** carry the property of being **non-flammable** (insulating/resisting fire).
Why it matters: Properties dictate function. Learning why certain materials react to heat or stress teaches children that humans must select building materials deliberately based on safety, durability, and environmental conditions.

3. Physical Changes & The Effects of Heating
Substantive knowledge includes observing and understanding how materials change state or form when subjected to external forces like forces (bending, stretching) or temperature shifts (**heating and cooling**).

In 'The Great Fire of London' Learning Theme: Children learn the basic ingredients a fire needs to exist: **Fuel** (the dry wooden houses), **Heat** (the bakery oven spark), and **Oxygen** (the strong wind feeding the flames). They observe that heating can permanently change materials—turning solid wood into ash and smoke, melting metal lead roofs (like the roof of old St. Paul's Cathedral), and cracking weak stones.
Why it matters: This introduces early chemistry. Understanding how heating alters materials helps children grasp the concept of cause and effect at a molecular level, building the framework for learning about reversible and irreversible changes later in Key Stage 2.

4. Weather Systems and Seasonal Environmental Tracking
Children must know the four seasons and understand how basic weather elements (rain, wind, heat, drought) change across the year and impact the environment.

In 'The Great Fire of London' Learning Theme: Children look at the meteorological data of September 1666. They learn that London had experienced a long, hot summer **drought** (months with almost no rainfall). This physical weather context permanently changed the properties of the human features, evaporating all moisture and leaving the wooden buildings bone-dry. They also learn that a powerful easterly **gale** (strong wind) supplied an abundance of oxygen, pushing the fire forward rapidly.
Why it matters: This connects earth science with real-world consequences. It teaches children that the atmosphere and weather patterns directly dictate the behaviour of land systems and human settlements.

Why Substantive Science Knowledge Matters
Without substantive science facts, children view historical events through a lens of superstition or simple storytelling ("the fire happened because a baker was careless").

Science changes the narrative. By evaluating the material properties of wood versus brick, or understanding how a summer drought alters the water content of timber, children realise that **'The Great Fire of London'** was a predictable physical event. It teaches them that the modern world is engineered the way it is—with brick houses, fireproof materials, and strict safety layouts—because humans used scientific observation to learn from the material failures of the past.

Disciplinary Knowledge

While **substantive knowledge** teaches children the concrete facts of science (such as naming wood, brick, and straw, or defining what *flammable* means), **Disciplinary Knowledge** teaches them *how to think, work, and investigate like a scientist.*

In Key Stage 1, disciplinary science is explicitly mapped out as **"Working Scientifically."** It focuses on the practical skills of **asking questions, performing simple fair tests, observing closely using senses and equipment, recording data, and identifying patterns.**

Using **The Great Fire of London** as a theme shifts science from static worksheets into a hands-on investigation. Children act as safety engineers and forensic scientists, testing the material world of 1666 to gather physical evidence that explains a historic disaster.

The 4 Pillars of Disciplinary Science in KS1

1. Performing Simple Comparative and Fair Tests

Disciplinary knowledge means understanding that to truly find out how a material behaves, you have to test it fairly. This involves changing one variable while keeping everything else exactly the same.

In the Great Fire Theme: Children test the property of **absorbency** to solve an infrastructure problem: *What were the best materials for making buckets in 1666?*

The Test: Children take identical squares of different materials (leather, fabric, wood, paper, modern plastic). They pour the exact same amount of water onto each square for 10 seconds.

The Scientific Discovery: They observe which materials absorb water and fall apart (paper/fabric) versus which materials hold water securely (leather/wood/plastic). They use this test data to judge why the 1666 leather fire buckets were designed the way they were.

Why it matters: This is the bedrock of the scientific method. Learning how to control a test ensures that data is reliable, teaching children how to form evidence-based conclusions rather than relying on guesswork.

2. Observing Closely and Measuring Over Time

Scientists must train their eyes, hands, and measurement tools to spot subtle physical changes in matter as it reacts to environmental forces like heat, water, or wind.

In 'The Great Fire of London' Learning Theme: Children simulate the environmental conditions leading up to the fire. They take identical blocks of fresh wood. They place one block in a damp tray (simulating a rainy season) and one block under a heat lamp or on a sunny windowsill for a week (simulating the 1666 **summer drought**).

OBSERVING MOISTURE LOSS	
THE DRIED MATERIAL	THE SCIENTIFIC TEST:
Wood block kept dry/hot to mimic 1666 drought.	Weighing reveals weight loss(water loss). Surface splits and absorbs mock sparks fast.

The Observation: Children weigh the blocks before and after, noticing the dried wood loses mass (water weight). They use magnifying glasses to observe how the dry wood cracks and splits, noting how its physical structure changes to make it more vulnerable to catching fire.
Why it matters: Careful observation guards against confirmation bias. It teaches young children to look past the obvious and notice micro-changes in weight, texture, and appearance, building vital precision and patience.

3. Gathering, Recording, and Mapping Data
Data must be organised clearly so that other scientists can read it, understand it, and spot trends quickly. In KS1, this involves sorting objects into tables, Venn diagrams, or simple pictograms.
In 'The Great Fire of London' Learning Theme: Children sort materials found in 1666 London versus modern London. They create a **Venn Diagram** based on two strict properties: *Is it Stiff?* and *Is it Flammable?*

CLASSROOM PROPERTY DATA SORT		
STIFF		FLAMMABLE
Stone	Wood	Straw
Brick	(Tudor Houses)	Fabric
		(Thatch)

They physically place sample blocks into the sorting rings, revealing a dangerous data pattern: 1666 houses were built entirely out of materials that sat right in the overlapping middle zone—both stiff enough to build with, but highly flammable.
Why it matters: Data organisation transforms a messy pile of observations into clear, scannable intelligence. It helps children spot relationships between properties and real-world consequences at a single glance.

4. Answering Questions and Using Evidence to Justify Claims
A scientist never simply says, "I think this happens." They say, "I know this happens **because the evidence shows...**" Disciplinary knowledge means backing up a hypothesis with physical test results.

In 'The Great Fire of London' Learning Theme: The teacher asks: *"Why did the King order the new city of London to be built entirely out of stone and brick?"* A child using disciplinary thinking responds: *"Because when we tested stone and brick against heat, they did not burn or change shape, which proves they are non-flammable and will keep the city safe."*
Why it matters: This builds early argumentative and rhetorical logic. It trains children to base their statements on verifiable physical facts, protecting them from misinformation and teaching them the value of intellectual honesty.

Substantive vs. Disciplinary: The Science Paradigm

Substantive Knowledge (The Concrete Facts)	Disciplinary Knowledge (The Scientist's Skill)
Knowing that stone, brick, wood, and thatch are all examples of everyday materials.	Actively grouping and classifying those materials based on shared physical properties using a Venn diagram.
Stating that heating a material can cause it to melt, burn, or change into ash.	Setting up a structured test to observe and measure exactly how different surfaces respond to a targeted heat source over time.
Knowing that water puts out a fire and can be carried in a bucket.	Designing a fair test to measure the absorbency of paper, leather, and fabric to prove which makes the most reliable water container.

Why Disciplinary Science Matters Most

If science lessons only focus on *substantive* facts, children are just memorising a glossary of properties. They learn to point to a brick and call it "hard" without ever understanding the investigative process that led to its selection. **Disciplinary knowledge brings science to life.** By using **'The Great Fire of London'** as a historic puzzle, children learn that science is a toolkit for investigating problems. They discover that our ancestors solved the crisis of a burning city not through luck, but by working scientifically—observing material failures, testing alternative materials, and changing building rules based on physical evidence. This mindset prepares children to look at modern challenges (like climate change or product design) as problems that can be solved through methodical, scientific inquiry.

Learning Objectives

Working Scientifically (Enquiry Skills):

Observing and Asking Questions:

To be able to observe and describe different materials and how they change when exposed to heat (e.g., in a controlled experiment with adult supervision, demonstrating how small pieces of paper or wood char).

To ask simple questions about fire, such as "What does fire need to burn?" or "Why did the fire spread so quickly?"

Predicting and Investigating:

To make simple predictions about which materials will burn more easily.

To carry out simple, safe investigations (e.g., looking at different materials and discussing their properties, not actual burning of materials by children).

Recording and Communicating:

To record observations using simple methods (e.g., drawing pictures, ticking boxes, making simple notes).

To communicate their findings to others using simple scientific language.

Science Knowledge and Understanding:

Properties of Materials:

To identify and name a variety of everyday materials, such as wood, stone, brick, glass, and metal.

To describe some observable properties of these materials (e.g., wood is hard, paper is thin, stone is heavy).
To understand that different materials have different properties that make them suitable for different uses (e.g., wood for houses, stone for foundations).
To understand that some materials are **combustible** (burn easily) and some are **non-combustible** (do not burn easily). Link this to the prevalence of wooden houses in 1666 London.

Changes to Materials (Irreversible Change - Burning):
To understand that burning is a **change** to a material.
To recognise that burning is an **irreversible change**, meaning the material cannot easily be changed back to its original form (e.g., wood turns to ash and smoke).

The Fire Triangle (simplified for KS1):
To know that fire needs three things: **fuel** (something to burn, like wood), **heat** (to start and keep it going), and **oxygen** (from the air).
To understand how removing one of these can help stop a fire (e.g., water cools the heat and smothers the oxygen; creating firebreaks removes fuel).

Forces and Movement (Spread of Fire):
To understand that wind (a force) can make fire spread faster.
To discuss how houses being built close together allowed the fire to jump from one building to another.

Lesson Ideas

This 6-week Key Stage 1 Science medium-term plan focuses on the **Everyday Materials** strand of the National Curriculum. By working scientifically, children will investigate the physical properties of the materials that made up 1666 London, perform simple fair tests, and gather evidence to explain why the city was rebuilt using completely different materials.

Block 1: Identification & Sorting (Weeks 1-2)
Week 1: What was London Made Of? — Material Identification
Substantive Knowledge: An object is the thing itself (e.g., a house, a bucket); a **material** is what it is made from. Common materials include **wood, straw, brick, stone, leather, glass, and metal**.
Disciplinary Knowledge (Working Scientifically): Identifying and classifying common materials by sight and touch, distinguishing them from the objects themselves.

Activity:
The 1666 Mystery Bag: Pass around physical samples of materials used in Tudor London (rough timber blocks, dried straw, scrap leather, real brick, cold stone). Children use their senses to describe them.
Object vs. Material Sort: Look at pictures of 17th-century objects. Guide children to label the object and name its material (e.g., *"This object is a roof, its material is straw"*).
Classroom Material Hunt: Children find things in the modern classroom made of the same materials, noting that we still use wood and brick but rarely use straw for roofs.
Outcome & Assessment: Children can correctly sort a selection of objects by their raw materials and name at least four everyday materials found in 1666.

