

**Topic: The Flintstones**

**Year:3**

**Term: Autumn**

Starting point:  
Archaeology Afternoon:  
Travelling back in time to the Stone Age  
Butser Ancient Farm Visit:  
Archaeology, Spinning, Wattling and Pottery in Stone Age times.  
Learn basic methods: used by archaeologists, essential skills to make clothes, build a wall with hazel, use clay to make pots etc.

**MOTIVATION:**

Children will be using their skills throughout to design their stone age, bronze age and iron age weapons and clothing using the properties they learn over the topic.

**SCHOOL VALUES:**  
**Charlie Challenge**  
**Creative Cristoph**  
**Teamwork Trio**  
**Independent Isaac**  
**Resilient Ruby**

**BRITISH VALUES:**  
**Democracy**  
**Rule of law**  
**Individual Liberty**  
**Mutual Respect**  
**Tolerance**

**Subject areas/cross curricular links:**

Science: properties of materials / manmade and natural (stone, bronze, iron etc), separating materials, dissolving and mixing / solutions / solids, liquids, gases, reversible and irreversible changes, comparing rocks / soils / fossils.  
D&T: design, make and evaluate, creating structures  
History: changes in Britain from the Stone age to the Iron age  
R.E: Belonging (Christian faith: baptism)  
Bronze age religions  
Art: cave painting, drawing and sculpture using various materials  
Maths: Creating life size drawings using scale comparisons. ordering dates of events in chronological order  
Literacy: Non-fiction units: instructional text, narrative topic writing: diary entry / recount, discussing opinions and listening to those of other children, new vocab, making notes from videos, using a dictionary and glossaries

**What the children want to know:**

Children to understand properties of materials and how they are used in relation to their properties. The changes in Britain from the stone age to the iron age and how and why the use of materials changed.

**Multicultural/Community cohesion:**

Museum presentation to parents/adults.

<p><b>End product:</b> Design and make the walls of a Stone Age building using methods and tools from the period. Create an end of term museum celebrating findings from Stone Age to the Iron Age.</p>	<p><b>R.E</b> QCA scheme of work: Belonging</p> <p>Explore Bronze age religion</p>	<p><b>SEAL/PSHE/Citizenship</b> Me and My Relationships Autumn 1</p> <ul style="list-style-type: none"> <li>• To manage feelings surrounding new people and understand the importance of belonging to a group.</li> <li>• To be able to see things from someone else's point of view in order to maintain friendships and relationships.</li> </ul> <p>Me and My Feelings Autumn 2</p> <ul style="list-style-type: none"> <li>• To identify what makes us feel happy/sad and why.</li> <li>• To think about being in someone else's shoes and suggest ways to help if they are feeling sad.</li> </ul>
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**VALUES - How/when will these be taught?**  
Charlie Challenge: children will have to design their own stone age house  
Creative Cristoph: children will discuss ways to present their learning throughout the topic  
Teamwork Trio: children will present information as an end product  
Independent Isaac: children will produce written pieces using high level language skills  
Resilient Ruby: children will re-create their own cave paintings

## Subject skills (Learning objectives)

### Science (Specialist teaching) Programme of Study:

- compare and group together everyday materials on the basis of their properties, including their hardness, solubility, conductivity (electrical and thermal), and response to magnets
- know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution
- use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating
- give reasons based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic
- demonstrate that dissolving, mixing and changes of state are reversible changes
- compare and group together different kinds of rocks on the basis of their appearance and simple physical properties
- describe in simple terms how fossils are formed when things that have lived are trapped within rock
- recognise that soils are made from rocks and organic matter

### History:

- changes in Britain from the Stone age to the Iron Age

### Design and Technology:

- generate, develop, model and communicate their ideas through discussion and annotated sketches
- select from a wider range of equipment to perform practical tasks
- select from a wider range of materials and components according to their functional properties

### Art:

- to create sketch books to record their observations and use them to review and revisit ideas
- to improve their mastery of art and design techniques, including drawing, painting and sculpture with a range of materials [for example, pencil, charcoal, paint, clay]