Week 2: Hard, Soft, Stiff, Bendy — Exploring Properties

Substantive Knowledge: Materials have distinct **properties** that describe how they behave. Properties include *hard/soft, stiff/bendy, rough/smooth, opaque/transparent*.
Disciplinary Knowledge (Working Scientifically): Sorting and grouping objects into basic data sets based on their physical properties.

Activity:
The Property Challenge: Give pairs a block of wood and a bunch of straw. Ask them to try bending both. Introduce the words **stiff** (does not bend easily) and **bendy/flexible** (bends easily).
The 1666 Property Grid: Children test a range of materials, checking if they are rough or smooth, hard or soft, stiff or bendy.
Data Mapping: Group materials into a simple table or Venn diagram based on two criteria: *Is it hard?* and *Is it stiff?*
Outcome & Assessment: Children can use accurate descriptor words (stiff, hard, rough) to explain the physical properties of wood, stone, and straw.

Block 2: Investigating Fire Safety & Absorbency (Weeks 3-4)
Week 3: Flammable vs. Non-Flammable
Substantive Knowledge: Flammable means a material catches fire easily and burns quickly (e.g., wood, straw, paper). **Non-flammable** means a material resists fire and does not burn easily (e.g., brick, stone, clay).
Disciplinary Knowledge (Working Scientifically): Using observations to answer a scientific question and grouping objects based on a hidden behavioural property.

Activity:
The Safety Question: Introduce the scientific riddle: *"Why did the fire spread across the houses so quickly?"*
Faux-Fire Property Test: (Safety Note: No real fire is used in the classroom). Use a bright red light or a damp sponge "fire stamper." Children explore how different mock materials respond to heat based on a property sheet.
The Danger Zone Sorting: Children sort samples into two zones: *The Flammable Danger Zone* (straw, wood, fabric, paper) and *The Non-Flammable Safe Zone* (brick, slate, stone, metal).
Outcome & Assessment: Children can define "flammable" and explain that London's houses were built out of materials from the flammable danger zone.

Week 4: The Fire Bucket Challenge — Testing Absorbency
Substantive Knowledge: Absorbent materials soak up liquid easily (e.g., paper, fabric). **Waterproof** materials repel water and do not let liquid soak through (e.g., plastic, leather, treated wood).
Disciplinary Knowledge (Working Scientifically): Performing a simple **comparative fair test** by changing one variable (the material) while keeping other factors the same.

Activity:
The Infrastructure Problem: In 1666, there were no plastic buckets. They used leather or wood. Why didn't they use paper or fabric?
The Fair Test Setup: Set up an absorbency test. Cut identical squares of paper, fabric, leather, and wood. Use a pipette or spoon to drop exactly 3 drops of water onto each square.

THE ABSORBENCY FAIR TEST			
Same size squares ⟶	Paper	Fabric	Leather
Same amount of water ⟶	💧💧💧	💧💧💧	💧💧💧

The Discovery: Paper turns to mush. Leather keeps water on top!
Data Recording: Use a timer. Observe what happens after 1 minute. Record which materials stayed strong and held the water (waterproof) and which soaked it up and went soggy (absorbent).

Outcome & Assessment: Children can run a simple test with support, keeping the water drops equal, and identify leather as a waterproof material suitable for buckets.

Block 3: Environmental Factors & Rebuilding (Weeks 5-6)
Week 5: The Bone-Dry City — Weather and Moisture Loss
Substantive Knowledge: The weather can permanently alter the properties of materials. A **drought** (a long period with no rain) extracts moisture from materials, making wood and straw lighter, drier, and much easier to ignite.
Disciplinary Knowledge (Working Scientifically): Making close observations over time and using measuring equipment (scales) to gather physical data.

Activity:
Simulating the 1666 Drought: One week prior, place one block of fresh timber in a damp container and an identical block under a dry heat lamp or sunny windowsill.
The Mass Inspection: Children weigh both blocks using a balancing scale or digital scale. They observe that the dried block is lighter.
Magnifying the Details: Use magnifying glasses to look closely at the surfaces. Notice how the dried wood has cracked, split, and become brittle. Discuss how losing its water content makes the wood ready to burn instantly if a spark touches it.
Outcome & Assessment: Children can use scales to show that drying wood makes it lighter, and explain that the hot summer weather made London's timber bone-dry.

Week 6: Rebuilding London — The Ultimate Material Audit
Substantive Knowledge: Humans use scientific testing to solve real-world problems. After 1666, King Charles II decreed that houses must be built of **brick or stone** with slate roofs to prevent future fires.
Disciplinary Knowledge (Working Scientifically): Using gathered test evidence to justify why a material is fit for purpose.

Activity:
The King's Council: Children act as royal scientists advising the King on how to rebuild London safely.
The Material Audit: Review all the data gathered from Weeks 1–5. Children look at pairs of competing choices:
Choice 1: Wood vs. Brick for walls.
Choice 2: Straw vs. Slate tile for roofs.

The Evidence Summary: Children complete an annotated blueprint drawing of a new 1667 house, using scientific arrows to justify their choices (e.g., *"I chose brick because it is hard, stiff, and non-flammable"*).
Outcome & Assessment: Children can select brick/stone as the best building material and explicitly use the property word "non-flammable" to justify their decision.

Progress Trackers: Substantive vs. Disciplinary

Dimension	Key Stage 1 Science Milestones (What they will know and do)
Substantive (Scientific Facts)	Identify and name **wood, straw, brick, stone, leather, glass, and paper**. Accurately define the property terms **stiff, flexible, absorbent,** and **waterproof**. Explain the difference between **flammable** and **non-flammable** materials. State that a **drought** dries out materials by removing their water content. Explain why brick and stone are safer building materials than wood and straw.
Disciplinary (Working Scientifically)	Sort objects clearly by the raw materials they are physically made from. Group everyday items into tables and Venn diagrams based on physical properties. Conduct a simple comparative test fairly by keeping liquid volumes and sample sizes equal. Use measuring equipment like scales and magnifying glasses to track changes in matter. Back up a structural claim using data and evidence collected during class experiments.

Other Information, Ideas and Resources

Examples of Activities to Link Science and the Great Fire of London:
Material Sort: Provide various safe materials (small pieces of wood, fabric, paper, stone, metal, plastic) for children to sort into "burns easily" and "does not burn easily" categories. Discuss their reasoning and link to houses in 1666.

"What does fire need?" demonstration (adult-led, highly controlled): A teacher could demonstrate a small candle flame and then cover it to show it needs oxygen, or discuss how water extinguishes a flame by removing heat and oxygen.

Wind and Fire: Discuss how strong winds would have affected the spread of the fire, perhaps by blowing paper "embers" across a simulated London map.

"London Before and After" Materials: Compare images or models of 1666 London (wooden houses) with modern London (brick, concrete) and discuss why building materials changed.

Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter

Learning about different materials and the qualities they have.

Understand how materials are used for different purposes based on their qualities. Investigate how materials can be changed and whether these changes can be reversed.
Understand which materials burn easier than others Use our knowledge of materials when we learn about the Great Fire of London.

We will learn about how the building materials of the time helped the fire to spread.

What Makes Things Burn? (Combustion Basics):
Activity: Discuss things that burn (wood, paper, candles) and things that don't (stone, metal, water). Introduce the idea that fire needs fuel (something to burn) and air (oxygen). You can demonstrate this simply by covering a lit candle with a jar – it will go out when the oxygen is used up.
Science Concept: Introduction to the basic requirements for combustion (fuel and air).

How Does Fire Spread? (Heat Transfer - Conduction and Convection):
Activity: Discuss how the fire in London spread quickly from house to house. Explain that when something is hot, it can make the things next to it hot too (conduction). You can demonstrate this by placing a metal spoon in a cup of hot water – the handle will eventually feel warm. Also, discuss how hot air rises (convection) and how the wind helped carry the fire. A simple demonstration could be holding a piece of tissue paper above a warm (but not hot!) lightbulb or radiator to show it moving upwards.
Science Concept: Introduction to basic heat transfer (conduction and convection) and the role of wind.

Materials and Fire Resistance:
Activity: Show children different materials that were used to build houses in 1666 (wood, straw) and materials used now (brick, stone). Discuss which materials they think would burn easily and which would resist fire better. You could do a very simple (and safe, with adult supervision) demonstration of holding small pieces of different materials (like a small wooden block, a piece of fabric, a small stone) near a safe heat source (like a hairdryer on a warm setting – not too hot and not directly touching). Observe which materials heat up quickly or show signs of burning (if any, very carefully).
Science Concept: Understanding that different materials have different properties, including how easily they burn (flammability).

The Importance of Water to Put Out Fire:
Activity: Discuss how people tried to put out the fire using buckets of water. Explain that water cools things down and can stop the fire from having fuel to burn. You can demonstrate this by carefully pouring a small amount of water onto a lit candle (with appropriate safety measures and adult supervision) to show it being extinguished.
Science Concept: Water as a cooling agent and its role in fire suppression.

Observing and Comparing Old and New Buildings:
Activity: Look at pictures or models of the wooden houses in 1666 and compare them to the brick and stone buildings we have today. Discuss the differences in materials and how this might affect the spread of fire. This links to observation skills and understanding changes over time.
Science Concept: Observation, comparison of materials and structures, understanding how design and materials can impact safety.

Air and Fire (The Great Wind):

Activity: Discuss how the strong winds helped the fire spread so quickly. You can demonstrate the effect of wind by blowing on a tissue paper flame (from a safe distance and with adult supervision of the flame) or by using a fan to show how air movement can affect light objects. Explain how the wind carried hot embers to new buildings.
Science Concept: The effect of air movement (wind) on the spread of fire and materials.

Considerations for Implementation

Important Safety Note: Any activities involving heat or flames must be conducted with strict adult supervision and safety precautions. Focus on demonstrations rather than allowing children to handle fire themselves. The goal is to introduce basic scientific concepts in a safe and engaging way through the context of The Great Fire of London.

English

Book/Text Ideas

https://www.booksfortopics.com/fire-of-london

Fiction:
Vlad and the Great Fire of London by Kate Cunningham & Sam Cunningham (picture book) EYFS/KS1 (there are lots of resources for this online)
Toby and The Great Fire of London by Margaret Nash & Jane Cope (chapter book) – KS1
Short Stories: The Baker's Boy and the Great Fire of London by Tom Bradman & Tony Bradman (chapter book) – KS1
Raven Boy - Pippa Goodhart
Charlie and the Great Fire of London - Sue Finnie, Danièle Bourdais & Yannick Robert
The Tower Bridge Cat – Tee Dobinson
Daisy and the Trouble with London by Kes Gray (chapter book) – Y2
Katie in London by James Mayhew (picture book) – KS1
Paddington's London Story Treasury by Michael Bond & R.W. Alley (Short Story Collection) – KS1
Katie in Scotland by James Mayhew (picture book) – KS1
Katie Morag: Island Stories by Mairi Hedderwick (short story collection) – KS1
No Such Thing as Nessie! By Chani McBain & Kirsteen Harris-Jones (picture book) – EYFS/KS1
The Tall Tale of the Giant's Causeway by Lari Don & Emilie Gill (picture book) – KS1

Non-Fiction:
The Great Fire of London: 350th Anniversary of the Great Fire of 1666 by Emma Adams & James Weston Lewis – EYFS/KS1
The Great Fire of London (Usborne Young Reading) by Susanna Davidson & Rick Fairlamb – Y2
The Great Fire of London Unclassified by Nick Hunter – KS1
The Great Fire of London by Liz Gogerly
Who Was: Samuel Pepys? By Paul Harrison - KS1
The buildings that Made London by David Long & Josie Shenoy – KS1
Why do we Remember? The Great Fire London by Izzi Howell – KS1
Maps of the United Kingdom by Rachel Dixon & Ms. Livi Gosling – EYFS/KS1
The Big Book of the UK by Imogen Russell Williams & Louise Lockhart – KS1
Rivers of the United Kingdom by Catherine Brereton – KS1
Info Buzz: The United Kingdom by Izzi Howell – KS1
A Street Through Time by DK & Steve Noon – KS1
The Buildings that Made London by David Long & Josie Shenoy – KS1

Coming to England by Floella Benjamin & Diane Ewen (picture book) – KS1
Scotland: The People, The Places, The Stories by Chae Strathie & Lorraine Kelly – KS1
An Amazing Animal Atlas of Scotland by Anders Frang – KS1
Wales by Anita Ganeri – KS1
Belfast by Chris Oxlade & Anita Ganeri – KS1

Substantive Knowledge

In Key Stage 1 English, **substantive knowledge** consists of the fundamental, factual components of language—the "givens" that children must memorise and automate to become proficient communicators. Unlike disciplinary knowledge (the critical interpretation of a text or the creative craft of writing), substantive knowledge covers the concrete building blocks: phonics rules, grammar structures, spelling patterns, literal comprehension, tier-specific vocabulary, and the physical mechanics of speech and handwriting. By anchoring this linguistic framework to **The Great Fire of London**, children do not practice reading and writing in a vacuum. The dramatic, sensory historical theme serves as a high-utility landscape to apply and secure core English rules.

1. Substantive Knowledge in Reading

In Key Stage 1, reading split-screens into two primary substantive channels: **Word Reading (Transcription)** and **Literal Comprehension**.

Phonics and Word Decoding: Children must know how to translate graphemes (letters) into phonemes (sounds) and blend them with automaticity.
Application: Reading historical accounts requires decoding words containing complex digraphs and alternative spellings typical of KS1 phonics (e.g., *b-a-k-e-r* split digraph, *e-a* in *b-r-e-a-d*, or *ch* in *t-h-a-t-c-h*).
Common Exception Words: Memorising "tricky words" that do not follow standard phonic rules (e.g., *said, house, people, where, city*). The Great Fire narrative naturally repeats these exact baseline vocabulary tokens.
Literal Retrieval: Knowing that a text holds explicit facts that can be directly pulled out (e.g., using "VIPERS" retrieval skills).
Application: Finding explicit answers in simple primary records (such as adapted snippets of Samuel Pepys's diary). Children learn to point to the exact sentence stating *where* the fire started (Pudding Lane) and *when* (Sunday).
Why it matters: Word recognition must become an automatic reflex. By using a highly engaging, high-stakes story like a burning city, children practice high-frequency exception words and multi-syllable decoding repeatedly, converting fragile phonics tracking into permanent long-term memory fluency.

2. Substantive Knowledge in Writing

Substantive knowledge in writing governs the physical, grammatical, and structural architecture of a sentence. Children must explicitly know the laws of sentence construction before they can manipulate them for creative effect.

Sentence Architecture & Punctuation: Knowing that a complete sentence must contain a subject and a verb, start with a capital letter, and end with a full stop, exclamation mark, or question mark.
Application: Moving from simple sentences (*"The fire grew."*) to compound sentences using coordinating conjunctions like *and, but, or so* (*"The wind was strong so the fire spread."*).

Grammar and Word Classes: Identifying and using nouns (e.g., *sparks, timber, wind*), verbs (*burned, ran, pulled*), and adjectives (*dry, hot, smoky*).
Transcription and Mechanics: Forming lower-case and capital letters in the correct size and direction, using distinct finger spaces, and applying spelling rules (like adding suffixes *-ed* to past-tense verbs like *escaped*).
Why it matters: If the mechanics of writing—like finger spaces, full stops, and letter formation—are not thoroughly automated, a child's working memory becomes completely overloaded. Using the explicit, linear chronological sequence of the Great Fire allows children to write structural recounts safely, training their brains to embed basic punctuation and grammar patterns into their long-term memory.

3. Substantive Knowledge in Oracy
Oracy is the structural capacity to express oneself fluently and purposefully through spoken language. **Substantive oracy knowledge** defines the specific physical, linguistic, and cognitive tools needed to talk and listen effectively.

Tier 2 and Tier 3 Vocabulary Instruction: Actively learning, pronouncing, and retaining subject-specific words.
Application: Rather than using generic words like *hot*, *bad*, or *broke*, children learn and deploy Tier 2/3 words like **ignite, spread, extract, embers, diary, citizen,** and **demolish**.
Sentence Stems and Talk Frameworks: Utilising specific verbal scaffolds to structure logical thoughts out loud.
Application: Using formalised language structures to agree, disagree, or provide evidence during class debates.
Examples: "I think the fire spread because...", "I agree with [Name] and would add that...", or *"The evidence suggests...".*
Physical and Vocal Mechanics: Knowing that eye contact, clear pronunciation, volume modulation, and posture change how a message is received by a listener.

ORACY SENTENCE STEM STRUCTURING	
ROOT STATEMENT	EVIDENTIAL EXTENSION
"I think the houses burned quickly..."	...because the wood was bone-dry from the summer."

Why it matters: Children cannot write language that they cannot first generate orally. Oracy provides the cognitive blueprint for composition. By practicing targeted historical sentence stems out loud, children learn to link cause and effect verbally, directly constructing the advanced syntactic pathways required for academic reading and writing later in their education.

Why Combining these Elements Matters
When Key Stage 1 children explore **'The Great Fire of London'** through this precise matrix of substantive English skills, the benefits extend far beyond a history lesson:

Contextualises Drudgery: Practicing full stops, adjectives, and suffix spellings (*-ed*) can feel tedious in isolation. Applying those exact rules to describe a dramatic escape down the River Thames makes the technical mechanics of writing purposeful and immediate.

Closes the Vocabulary Gap: A historical theme introduces all children to high-level academic Tier 2 vocabulary (*consequence, prevent, source*) that they may not encounter in day-to-day spoken English, establishing an equitable base for reading comprehension.

Reduces Cognitive Load: Because the historical story has a clear, memorable sequence (Oven spark →Dry wooden houses → Strong winds →Rebuilding in stone), children don't have to invent a fictional plot from scratch. Their working memory is freed entirely to focus on the mechanical, substantive challenges of English: neat handwriting, correct spelling, accurate decoding, and flawless sentence punctuation.

Disciplinary Knowledge

While **substantive knowledge** teaches children the mechanical, factual building blocks of language (such as spelling rules, phonics blending, grammar classifications, and capitalisation), **Disciplinary Knowledge** teaches them *how to think, interpret, and communicate like a real reader, author, and orator.* In Key Stage 1, disciplinary English is where language comes alive as a craft. It focuses on **inference, authorial intent, creative composition, and persuasive rhetoric.** Instead of just copying sentences or decoding words automatically, children analyse *why* words are chosen, *how* a text makes a reader feel, and how they can manipulate their own language to influence an audience. Using '**The Great Fire of London'** as a learning theme creates a powerful arena for early disciplinary thinking. The high-contrast, sensory nature of the historical event allows young children to easily analyse perspective, play with evocative language, and practice the art of persuasive speech.

1. Disciplinary Knowledge in Reading (The Critical Critic)
Disciplinary reading at Key Stage 1 transitions children from passive decoders into active text detectives. They learn to read between the lines using **inference** and examine **authorial intent**—understanding that writers make deliberate choices to manipulate atmosphere.

In 'The Great Fire of London' Learning Theme: Children analyse contrasting texts, such as a dramatic storybook depiction of the fire versus Samuel Pepys's actual journal entries.
Applying Inference: The text says, *"Samuel Pepys buried his wine and cheese in a deep hole."* The literal words do not say he was panicked. The disciplinary reader uses clues to infer: *"Samuel must have been terrified of losing his most expensive things because the fire was getting closer."*
Analysing Word Choice: Children look at an author's choice of verbs. If an author writes that the fire *"devoured"* the houses rather than *"burned"* them, the disciplinary reader evaluates the impact: *"The word 'devoured' makes the fire sound like a hungry, scary monster."*
Why it matters: Reading is not just saying words out loud; it is an act of translation. Developing inference skills early ensures that children look for subtext and hidden meaning, protecting them from superficial readings and setting the foundation for advanced comprehension in later years.

2. Disciplinary Knowledge in Writing (The Master Craftsman)
Disciplinary writing teaches children that they are authors with an audience. They learn that writing is a process of **planning, drafting, editing, and selecting specific vocabulary** to intentionally evoke an emotional response (fear, excitement, relief) in their reader.

In 'The Great Fire of London' Learning Theme: Instead of writing generic sentences, children are coached to craft a "Sensory Recount" from the perspective of a citizen escaping to the River Thames.
Strategic Vocabulary Choice: The child rejects a basic adjective like *"big"* and deliberately selects *"blazing"* or *"furious"* to describe the flames, aiming to trigger a sense of danger in the reader's mind.

Sentence Manipulation for Dramatic Pace: Children learn how sentence length impacts tension. They pair a long, descriptive compound sentence (*"The orange sparks danced in the air and the wind blew the thick smoke across the narrow street..."*) with a sudden, short sentence (*"Crash! The roof fell."*) to startle their reader.

CRAFTING TENSION WITH SENTENCE STRUCTURE
THE LONG SCENIC BUILD-UP:
"The orange sparks danced in the air and the wind blow the thick smoke across the narrow street..."
(Sudden Pace Change)
THE SHOCK PUNCH:
"Crash! The roof fell down."

Why it matters: This builds creative agency. It teaches children that writing is a series of deliberate, artistic choices. Once a child realises that they can control a reader's emotions through sentence architecture, writing stops being a classroom chore and becomes a powerful outlet for personal expression.