WK	LI	Lesson	Resources
1 Topic	To find out what happened in the Stone Age	<p>Travel back in time to the Stone Age. Explore a cave with cave paintings, find a pterodactyl footprint. Make life-size drawings using comparison to own footprints. Uncover a range of historical facts. Watch a clip from the Flintstones: discuss some historical comparisons with the fictional story.</p> <p>[Dr Collins: making arrow heads]</p> <p>What do we already know about the Stone Age?</p> <ul style="list-style-type: none"> <li>- Mind map existing knowledge and ideas</li> <li>- What do we want to find out?</li> <li>- Begin to create a timeline from Stone Age to now, based on pupil knowledge of events</li> </ul> <p>Annotate mind maps in different colours - get children to think independently about what they already know, then get children to share, swap and think of other ideas in a different colour. Then get children to swap partners on a different table and get to share, swap and think of ideas. Children to record the questions on the carpet together as a class.</p>	
<p>Visit to Butser Farm: Pupils will travel back in time to the Stone Age. Explore archaeology learning basic methods used to be an archaeologist. Learn how to wattle, weave with hazel rods. Use clay to make pots, models of warriors, houses, animals and plaques. Discover the essential skills in the first steps towards making clothes. Learn how to use basic spindle to spin some wool from sheep into yarn.</p>			
2 Topic/ English	To become familiar with the Stone Age and how people lived	<p>Intro: Read the 'Stone Age Boy' by Satoshi Kitamura to them. In discussing the book with the children, focus on the historical aspects of it; for example, on page 11 why the girl he meets inspects his glasses and is confused by them (because Stone Age people would not have had glasses) Explain independent work and do some shared writing to model how we might begin our recounts / diary entries.</p> <p>Main: Children to write a recount / diary entry as the girl about her life, as Stone Age Boy wants to get a good idea about life in Stone Age times.</p> <p>Leave the following list of prompts (with related images) on the IWB for things to include: What animals were around e.g. mammoths, what materials people used e.g. animal skins, what activities people did e.g. making tools, cave painting</p> <p>Plenary: in partners children to read each other's recounts / diary entries to each other. Discuss if children would have liked to live in the stone age. Why / why not?</p>	<p>The book 'Stone Age Boy' by Satoshi Kitamura</p> <p>Prompt sheet with images displayed on IWB</p> <p>Writing frame for lower ability</p>
3 D&T	<p>To understand that we live in many different types of homes.</p> <p>To know the names of different buildings and the main features.</p> <p>To observe carefully and draw simple shapes.</p> <p>To be able to recognise and name basic mathematical shapes in the context of houses and homes.</p>	<p>Explain to the children that Stone Age Boy would like to know more about houses in the Stone Age, Bronze Age and Iron Age times. Observe and discuss some pictures on the IWB of buildings from this period. How did they enclose space? Why do we enclose space? What are the differences between these different buildings?</p> <p>Ask the children to draw examples of different types of buildings they have seen and label the main features eg doors, windows, chimneys, walls, roof, and relate the main features to basic mathematical shapes eg walls - rectangle or look at 3D shapes?</p>	

4 Topic	To understand the major prehistoric human achievements	Intro: explain to children that although prehistoric people are often thought of as not being very clever, they actually completed some great achievements. For each of the achievements on the IWB ask children to discuss in their talk partners how it would have improved the people's lives. Main: Explain 'Diamond Nine' activity to children: they will have nine cards. On each card will be an achievement from the list on the IWB, with how that achievement could have improved people's lives. They will need to rank the reasons in terms of their importance in the shape of a diamond.	Scissors Glue sticks Set of nine cards
5 Topic/ Art	To create pictures in the style of cave paintings	'Cave paintings' - what images are brought to mind? Use the 'Stone Age Cave Paintings' flipchart or powerpoint. In their sketchbooks children to create their own cave painting. Think about different ideas that they have seen and using pencil think of some ideas that can be used later on.	Sketchbooks Art pencils Examples of cave paintings.
6 Topic/ Maths	To arrange events from the past in chronological order	Intro: Introduce the idea of a timeline to children, explaining how we often use timelines in history to put things in order of when they happened. Explain that we arrange our dates from the time Jesus was born: even though we say this is the year 2015, the world is actually billions of years old; BC means Before Christ and AD means Anno Domini (in the time of our Lord); Higher BC numbers were longer ago; Higher AD numbers are closer to now; Use a number line / timeline and some random dates to explain this. Show, on the IWB, children the events that we will be ordering today, with some explanation. Model for children how to complete independent work. Main: Children to arrange the events in chronological order.	
7 D&T	To be able to use their own experiences when developing ideas. To be able to clarify their ideas through discussion. To be able to make suggestions as to how to proceed. To be able to assemble, join and combine 3D material into a model. To be able to use basic tools safely. To be able to evaluate products they have made, commenting on the main features.	Discuss the different types of buildings that we have seen from Stone / Bronze / Iron Ages and encourage the children to think about the sort of home they might make. Who it is for? What do they need? What might it be like?  Show the children the materials available and ask them to discuss their ideas. How could we do this? Ask the children to select their materials and join and combine them to construct a home choosing appropriate techniques.  Encourage the children to add finish and detail to the home, using daub and some cave painting styles around the outside of the house.  Encourage the children to talk about their finished hoes and the main features they have added. Discuss strengths and areas for development. Highlight specific learning points drawn from the children's work.	

8 Topic	To find out about life in Skara Brae	Intro: Explain that we are going to be learning about an archaeological site that was built during the Stone Age. Ask children what they can remember about archaeology from our trip to Butser Farm. Watch videos about Skara Brae, pausing the videos to explain technical language. Discuss how the two archaeologists at the end of the second video have different views on why Skara Brae was abandoned. Explain that this is how archaeology works: archaeologists come up with theories to explain things based on the evidence to support their theories. Discuss how many ancient places in history were abandoned by the people who lived in them.	
9 Topic	To find out what people ate in the Stone Age and how their diet changed	What did people eat in the Stone Age? Get children to share ideas with each other and then do a brainstorm of their ideas. Use the Stone Age Food flipchart or powerpoint. Relate back to previous topic on 'healthy eating', did they follow the Eatwell plate and have a balanced diet? Sample some of the foods available to hunter gatherers in the Stone Age. Stew your own fruit.	
End product: Presentation to parents Northern Parade Museum: The Age of Man. Pupils to show parents hall / rooms, acting as curators, explaining and presenting work from the term.			