3. Disciplinary Knowledge in Oracy (The Rhetorician)
Disciplinary oracy focuses on the purposeful art of public speaking, debating, and active listening. Children learn to adapt their vocal delivery based on their **audience and purpose**, and learn how to challenge or build upon the ideas of others using logical arguments.

In 'The Great Fire of London' Learning Theme: Children engage in a structured class court debate: *"Who is to blame for the destruction of London—Thomas Farriner the baker, or the Mayor who refused to pull down the houses?"*
Vocal Modulation for Impact: When roleplaying a panicked citizen warning the Mayor, a child uses the disciplinary skill of shifting their pitch up and accelerating their pace to vocally project urgency. Conversely, when acting as the King delivering a speech about rebuilding, they slow down their tempo and lower their tone to project authority.
Active, Critical Listening: During the debate, a child practices active listening scaffolds to challenge a peer politely: *"I understand why you think the baker is to blame, but I disagree because the strong wind is what actually carried the fire across the city."*

THE RECONSTRUCTED ORACY EXCHANGE
Child A: "The baker is to blame because he left his oven on!"
(Active Listening & Challenge)
Child B: "I understand your point, BUT I disagree because the narrow streets are what allowed the fire to jump."

Why it matters: Oracy is the vehicle for democratic participation and intellectual debate. Teaching young children how to structure a verbal counter-argument respectfully, while altering their volume and tone to match their role, equips them with the confidence to communicate their ideas effectively in any setting.

Substantive vs. Disciplinary: The English Paradigm

Substantive Knowledge (The Linguistic Rules)	Disciplinary Knowledge (The Communicator's Craft)
Memorising the correct spelling of the common exception words **people**, **house**, and **where**.	Selecting those words strategically within a diary entry to ground the reader in the historical setting of 1666.
Identifying **nouns, verbs,** and **adjectives** in a sample sentence about a fire.	Evaluating *why* an author used the aggressive verb *"leaped"* instead of the neutral verb *"went"* to describe a flame.
Knowing how to speak clearly, project volume, and take a deep breath before talking.	Changing your physical vocal pace from fast to slow to match the shifting mood of a story you are telling.

Why Disciplinary English Matters Most

If we only teach *substantive* English, children become mechanical processors: they spell accurately, write neat full stops, and decode text aloud without error, but they remain detached from the deeper soul of communication. **Disciplinary knowledge transforms them into analytical thinkers and expressive creators.** By exploring **'The Great Fire of London'** through this critical lens, they learn that reading is an act of investigation, writing is an exercise in craftsmanship, and speaking is a tool for influence. These communicative habits give children the analytical foundation to challenge bias, appreciate art, find their unique writing voice, and advocate for themselves with clarity and eloquence throughout their lives.

Learning Objectives

Overall Aim: To enable pupils to develop their English skills through engaging with the historical event of The Great Fire of London.

Reading Objectives

1. Word Reading:

To be able to decode words accurately and speedily, including those with common suffixes (e.g., -ing, -ed, -ful, -less) found in texts about the Great Fire (e.g., "burning," "frightened," "careful," "helpless").

To read accurately words of two or more syllables that contain learned GPCs and to read words with common prefixes (e.g., "re-," "un-") when encountering them in texts about the fire (e.g., "rebuild," "unbelievable").

To recognise and read accurately common exception words (tricky words) within the context of the Learning Theme (e.g., "door," "floor," "people," "asked," "where").

2. Comprehension:

To develop an understanding of the key events and chronology of the Great Fire of London through listening to and discussing non-fiction texts and historical accounts.

To identify and explain the main characters and their roles in the narrative (e.g., Samuel Pepys, Thomas Farriner).

To ask and answer questions about the content of texts related to the fire, demonstrating an understanding of "who," "what," "where," "when," "why," and "how."

To make predictions about what might happen next in a story or account about the fire, based on what has been read so far.
To retrieve specific information from a text about the fire (e.g., "Where did the fire start?", "What year did the fire happen?").
To discuss the feelings and emotions of people affected by the fire, drawing inferences from the text and illustrations.
To sequence events from the Great Fire of London in chronological order using time connectives (e.g., "first," "next," "then," "after that," "finally").
To discuss and evaluate vocabulary from texts about the fire, including words like "flames," "embers," "destruction," "panic," "escape," "rebuild."

Writing Objectives

1. Transcription (Spelling & Handwriting):

To spell accurately words containing the common digraphs and trigraphs relevant to the Learning Theme (e.g., "fire," "smoke," "street," "church").
To spell common exception words encountered in the Learning Theme (e.g., "house," "London," "people," "walk").
To use apostrophes for contraction (e.g., "didn't," "couldn't") and for singular possession (e.g., "Pepys' diary") when appropriate in their writing about the fire.
To form letters correctly and consistently, and to join some letters confidently when writing about the fire.
To write simple sentences and short narratives about aspects of the Great Fire of London, ensuring legible handwriting.

2. Composition:

To plan and write simple recounts of the Great Fire of London, using chronological order.
To write short diary entries from the perspective of someone experiencing the fire (e.g., Samuel Pepys, a Londoner).
To write captions for pictures or diagrams related to the fire (e.g., "Pudding Lane Bakery," "Houses in flames").
To write simple factual sentences about the causes and effects of the Great Fire.
To use a range of conjunctions (e.g., "and," "but," "or," "because") to extend sentences when writing about the fire.
To use capital letters for names of people and places associated with the fire (e.g., "Samuel Pepys," "London," "Pudding Lane").
To use full stops, capital letters, and question marks correctly to demarcate sentences in their writing about the fire.
To begin to use exciting vocabulary (adjectives and verbs) to make their writing about the fire more vivid (e.g., "raging fire," "terrifying smoke," "fleeing people").

Spoken Language Objectives

To listen attentively to stories, poems, and non-fiction texts about the Great Fire of London and respond appropriately.
To participate in discussions about the Great Fire, sharing ideas and opinions respectfully.
To ask relevant questions to deepen their understanding of the event and answer questions clearly.
To retell key events of the Great Fire of London in chronological order.
To express their thoughts, feelings, and understanding about the Great Fire, using increasingly precise vocabulary.

To use role-play or hot-seating to explore the experiences and emotions of people affected by the fire.
To present simple information about the Great Fire of London to a group or the class.

Lesson Ideas

This 6-week Key Stage 1 English medium-term plan treats children as both text detectives and literary craftsmen. Using '**The Great Fire of London'** as a narrative anchor, it integrates **Reading** (word decoding, vocabulary acquisition, and inference), **Writing** (grammar mechanics, sensory vocabulary, and sentence structure), and **Oracy** (roleplay, formal debate, and performance delivery).

Block 1: The Gathering Storm — Chronology & Vocabulary (Weeks 1-2)
Week 1: Meet Samuel Pepys — Comprehension and Captions
Substantive English Focus: Capital letters for proper nouns (names and places). Nouns and adjectives word classes. Retrieving explicit information directly from a text.
Disciplinary English Focus: Reading & Oracy: Utilising text clues to infer a character's inner emotions (fear, confusion) and acting out those feelings vocally.

Activity:
The Shared Text: Read a child-friendly, adapted extract of Samuel Pepys' diary describing the early hours of Sunday 2nd September.
Oracy - Eye-Witness Talk: Children use the sentence stem: *"I am Samuel Pepys and through my window I can see..."* They practice expanding their thoughts using sensory adjectives (*smoky, bright, orange*).
Writing - Labelling London: Children draw Samuel looking at a Tudor street and write a simple descriptive caption, ensuring proper nouns like **S**amuel, **L**ondon, and **P**udding **L**ane have clear capital letters.
Outcome & Assessment: Children can retrieve the name of the author and literal facts from the text, and apply proper noun capitalisation rules.

Week 2: The Fire Spreads — Compound Sentences and Cause/Effect
Substantive English Focus: Coordinating conjunctions (**and**, **but**, **so**) to link clauses. Past tense verb suffixes (*-ed*).
Disciplinary English Focus: Writing: Choosing conjunctions strategically to construct a clear, logical explanation of cause and effect for a reader.

Activity:
Reading - The Pattern Hunt: Read a narrative account of how the fire jumped between houses. Children highlight verbs in the past tense (*burned, leaped, sparks flew, panicked*).
Oracy - The Conjunction Chain: Play a verbal game around the circle using **so**. *Teacher:* "The weather was very dry..." *Child 1:* "...**so** the timber houses caught fire quickly." *Teacher:* "The wind blew from the East..." *Child 2:* "...**so** the sparks jumped across the narrow street."
Writing - Building Compound Sentences: Children combine short sentences using *and, but, or so* to complete an official incident record page for the King.
Outcome & Assessment: Accurately punctuated compound sentences using past-tense verbs to explain why the fire grew.

Block 2: The Escape — Sensory Poetry & Setting Descriptions (Weeks 3-4)
Week 3: Sounds of the Inferno — Onomatopoeia & Expanded Noun Phrases
Substantive English Focus: Expanded Noun Phrases (Adjective + Adjective + Noun). Onomatopoeia (sound words like *crackle, pop, crash, roar*).

Disciplinary English Focus: Reading & Writing: Evaluating how an author uses specific sonic vocabulary to build a tense, scary atmosphere, and applying that craft to original writing.

Activity:
Reading - The Soundscape Scan: Listen to a dramatic audio clip of a fire while reading a poem about the disaster. Children harvest sound words (*hiss, snap, thud*) and write them onto a vocabulary flipchart.
Oracy - The Vocal Orchestra: Children use untuned percussion or vocal sound effects to perform the text aloud, shifting their dynamics from a soft, quiet whisper (*"hiss..."*) to a sudden, loud shout (*"CRASH!"*).
Writing - Sensory Poetry: Children write a short, structured poem using expanded noun phrases and onomatopoeia: *"Furious, hot sparks. Crackle! Thick, grey smoke. Choke!"*
Outcome & Assessment: A completed sensory poem featuring distinct expanded noun phrases and clear, expressive onomatopoeia punctuation (exclamation marks).

THE SENSORY POETRIC FORMAT	
Adjective + Adjective + Noun	⟶ Furious, orange sparks.
Onomatopoeia!	⟶ Crackle!
Adjective + Adjective + Noun	⟶ Thick, suffocating smoke
Onomatopoeia!	⟶ Whoosh!

Week 4: Flight to the River — Diary Writing and First-Person Perspective
Substantive English Focus: Writing from the first-person perspective using personal pronouns (**I, we, my**). Finger spaces and consistent sentence tracking.
Disciplinary English Focus: Writing: Adopting a distinct historical persona and making vocabulary choices to communicate immediate personal danger to an audience.
Activity:
Reading - Perspective Analysis: Contrast a modern informational webpage about the fire with an emotional letter written by a survivor. Discuss how the use of "I" changes how the reader connects to the event.
Oracy - The Hot Seat: One child sits in the hot seat acting as a fleeing citizen. The class asks questions: *"What are you carrying? How will you cross the river?"* The child answers in character using first-person pronouns.
Writing - The Diary Draft: Children write a first-person diary entry detailing their escape to the river banks: *"Dear Diary, Last night I woke up because my room smelled of dark smoke. We ran quickly to the River Thames..."*
Outcome & Assessment: A short paragraph written cleanly in the first-person past-tense that demonstrates sustained historical empathy and clear finger spaces.