## Science specialist teaching:

1 Science	To be able to identify objects made of a particular material. To be able to make links between materials and their properties. To be able to group objects according to their uses, properties and material types.	Show the children some of the objects that you have collected and discuss what they are and what they are used for. Explain that you are going to group the objects and that they must decide why you have placed each object in a particular group. Place all the metal objects in one pile, all of the wooden objects in another pile etc and take suggestions from the children. Help them reach the appropriate conclusion if they are having difficulty i.e. all the objects made from metal are in one pile etc. Ask children to offer alternative ways of grouping the objects and the class can guess what the criteria are. Discuss any differences in the appearances of objects made from the same materials. Talk about why materials are appropriate for certain objects such as windows needing to be transparent and chairs needing to be strong. Help children to make links between materials and their properties. Imagine objects made from very different materials and discuss why these materials would not be suitable. Make a list, using contributions from the children, of all the different types of material that they are aware of. Ask if they can identify any objects that are made from these materials. Explain to the children that the Stone Age Boy would like to conduct a survey to find which material is used most commonly. Show them an enlarged example of 'Materials Tally Chart' worksheet. Tell the children that they must examine all of the objects within the classroom/school and try to decide which materials they are made from. Demonstrate completing the chart using an example that is constructed from two different materials eg a table (wooden top and metal legs). Hand out copies of 'Materials Tally Chart' to each child. Ask them to identify on their chart the specific part of the object that is constructed from that	Collection of objects made from different materials eg wood, glass, metal  Copies of 'Materials Tally Chart'
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		<p>material. The children complete their survey and write the results in the chart provided. They total the number of objects made from each material and write the number in the total column. Bring the children together and discuss conclusions they have made. A bar graph can be constructed to show which material is most commonly used. Children will find it easier to view this information visually. Discuss the results with the children and ask them to identify reasons why one material appears to be used more than another. Base the discussion around the properties of each material. Also infer that as children were selecting objects at random, they may have deliberately influenced the results therefore not making it a 'fair test'. Talk through ways the test could be made 'fair', eg. by recording every object in the classroom etc.</p>	
2 Science	<p>To be able to state one or two characteristics of a range of common materials.</p> <p>To be able to make comparisons between materials eg wood is usually hard and strong but glass is hard and breaks easily.</p>	<p>The Stone Age Boy needs some more help to tell the Stone Age people of the different materials that we have. He needs to describe the different materials and their characteristics. Fill the bag with a selection of objects made from different materials. Ensure that the objects chosen do not have sharp edges and are not too fragile. (For glass choose sample size jam pots as they are virtually unbreakable.) Sit the children in a circle and ask them to take turns to put their hand inside the bag and describe the object to the other children. They must not take the object out of the bag at this stage. When they have finished their description, the other children must attempt to guess what material the object is made from. Write the describing words used on the board. After a few goes, introduce the children to the specific vocabulary eg fragile, strong, hard, soft, rough, smooth, flexible, rigid etc. Encourage the children to describe the objects in terms of these characteristics. Try to encourage the children to develop generalisations about each kind of material.</p> <p>Split the class into 4 groups and give them a pair of properties to investigate eg fragile/strong, rough/smooth. Provide them with the flashcards for their words so they become familiar with the vocabulary used. Provide each group with a range of materials and ask each group to sort their materials into 2 piles. When they have physically sorted the objects, the children need to record their results on the 'Sorting Materials' worksheet by drawing pictures of the objects in the appropriate circle and labelling the object with the material.</p> <p>Gather together and talk about how we can explain our findings to Stone Age Boy. Talk about how the objects were sorted according to the properties of the materials used. Brainstorm objects that can be made from more than one type of material - tables, chairs etc. Identify common properties needed in a material used for certain objects, eg. a table will need to be made from a material that is strong, durable and easy to clean.</p>	<p>Collection of objects made from different materials eg wood, glass, metal, Flashcard properties, feely bag, Copies of 'Sorting Materials' and 'Materials and their Properties'.</p>
3 Science	<p>To be able to identify particular reasons for using particular</p>	<p>The people from the Stone Age times have asked Stone Age Boy some questions that he thinks will not work. Show the children the 'impossible scenarios' and discuss why the materials that have been used for the specific job are unsuitable. Encourage the children to identify the links between the properties of the material chosen and its use. For example, if you had a towel made from metal foil, it would not absorb any water and it would be very uncomfortable. Explain that</p>	<p>Wooden chair, plastic bottle, paper towel, woollen jersey etc, Series of</p>

	<p>materials. To identify alternative materials and explain which property is important.</p>	<p>although metal foil is flexible, which is important for a towel it is not the most important property. Repeat the exercise with other impossible scenarios. Stone Age Boy is wondering if we can think of ways to teach the Stone Age people more about what objects are suitable for certain things. Show the children the objects. (Wooden chair, plastic bottle, paper towel, woollen jersey.) Ask the children to explain which material(s) the objects are made from. Ask them to identify reasons why these objects were chosen. Discuss whether there would be any suitable alternatives for the materials chosen. Try to identify the most important property which would usually be the main purpose of the item. Complete an enlarged version of the 'Materials, Properties and Alternatives' worksheet, for one of the objects. Then distribute copies of the worksheet to the children and allow them to work in pairs to complete the rest of the sheet.</p>	<p>impossible scenarios Copies of 'Materials, Properties and Alternatives' worksheet.</p>
<p>4 Science</p>	<p>To be able to obtain evidence to test scientific ideas. To be able to plan and carry out a test safely. To be able to decide whether a test was fair.</p>	<p>The Stone Age people have told Stone Age Boy that they are going to build a cart to transport their materials around for building their houses. However they are having difficulty in moving the cart around on the ground. They would like to know if there is a best material to use as a surface for their carts to move around on? Ask the children how they knew about the properties of some materials eg How did they know that wood was hard? How did they know that paper towels were absorbent? Discuss how the children could find out answers to these questions if they didn't already know. Introduce the concept of testing. Explain that people who make things for a specific purpose test them before they are allowed to go on sale. Show the children the toy cars and explain what they will be investigating. They will be trying to find out which floor covering is the one that allows the cars to move the furthest. Take suggestions about how the investigation might be carried out. Explore the concept of a 'fair test' by demonstrating different situations to the children and asking them to explain what is wrong eg I push one car on the carpet and David pushes one car on the wooden floor and we measure which one has gone the furthest. Problems with this approach include one person may push the car harder, no starting line, different car used each time. Split the children into groups and provide them with copies of 'Investigation Planner'. Ask them to talk in their group to decide how to conduct their investigation to ensure a fair test. Allow time for the groups to feedback to the rest of the class, clarifying their ideas and developing the concept of fair testing. Now ask the children to complete the first sections of the worksheet, up to the Results box. Lower ability children could work in pairs to complete the worksheet. Once the worksheet sections are complete, provide the group with the equipment. Once the investigation has been completed, the children can write their results onto the 'Investigation Planner' worksheet and draw a labelled diagram of what they did. Talk with the group through the results they found and work as a class to decide on some conclusions to be entered into the final box.</p>	<p>Toy cars, Materials for ramp (e.g large hardback book rested on smaller books), Different flooring materials eg carpet, lino etc, Measuring equipment, Copies of 'Investigation Planner'.</p>



<p>5 Science</p>	<p>To be able to plan a fair test and explain why it was fair, pointing out any difficulties. To be able to explain why the evidence in this test was better eg more accurate. To be able to state which paper was best or rank papers in order of absorbency.</p>	<p>Stone Age Boy has discovered that the Stone Age people are having terrible problems in keeping clean and especially in cleaning spilt drinks that have fallen over in their poorly designed cups. He would like to take back some paper to help them to clean these messes up. However, he is very unsure what paper would be best to take back. Can the children help?</p> <p>Introduce the investigation to the children by discussing the use of paper towels and kitchen paper for mopping up spills. Discuss which properties of paper they will be looking for and how to make the test fair eg using the same sized piece of paper/towel and using the same amount of water each time. Recap on the information gained in lesson 4 about the conduct of a fair test. Help the children decide which variable(s) they might want to keep constant and which ones they might want to change. Ask them how they are going to decide that the paper has absorbed the water. Help the children plan the investigation by completing the 'Investigation Planner'. This will help them to decide what they are actually testing and their method. Help the children devise an appropriate format for gathering their results eg a tally chart indicating the number of drops of water absorbed by each piece of paper. Ask the children to demonstrate which parts of their test they have made fair and how they will ensure that it was a fair test eg measured and cut the pieces of paper so that they are all the same size or using a pipette to measure and restrict the amount of water used each time.</p> <p>Allow the children to complete their investigation in pairs and to analyse the results. Explain to them that they will need to rank the results in order of the absorbency of each type of paper. Compare the results of the whole class on a large frequency or tally chart and see which types of paper the class regarded as the most/least absorbent. Talk with the group through the results they found and together decide on some conclusions to be entered into the final box so that they can pass on the information to Stone Age Boy.</p>	<p>Different types of paper eg tissue paper, paper towel, toilet paper, sugar paper, greaseproof paper etc, Pipettes, Measuring jugs, Copies of 'Investigation Planner'.</p>
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