Block 3: The Trial & The New City — Rhetoric and Reports (Weeks 5-6)
Week 5: Who is to Blame? — Oracy Debate & Persuasive Sentence Stems
Substantive English Focus: Question marks (**?**) and exclamation marks (**!**). Question words (*Who, Why, What, How*).
Disciplinary English Focus: Oracy: Presenting a structured verbal argument, using evidence to back up claims, and listening critically to challenge an opposing view politely.

Activity:
Reading - The Accusation Files: Read short descriptions of the two main suspects: Thomas Farriner (who left the oven on) and Bloodworth, the Lord Mayor (who refused to pull down houses early on).

Oracy - The Great Courtroom Debate: Divide the class into two opposing sides. Introduce structured talk stems for respectful disagreement.
Child A: "Thomas Farriner is to blame **because** he didn't check his bakery embers."
Child B: "I understand your point, **but I disagree because** the Mayor could have ordered the houses to be pulled down sooner."
Writing - The Verdict Speech: Children write down their final judgment sentence using a question and an exclamation: *"Was it the baker's fault? No, it was the strong wind!"*
Outcome & Assessment: Active participation in a structured debate, utilising evidence-backed causal conjunctions (*because*) to defend an opinion out loud.

THE RECONSTRUCTED ORACY EXCHANGE
Child A: "The baker is to blame because he left his oven on!"
(Active Listening & Challenge)
Child B: "I understand your point, BUT I disagree because the narrow streets are what allowed the fire to jump."

Week 6: The City Resurgent — Informational Reports & Editing
Substantive English Focus: Organising text using basic headings. Applying spelling rules for adding suffixes (*-er, -est* to adjectives like *safe* →*safer, tall* →*taller*). Proofreading for missed full stops.
Disciplinary English Focus: Writing & Oracy: Editing one's own work for mechanical accuracy, and presenting a formal historical report with clear vocal projection.

Activity:
Reading - Blueprint Scanning: Look at Christopher Wren's original plans for the new city layout. Contrast the words *dangerous, old, narrow* with *safer, wider, taller*.
Writing - The Information Report: Children draft a non-chronological report detailing how London was rebuilt. They structure it into sections using headings: The Rebuilt Walls and The New Streets. They write fact sentences using comparative suffixes: *"The new brick houses are safer than the old wooden ones. The streets are wider."*
The Editing Workshop: In pairs, children read their drafts aloud to catch missing full stops or capital letters, refining their work with a green editing pen.
Outcome & Assessment: A neatly written, cleanly structured information report with accurate heading divisions, displaying evidence of self-correction and proofreading.

Progress Trackers: Substantive vs. Disciplinary

Dimension	Key Stage 1 English Milestones (What they will know and do)
Substantive (Linguistic Rules)	Consistently secure **capital letters, full stops, question marks, and exclamation marks**. Identify and apply nouns, verbs, adjectives, and personal pronouns correctly. Link clauses using coordinating conjunctions (**and, but, so**). Spell targeted multi-syllable historical vocabulary and common exception words accurately. Apply suffix rules for the past tense (*-ed*) and comparative adjectives (*-er, -est*).

Disciplinary (Communicative Artistry)	Infer character motivations and feelings from subtle text actions (reading between lines).Evaluate how an author's specific verb and dynamic choices change a text's mood. Manipulate sentence pace and sensory descriptions to purposefully inject tension into writing. Adopt distinct historical perspectives fluently using first-person viewpoints. Formulate structured oral arguments during a formal debate using evidential sentence stems.

Other Information, Ideas and Resources

Introducing the Fire (Oral Storytelling/Discussion):
"Imagine a long, long time ago, in a big city called London. The houses were very close together, and many were made of wood. One night, a little spark started in a baker's shop on Pudding Lane. Uh oh! That little spark grew bigger and bigger! Can you show me with your hands how the fire grew?"

(Vocabulary Focus: spark, baker, shop, wood, grew, big, fire, London, Pudding Lane)
Simple Sequencing Activity:
"Let's think about what happened first, next, and last. Can you help me put these pictures in the right order?"
(Present simple pictures or drawings showing: a small fire in a house, many houses on fire, people running away, boats on the river with belongings.)
"First, there was a little **spark** in the **baker's shop**. Next, the **fire grew** very **big** and spread to other houses made of **wood**. Then, people had to run away from the **fire**. Last, some people used boats on the River Thames to save their things."

(Vocabulary Reinforcement: first, next, then, last, river, boats)
Descriptive Language:
"The fire was hot! Can you say 'hot'? The smoke was black and went up high. Can you point up high? People were scared. How do you think they felt?"

(Vocabulary Focus: hot, smoke, black, high, scared)
Simple Comprehension Questions:
Where did the fire start? (In a baker's shop on Pudding Lane)
What were many of the houses made of? (Wood)
Was the fire small or big? (Big)
Where did some people go to escape the fire? (To the river/in boats)

Storytelling and Retelling:
"Hot Seating" Characters: Have children take on the roles of key figures like Samuel Pepys, a baker, or even a scared mouse. Encourage them to answer questions about what they saw, felt, and did during the fire. This builds speaking and listening skills and deepens their understanding of different perspectives.

Retell the Story in Their Own Words: Provide picture cards or a simple story map of the fire's events. Encourage children to retell the story to a partner, focusing on sequencing and key details. This develops their narrative skills and comprehension.

Diary Entries: Inspired by Samuel Pepys, have children write simple diary entries from the perspective of someone living during the fire. They can describe what they saw, heard, and how they felt. This encourages descriptive writing and understanding of historical context.

Creating a Class Story: Start a story together as a class about a family or animal experiencing the fire. Each child can add a sentence or two to build the narrative collaboratively. This fosters teamwork and creative writing.

Descriptive Writing:
Sensory Details: Focus on the sights, sounds, smells, and feelings of the fire. Brainstorm words and phrases related to each sense (e.g., roaring flames, crackling wood, smoky air, hot, scared). Children can then use these words to write descriptive sentences.

"If I Were There..." Poems: Encourage children to write short poems imagining they were present during the fire. What would they see? What sounds would they hear? This combines creative writing with empathy.
Describing the Fire Spread: Use images or videos to show how the fire spread through the wooden houses. Ask children to describe this process using words like "quickly," "leaping," "climbing," and "engulfing" (with appropriate explanation).

Reading and Comprehension:
Simple Information Texts: Provide age-appropriate information books or leaflets about the Great Fire of London. Focus on key facts and discuss the main events as a class.

Picture Book Analysis: Read picture books about the fire and discuss the illustrations. How do the pictures help us understand the story? What emotions do they convey?

Sequencing Activities: Provide jumbled sentences or pictures about the fire and ask children to put them in the correct order. This reinforces their understanding of the timeline of events.

Questioning and Answering: Ask simple "who, what, where, when, why" questions about the fire to check their comprehension.

Creative Expression:
Writing Firework Poems: Connect the idea of fire to fireworks (if appropriate for your class and time of year). Encourage them to use onomatopoeia and descriptive language to write poems about fireworks.

Creating Warning Posters: Imagine they lived in London before the fire. What warnings would they put up about fire safety? This encourages persuasive writing and understanding of consequences.

Writing Thank You Notes: Imagine they were survivors of the fire. Who would they want to thank and why? This fosters empathy and letter-writing skills.

Creative Writing/Drawing Prompt:
"Imagine you saw the Great Fire of London. What would you see? Can you draw a picture of the fire and the smoke? Can you write one word to describe what you saw (e.g., hot, big, scary)?"

Extension Activities:
Matching game: Match pictures of things related to the fire (house, fire, water bucket) with their names.

Sing a simple song: (Tune of "Twinkle Twinkle Little Star")
Fire burning, oh so bright,
In London town, one dark night.
Houses burning, falling down,
Smoke went up all over town.
Fire burning, oh so bright,
In London town, one dark night

Drama:
https://teachers.thenational.academy/lessons/living-through-the-great-fire-of-london-part-1-ccu3ar

https://teachers.thenational.academy/lessons/living-through-the-great-fire-of-london-part-2-c5k34d
Role-playing: Pretend to be a baker, someone escaping the fire, or someone helping to put it out (later in the story, if appropriate for their level).

Considerations for Implementation

Maths

We use White Rose Maths; the list below has suggested activities to enhance provision.

Substantive Knowledge

In Key Stage 1 Maths, **substantive knowledge** consists of the absolute facts, standard symbols, specific language formulas, and numerical rules that children must learn and commit to automatic memory. It covers the exact mechanics of mathematics—such as knowing number bonds to 10 and 20, recognising the physical value of a £1 coin, identifying a cylinder, or telling the time to the half-hour on an analogue clock face. When framed around '**The Great Fire of London**,' this cross-curricular learning provides a vivid, real-world testing ground. Rather than practicing abstract number lines on a worksheet, children apply statutory mathematical rules to solve concrete historical problems.

1. Number and Place Value (The Chronological Timeline)
Substantive Core Requirements: Knowing how to read, write, and order numbers up to 100 in numerals; counting forwards and backwards sequentially from any given baseline. Understanding place value (tens and ones).

Application to 'The Great Fire of London' Learning Theme:
The 1666 Anchor: Learning that "1666" contains thousands, hundreds, tens, and ones. While thousands are a Key Stage 2 concept, children must master ordering the smaller numbers within the story, such as tracking the **4 days** the fire raged, or understanding that Pudding Lane was one of **100+** crowded streets.
Ordinal Sequences: Knowing that *first* comes before *second*, *third*, and *fourth* to chronologically map out the sequence of events (e.g., *"On the **1st** day, the bakery burned. On the **2nd** day, the fire reached the river"*).
Why it matters: Number sense requires anchoring to prevent children from seeing numbers as random digits. Grounding place value in a historical timeline trains children's working memory to view numbers as scales of real-world magnitude and specific positions in time.

2. Measurement: Time and Money (The Midnight Spark & Rebuilding Costs)
Substantive Core Requirements: Telling the time to the hour and half-past the hour on an analogue clock; drawing hands on a clock face. Sequencing events using time vocabulary (*before, after, next, morning, night*). Recognising the physical denominations of coins and notes.

Application to 'The Great Fire of London' Learning Theme:
The Analog Midnight Spark: The fire broke out at roughly **1 o'clock** on a Sunday morning. Children learn to visually locate the hour hand pointing directly at the 1 and the minute hand pointing to the 12 to capture this exact historical moment.



The Bread Cost Scale: Using the context of Thomas Farriner's bakery to learn about historical vs. modern currency. Children look at the coins available in 1666 (pennies, shillings) and map out equivalent calculations using modern coins to find totals for a loaf of bread.

Why it matters: Time and money are abstract concepts because they use non-decimal base systems (60 minutes in an hour, changing values of coins). Attaching the passage of time to a dramatic, ticking-clock scenario like a spreading city fire makes time intervals and sequence tracking logical and memorable for young minds.

3. Addition, Subtraction, and Statistics (The Casualty & Structural Audit)
Substantive Core Requirements: Reading and writing calculations using standard mathematical operators (+, -, =). Memorising number bonds to 10 and 20. Interpreting simple tallies, pictograms, and block diagrams (Year 2).

Application to 'The Great Fire of London' Learning Theme:
The Missing Number Problem: Reconstructing historical records using inverse relationships. *"There were 15 wooden houses on a street. After the fire swept through, only 4 were left standing. How many houses were destroyed?"* (15 - ? = 4).

Data Representation: Building a simple pictogram tracking the destruction of iconic landmarks. Children use miniature flame icons (where 1 flame = 1 building) to tally the loss of St Paul's Cathedral, the Royal Exchange, and parish churches.

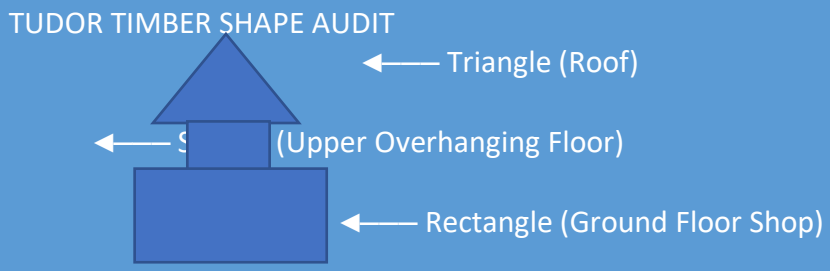
ICONIC LANDMARK DESTRUCTION PICTOGRAM	
St Paul's Cathedral	🔥
Parish Churches	🔥🔥🔥🔥🔥🔥
Wooden Homes	🔥🔥🔥🔥🔥🔥🔥🔥🔥

(Each 🔥 = 1 Building Group)

Why it matters: Fluency in calculation means knowing *which* operational sign to deploy when presented with a problem. Using the concrete losses of 16 London streets allows children to physically visual mathematical difference, partitioning, and reduction structures instead of relying on finger-counting.

4. Geometry: Properties of Shapes (The Architecture of London)
Substantive Core Requirements: Identifying and describing the distinct features of 2-D shapes (squares, rectangles, circles, triangles) and 3-D shapes (cubes, cuboids, pyramids, cylinders, spheres).

Application to 'The Great Fire of London' Learning Theme:
Tudor vs. Modern Architecture: Analysing how 17th-century timber frames were built by joining 2-D rectangles and triangles to make overhanging patterns.
3-D Structural Audit: Auditing the buildings before and after the fire. Children recognise that timber houses resembled stacked **cuboids**, haybales stored in stables were small **cubes**, and the newly built Monument to the Great Fire is a tall **cylinder** topped with a flaming **sphere**.



Why it matters: Geometry underpins early spatial reasoning and structural visualisation. By evaluating how 3-D cuboids fit tightly together down narrow lanes, children link geometric proximity with the scientific and historical concept of how fire jumps between adjacent structures.

Substantive vs. Disciplinary: The Mathematics Paradigm

Substantive Maths Knowledge (The Absolute Facts)	**Disciplinary Maths Knowledge (Thinking Like a Mathematician)**
Knowing that the big hand on the 12 and the small hand on the 2 states exactly **2 o'clock**.	Reasoning that if the baker went to bed at 11 o'clock, the oven must have been smouldering for 3 hours before the fire started.

Fluently calculating that 20 - 7 =13 using a standard number line.	Evaluating a historical word problem to deduce that a subtraction operation is required to find the "difference" between houses.
Stating that a brick is a **cuboid** and has 6 faces, 8 vertices, and 12 edges.	Designing a layout for a safer, modern street using stone cuboids that cannot tip over or trap citizens in narrow gaps.

Disciplinary Knowledge

While **substantive knowledge** teaches children the raw facts of mathematics (such as memorising number bonds, identifying a cuboid, reading a specific time, or drawing a tally mark), **Disciplinary Knowledge** teaches them *how to think, reason, problem-solve, and argue like a mathematician.* In Key Stage, disciplinary mathematics focuses on three core pillars from the National Curriculum: **Problem Solving, Mathematical Reasoning, and Fluency in Application.** Instead of just copying equations, children learn to notice mathematical patterns, explain *how* they arrived at an answer, select the correct operational tool (+ or -) for a real-world scenario, and test mathematical hypotheses. **The Great Fire of London** serves as a landscape for early disciplinary thinking. Historical records are messy, and the theme forces children to act like analytical detectives—using mathematics to evaluate space, check historical data consistency, and solve physical resource problems from the past.

The 3 Pillars of Disciplinary Maths Knowledge in KS1

1. Mathematical Reasoning and Proving (The "How Do You Know?" Lens)

Disciplinary knowledge means a child can look past a simple numerical answer and explain the logical thought process behind it. They use mathematical vocabulary to justify why a claim is correct or incorrect.

In 'The Great Fire of London' Learning Theme: The teacher presents a statement: *"Samuel Pepys says he buried his belongings at 3 o'clock in the afternoon. The clock face on his wall showed the big hand pointing to the 12 and the small hand pointing to the 3."* The teacher challenges: *"Is this mathematically true?"*
The Disciplinary Thinker: A child reasons: *"Yes, it is true, **because** when the big hand points to the 12 it always means 'o'clock', and the small hand points to the hour, which is 3. I can prove it by setting my own teaching clock to match."*
Why it matters: This builds deductive logic. If mathematics is only taught as a series of rote formulas, children fall apart when an equation doesn't look familiar. Reasoning trains them to look for structural proofs, building deep mathematical confidence.

2. Identifying and Applying Operations (The Tool Selection Lens)

A mathematician must decode a messy story problem, filter out the distractions, and identify exactly which mathematical structure is happening beneath the surface (e.g., *Are items being combined, partitioned, scaled, or reduced?*).

In 'The Great Fire of London' Learning Theme: Children are given a historical word problem: *"The King sent 18 guards to demolish houses on Pudding Lane. 5 guards went to clear the left side of the street, and the rest went to the right side. How many went to the right side?"*
The Disciplinary Thinker: Instead of guessing or adding the numbers together blindly (18 + 5), the child identifies that this is a **partitioning/missing part** problem. They realise they must find the difference,

choosing subtraction: 18 - 5 = ?. They can represent this using a part-whole model to visually track their logic.

THE PART-WHOLE LOGIC MODEL	
18 Total ◄— Whole Street	
5 Left	? Right ◄— Missing Part

Why it matters: This prevents "number juggling." Many young children see two digits in a text and instantly add them together because addition feels safer. Disciplinary thinking trains them to slow down, analyse the action in the story, and deliberately select the correct operator.

3. Systematic Problem Solving & Pattern Hunting (The Auditor's Lens)
Disciplinary maths requires looking at a complex scenario and breaking it down systematically, testing possibilities, and hunting for patterns or errors within data arrays.

In 'The Great Fire of London' Learning Theme: Children analyse early structural tallies of destroyed churches. The teacher shows a messy table of items and asks: *"How can we organise this data to see exactly which day was the most dangerous?"*
The Disciplinary Thinker: The child realises that unorganised data is hard to read. They systematically transfer the scattered numbers into a clean **block diagram** or **pictogram** where each block represents 2 buildings. By creating a scale, they spot a spatial pattern: the chart reveals that the column for Monday is twice as high as Sunday, proving Monday was the day the fire expanded most rapidly.
Why it matters: This builds early data literacy. It teaches children that mathematics is a visual language used to reveal hidden patterns, sort out chaos, and present factual truths clearly to others.

Substantive vs. Disciplinary: The Maths Paradigm

Substantive Maths Knowledge (The Absolute Facts)	**Disciplinary Maths Knowledge (Thinking Like a Mathematician)**
Knowing that the symbol - represents subtraction and means taking away.	Reading a story about a bucket chain losing water and deducing that a subtraction operation is required to find the final total.
Counting forward up to 100 on a standard plastic number line.	Using an ordinal number sequence (1^{st} 2^{nd} 3^{rd})to arrange a chaotic jumble of historic diary entries into a correct timeline.
Knowing that a rectangle has 4 straight sides and 4 square corners.	Arranging 2-D shapes systematically to see how many rectangular Tudor houses can fit tightly along a fixed length of a paper road.

Why Disciplinary Mathematics Matters Most
If mathematics in Key Stage 1 is restricted to *substantive* arithmetic drills, children view it merely as a processing engine. They learn how to solve 10 - 3 = 7 on a whiteboard but remain entirely blind to how that equation functions out in the real world. **Disciplinary knowledge converts numbers into a toolkit for life.** By exploring **The Great Fire of London** mathematically, children realise that numbers are descriptions of physical reality. They use geometry to evaluate why tight streets were structural hazards, time intervals

to audit how fast the wind blew, and statistics to display historical truth. This instils a vital realisation: mathematics isn't just an isolated school subject—it is a logical lens used to decode, measure, and understand the history of our world.

Learning Objectives

Teaching Key Stage 1 pupils about **"The Great Fire of London,"** you can integrate various mathematics objectives from the National Curriculum. The key is to make the learning engaging by connecting the historical event to practical mathematical concepts. Maths objectives for Key Stage 1 pupils linked to **"The Great Fire of London**," categorised by curriculum area:

1. Number and Place Value:
Counting:
Count the number of houses burnt down in different areas of London (e.g., "On Pudding Lane, 5 houses burnt down, then 3 more. How many altogether?").
Count the number of people who fled the fire.
Count in twos, fives, or tens when looking at quantities of objects (e.g., counting sets of "fire buckets" or "bread loaves").

Reading and Writing Numbers:
Read and write numbers up to 100, especially dates related to the fire (e.g., 1666).
Match numerals to words for key numbers (e.g., 'ten' houses, 'five' days).

Comparing and Ordering Numbers:
Compare the number of houses lost in different parts of London.
Order numbers (e.g., from the number of days the fire burned, or the number of people displaced).
Use language like "more than," "less than," "equal to" when comparing quantities related to the fire.

Place Value:
Understand the value of digits in two-digit numbers when discussing years (e.g., in 1666, the '6' in the tens place means 60, and in the ones place means 6). (More applicable for Year 2).

2. Addition and Subtraction:
Number Bonds:
Use number bonds to 10 or 20 to solve simple problems related to the fire (e.g., "There were 10 buckets of water, and 4 were used. How many are left?").

One-Step Problems:
Solve simple addition and subtraction problems using concrete objects or pictorial representations (e.g., "If 7 houses burnt on Monday and 5 on Tuesday, how many altogether?").
Solve problems about the number of people evacuated or rescued.

Adding/Subtracting One-Digit and Two-Digit Numbers:
Add and subtract small numbers relevant to the story (e.g., the number of bakeries in London before and after the fire, or the height of buildings in comparison).

3. Measurement:
Length:

Compare and measure the length of "fire hoses" (strings/ribbons) or the distance the fire spread using non-standard units (e.g., footsteps, blocks).
Compare the height of typical 17th-century houses (e.g., using comparative language like 'taller', 'shorter').

Mass/Weight:
Compare the weight of different "firefighting tools" (e.g., a full bucket vs. an empty bucket).

Capacity and Volume:
Measure the capacity of water buckets using non-standard units (e.g., cups) or standard units (litres if appropriate for Year 2).

Time:
Sequence events of the fire chronologically (e.g., "The fire started on Sunday, then spread on Monday...").
Use language relating to dates, including days of the week, weeks, months, and years (e.g., "The fire lasted for 4 days," "It happened in the year 1666").
Tell the time to the hour and half hour, linking to events during the fire (e.g., "The fire spread quickly by midday").

Money (if simplified):
Recognise and know the value of different denominations of coins if discussing the cost of rebuilding London (more of a stretch, but possible in a simplified way).

4. Geometry (Properties of Shapes):
2-D and 3-D Shapes:
Recognise and name common 2-D shapes (rectangles, squares, triangles, circles) in the context of buildings or fire images.
Recognise and name common 3-D shapes (cuboids, cubes, pyramids) when discussing the structure of buildings or objects found in 1666 London.
Identify shapes within pictures of 17th-century London or fire-damaged buildings.

5. Statistics:
Collecting and Presenting Data:
Interpret and construct simple pictograms, tally charts, or block diagrams to show information about the fire (e.g., "How many houses burnt in each street?").
Ask and answer questions by counting the number of objects in a category and sorting categories by quantity (e.g., "Which type of building was most affected?").
Compare categorical data (e.g., "Were more houses made of wood or brick?").

Lesson Ideas

This 6-week Key Stage 1 medium-term plan brings mathematics to life by utilising the historical context of '**The Great Fire of London'**. Children do not just solve isolated calculations; they act as mathematical auditors, urban planners, and clock-watchers tracking the spread of the flames.

Block 1: Chronology & Place Value (Weeks 1-2)
Week 1: Mapping the Timeline — Sequencing Numbers to 100
Substantive Focus: Reading, writing, and ordering numbers up to 100. Understanding the position of numbers on a blank or partially labelled number line.

Disciplinary Focus: Using numbers systematically to position events in chronological order, identifying numerical gaps, and using comparative language (*greater than, less than*).

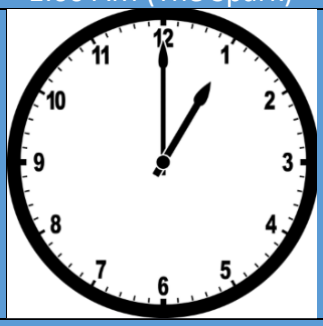
Activity:
The Context: Introduce the year **1666**. Explain that while it is a four-digit number, we can look at the historical timeline using a scale of 0 to 100 to map out the number of streets destroyed.
Number Line Assembly: Give children cards representing historical facts (e.g., *Street 12 caught fire, Street 45 caught fire, Street 89 caught fire*). Children must physically order themselves into a human number line.
The Inequality Challenge: Children write comparative statements on mini-whiteboards using mathematical vocabulary or symbols: *"The number of bakeries on Street 45 is **greater than** the number on Street 21."*
Outcome & Assessment: Children can accurately sequence a jumble of 2-digit numbers and track their position on a 0–100 scale.

Week 2: Partitioning the Parish — Tens and Ones
Substantive Focus: Recognising the place value of each digit in a two-digit number (tens, ones). Using Base 10 blocks (Dienes) to represent quantities.
Disciplinary Focus: Representing abstract data in concrete physical forms, and reasoning how partitioning a number into tens and ones makes counting large groups of items faster and more accurate.

Activity:
The Context: King Charles II needs to count the number of leather fire buckets remaining in the city stores. The total number is **43**.
Concrete Representation: Children use Dienes blocks to represent the buckets. They show that 43 is made of **4 tens** (long rods) and **3 ones** (individual units).
Part-Whole Modelling: Children draw part-whole diagrams to show different ways to partition housing counts: 65 = 60 + 5.
Outcome & Assessment: Fluency in identifying how many tens and ones are inside any 2-digit historical figure up to 100.

Block 2: The Ticking Clock & Rebuilding Costs (Weeks 3-4)
Week 3: The Midnight Spark — Telling Time on the Analog Clock
Substantive Focus: Telling the time to the hour and half-past the hour on an analogue clockface. Drawing the hands on a clock face to match a stated time.
Disciplinary Focus: Translating a chronological sequence of events into precise angular hand positions, and reasoning out the passage of time intervals.

Activity:
The Context: The fire breaks out at Thomas Farriner's bakery in the middle of the night and spreads systematically across the city.
Setting the Scene: Children use individual teaching clocks to show **1 o'clock** (when the fire started). They ensure the long minute hand points directly to the 12 and the short hour hand points to the 1.
Tracking the Intervals: Move the clock forward. *"By half-past 2, the next street was on fire. Show this on your clock."* Children adjust their dials so the minute hand points to the 6 and the hour hand sits halfway between the 2 and the 3.
Outcome & Assessment: Accurate reading and drawing of "o'clock" and "half-past" positions matching the narrative sequence of the fire.

TRACKING THE TIME OF THE INFERNO	
1:00 AM (The Spark)	2:30 AM (The Next Street)
	

Week 4: Bread, Buckets & Bribes — Calculating Value with Coins
Substantive Focus: Recognising the value of different denominations of modern coins (£1, 50p, 20p, 10p, 5p, 2p, 1p). Combining coins to make a fixed total amount.
Disciplinary Focus: Selecting the most efficient combination of coins to pay for an item, and calculating change by finding a mathematical difference.

Activity:
The Context: Citizens are buying leather buckets to fight the flames, or paying cart drivers a bribe of 50p to rescue their heavy chests of belongings.
The Shop Challenge: Set up a "1666 Supply Shop." A loaf of bread costs 15p. A leather bucket costs 35p. Children must use real or plastic coins to build those exact values using different combinations (e.g., 10p + 5p vs. 5p + 5p + 5p).
Calculating Change: *"You give the cart driver a 50p coin. His price was 40p. How much change do you receive?"* Children calculate 50p - 40p = 10p.
Outcome & Assessment: Ability to identify coin values and accurately add combinations together to reach values up to £1.

Block 3: Damage Control & Urban Design (Weeks 5-6)
Week 5: House Clearance — Addition, Subtraction & Part-Whole Models
Substantive Focus: Using the addition (+), subtraction (-); and equals (=) signs to write mathematical number sentences. Solving one-step word problems involving missing values.
Disciplinary Focus: Analysing a historical word problem to determine whether an amount is being combined (addition) or reduced/compared (subtraction), and representing that logic visually.

Activity:
The Context: Firemen are pulling down houses to create gaps so the fire cannot jump across the road.
The Reduction Structure: *"There are 18 wooden houses on a narrow lane. The King's guards pull down 6 of them. How many houses are left standing?"* Children map this using a part-whole drawing and write the corresponding subtraction equation: 18 - 6 = 12.
The Inverse Check: Children check their answer using the inverse relationship of addition: 12 + 6 = 18.
Outcome & Assessment: Correctly selecting and executing subtraction or addition operations based on historical word problem cues.

BREAKING DOWN THE URBAN AUDIT		
WORD PROBLEM STORY:	PART-WHOLE SCHEMATIC:	
"18 houses stood on the lane. 6 were pulled down. How many remain?"	18 Total	
EQUATION:18 - 6 = 12	6 Down	12 Left

Week 6: Designing a Safer London — Properties of 2-D & 3-D Shapes
Substantive Focus: Identifying and describing the properties of 2-D shapes (number of sides, corners/vertices) and 3-D shapes (number of faces, edges, vertices).
Disciplinary Focus: Utilising spatial reasoning to design structural layouts, and evaluating why certain 3-D geometric shapes are functionally safer or more stable than others for building construction.

Activity:
The Context: Architect Christopher Wren is redesigning London. The old, unstable timber homes are out; strong, wide stone buildings are in.
2-D Blueprint Drafting: Children design a safe street blueprint using paper shapes. They label their patterns using geometric properties: *"This building base is a **rectangle** because it has 4 straight sides and 4 square corners."*
3-D Structural Audit: Children examine solid wooden blocks (cubes, cuboids, cylinders, prisms). They evaluate which shapes can stack neatly without overhanging dangerous lanes. They conclude that **cuboids** stack safely for walls, while **prisms** form sloping roofs that rain can run off.
Outcome & Assessment: Children can name and sort 2-D and 3-D shapes based entirely on their geometric attributes (vertices, faces, edges).

Progress Trackers: Substantive vs. Disciplinary

Dimension	Key Stage 1 Mathematics Milestones (What they will know and do)
Substantive (Mathematical Facts)	Fluently read, write, and identify the place value (tens and ones) of any number up to 100.Tell and draw the time to the hour and half-hour on an analogue clockface. Identify all modern coins, state their values, and calculate basic cash combinations up to £1. Recall single-digit addition and subtraction facts, and read operational symbols (+, -, =) accurately. Name and state the number of sides/faces on common 2-D and 3-D geometric shapes.
Disciplinary (Mathematical Logic)	Explain how numbers function as positions and intervals along a physical timeline scale. Reason out the direction and passage of time using the shifting alignment of clock hands. Deconstruct a narrative story problem to determine whether an addition or subtraction framework is required. Justify an answer by explaining the calculation method or using the inverse operation to prove accuracy.

	Evaluate physical structures spatially, linking geometric traits with real-world stability and design safety.

Other Information, Ideas and Resources

Counting Houses and Buildings:
Activity: Show pictures or illustrations of the houses in London before and during the fire. Children can count the number of houses in a row (emphasising the close proximity), the number of buildings on fire in a picture, or compare the number of houses before and after (leading to simple subtraction ideas).
Maths Skills: Counting, number recognition, comparing quantities, simple subtraction.

Measuring the Spread (Figuratively):
Activity: Use blocks or small objects to represent houses. Start with a few close together and then "spread" them out to show how the fire moved from house to house. You can talk about how many houses were affected in each "spread."
Maths Skills: Understanding the concept of spread and distance (in a simplified way), counting, spatial awareness.

Sequencing Events by Time (Simplified):
Activity: Create simple picture cards representing key events of the fire (e.g., the bakery, the fire spreading, people escaping by boat, the fire being put out). Children can sequence these cards in the order they think they happened. You can then introduce the idea of days and nights passing.
Maths Skills: Sequencing, understanding the order of events, introducing the concept of time (days).

Comparing Sizes and Heights of Buildings:
Activity: Show pictures of different types of buildings in London at the time (tall houses, the bakery, St. Paul's Cathedral). Children can compare their relative sizes using words like "bigger," "smaller," "taller," "shorter." You could even use blocks to build representations of different heights.
Maths Skills: Comparing size and height, using comparative language.

Sharing Resources (Food, Water) for People Affected:
Activity: Present simple sharing problems related to helping those who lost their homes. For example: "If 6 people needed bread and you had 12 slices, how many slices could each person have?" (Introduction to division as sharing). You can use counters to represent the items.
Maths Skills: Introduction to division (sharing), counting, problem-solving.

Creating Patterns with Fire Colours and Building Shapes:
Activity: Use coloured paper or crayons (red, orange, yellow for fire; brown, grey for buildings) to create repeating patterns. For example: red, brown, red, brown or square, triangle, square, triangle. This links to the visual aspects of the event.
Maths Skills: Identifying and continuing patterns, creating own patterns, colour and shape recognition.

Considerations for Implementation

Keep the maths concepts simple and relate them directly to the historical event way for KS1 learners. Visual aids and hands-on activities will be particularly effective.

Courageous Advocacy

Courageous Advocacy ideas that go beyond the typical retelling of the story and really ignite their imaginations and critical thinking:

Stepping into the Past (Empathy & Perspective):
"If Walls Could Talk" Drama: Instead of just learning the facts, have the children imagine they are a building (a grand house, a bakery, a simple dwelling) during the fire. What would they "see," "hear," and "feel"? They could then act out their building's experience, fostering empathy for those who lost their homes.

Diary of a Survivor (or even a pet!): Encourage children to write a diary entry from the perspective of someone living in London during the fire. To make it extra courageous, challenge them to take on the voice of a less obvious character – perhaps a child who got separated from their family, a cat trying to escape the flames, or even a piece of furniture being carried out of a burning house.

"What If?" Scenarios: Present the children with "what if" questions that encourage critical thinking. For example: "What if the wind hadn't changed direction?", "What if more people had helped pull down houses sooner?", "What if they had fire hydrants back then?". This pushes them beyond the narrative and into exploring cause and effect.

Investigating the Evidence (Historical Inquiry):
Become Fire Investigators: Provide the children with "clues" (pictures of old London, descriptions of materials used in buildings, eyewitness accounts simplified for their age). Challenge them to work in small groups to analyse the clues and come up with their own theories about why the fire spread so quickly.

Mapping the Disaster (Spatial Reasoning): Using a simplified map of old London, have the children trace the spread of the fire day by day as they learn about it. They could use different coloured markers and discuss why the fire moved in certain directions. This brings in a geographical element and helps them visualise the scale of the disaster.
"Fake News" Alert!: Introduce the concept of how news and information spread differently in the 17th century. Show them a (child-friendly) example of a rumour or exaggerated account of the fire. Discuss why people might have believed it and how we check for reliable information today.

Creative Expression & Problem Solving:
Rebuilding London (Design & Technology): Challenge the children to design and build a "fire-safe" version of a street in London after the fire. They could use different materials and explain why their designs would be more resistant to fire. This links history to DT and encourages problem-solving.

The Sounds of the Fire (Music & Drama): Explore the sounds of the Great Fire – the crackling flames, the shouts of people, the collapsing buildings. Encourage the children to create a soundscape using instruments, their voices, and everyday objects. This adds an artistic dimension to their learning.

Commemorative Artwork with a Twist: Instead of just drawing pictures of the fire, ask the children to create a piece of artwork that commemorates the *changes* that happened after the fire. This could focus on the new building materials, the wider streets, or even a symbol of resilience.

Connecting to Today:

Fire Safety Heroes (Citizenship): Discuss the importance of fire safety today and the roles of firefighters. Invite a local firefighter to talk to the children (if feasible) or research modern fire safety measures. This helps them see the relevance of the historical event to their own lives.
Remember to tailor these ideas to the specific abilities and interests of your Key Stage 1 class. The key is to make the learning active, engaging, and encourage them to think critically and creatively about this significant historical event. Good luck – I'm sure they'll have a blast!

Developing Spirituality

Developing Spirituality few ideas, focusing on wonder, empathy, and reflection:

The Power of Small Beginnings:
The Spark: Begin by talking about how something enormous can start from something tiny, like a single spark. You could light a small candle (safely!) and discuss how even that little flame has the potential to grow. Connect this to the baker's oven and how a small mistake had huge consequences.

Reflection: Ask the children: "Have you ever seen something small that grew into something big? How can small actions have a big impact, both good and bad?" This encourages them to think about their own actions and their ripple effects.

Empathy for Those Affected:
Imagine: Encourage the children to close their eyes and imagine what it might have been like to see their homes burning, to lose their belongings, and to feel scared.

Connecting Feelings: Discuss the emotions people might have felt – fear, sadness, loss, but also perhaps kindness from those who helped. Ask: "How would you feel if this happened to you? How can we show kindness to people who are going through difficult times?"

The Fragility of Life and Possessions:
What Matters Most? Talk about how the fire destroyed houses and things people owned. Ask: "What are the most important things in your life? Are they things you can touch, or are they things like love and friendship?" This helps them consider values beyond material possessions.

Thankfulness: Lead a short moment of thankfulness for their homes, families, and safety.
The Spirit of Resilience and Rebuilding:
Hope After Disaster: Explain how, even after the fire, people didn't give up. They worked together to rebuild London.

Planting Seeds: You could plant some seeds together as a symbol of new beginnings and hope after destruction. Discuss how even after something seems completely gone, new life can emerge.

The Importance of Community:
Helping Hands: Focus on the stories of people helping each other during and after the fire. Discuss how communities come together in times of crisis.

Circle Time: Have a circle time where children can share ways they help each other and how working together can make a difference.

The Wonder of Transformation:
From Ashes to New City: Show pictures of old London before the fire and then modern London. Discuss how something destructive led to something new being built.

Metamorphosis: You could link this to natural transformations they might know, like a caterpillar turning into a butterfly, highlighting the idea that change, even if difficult, can lead to new possibilities.
Other Ideas:
Showing an awareness of what life was like in the past.
Start to develop an awareness of the differences between rich and poor and that there are those less fortunate that will need our support.
Appreciate where food comes from.

Remember to:
Keep the language simple and age-appropriate.
Use visuals and sensory experiences where possible.
Allow time for quiet reflection and sharing.
Focus on the positive messages of hope, resilience, and community.
These ideas aim to move beyond just the facts of the fire and touch upon deeper themes of human experience and the world around us, fostering a sense of wonder and connection.

Other Ideas

Extra-curricular ideas for Key Stage 1 pupils about 'The Great Fire of London' in North Norfolk, keeping in mind the local context and age appropriateness:

1. Museum Visit & Workshop:
Strangers' Hall, Norwich: This museum offers a dedicated KS1 workshop called "Life at the Time of the Great Fire of London." A servant who experienced the fire first-hand leads an object-handling session and uses drama to share their experiences. Pupils can also explore the upstairs rooms, looking for fire hazards and experiencing a room lit by candlelight. This is a fantastic, immersive option for historical understanding.

Museum of Norwich: While not directly about the Great Fire, they offer workshops that can be linked to the time period, such as "Made in Norwich" (examining industrial past, tools, and products) or "Toys in the Past" (exploring historical toys). These could provide context for what life was like in 17th-century towns.

2. Local Connections & Activities:
Norfolk Record Office (The Archive Centre): They offer workshops like "Working as an Historian" where pupils can learn about historical sources and put documents in chronological order. This could be adapted to look at imagined or simplified "evidence" related to the Great Fire, or even general historical skills that link to how we know about the fire (e.g., Samuel Pepys' diary).

"Build a Tudor/17th Century House" Day:
Activity: Provide cardboard boxes, craft sticks, straw, red/orange tissue paper, and glue. Have children design and build their own miniature 17th-century London houses. Emphasise the materials used (wood, straw roofs) and the close-packed nature of the buildings.

Extension: Discuss fire safety and how modern houses are built differently. You could even safely demonstrate how quickly a small paper structure can burn (under strict adult supervision, outdoors, with water readily available) to show the dangers of the old buildings.

Baking Bread (Pudding Lane connection):
Activity: Make simple bread rolls or small loaves, linking back to Thomas Farriner's bakery in Pudding Lane where the fire started.
Discussion: Talk about the importance of bakeries in 17th-century life and how a small spark could lead to such a huge disaster.

"Samuel Pepys" Diary Writing/Drawing:
Activity: Encourage children to imagine they were in London during the fire and to draw or write (with adult help for younger ones) what they saw, heard, and felt. Provide simple prompts like "I saw...", "I heard...", "I felt...".
Resource: The fireoflondon.org.uk website has excellent KS1 resources, including activities about Samuel Pepys and his diary.

Fire Safety Workshop:
Activity: Invite a local fire safety officer to talk about fire safety today. Compare modern firefighting techniques and equipment with those used in 1666.
Relevance: This brings the historical event into a contemporary context, highlighting the progress made in fire safety.

Dramatic Re-enactment/Storytelling:
Activity: Use simple costumes (e.g., aprons for bakers, cloaks) and props to act out key moments of the fire: the start in Pudding Lane, the fire spreading, people escaping by boat on the River Thames, and the rebuilding of London.
Resource: BBC Teach has a "Let's Move! The Great Fire of London" dance session that uses movement to tell the story – perfect for energetic KS1 pupils.

3. Creative and Imaginative Play:
"Rebuilding London" Design Challenge:
Activity: After learning about how London was rebuilt with wider streets and brick houses, provide building blocks, LEGO, or even drawing materials. Challenge the children to design their "new and safer London."
Discussion: Talk about the features that would make their city safer from fire.

Puppet Show or Small World Play:
Activity: Create simple stick puppets or small figures representing key people (Samuel Pepys, King Charles II, ordinary Londoners) and buildings. Children can then retell the story of the Great Fire through play.
Art and Craft - "Fiery Art":
Activity: Use warm colours (reds, oranges, yellows) and different textures (tissue paper, paint, glitter) to create abstract art representing the fire and smoke.
Collage: Create collages of London before and after the fire, using images of old wooden houses and new brick buildings.

Other Ideas:
Visit to a fire station or get firefighters to come to school with their fire engine – could put the fire of London out (if you choose to recreate it!)