



Pinner Wood School



Year Group	1	Term 1	Aut 2	Subject	Science	Topic	Materials
						Key Question	What are objects made from?
Prior Learning and other Curriculum Links	<p>EYFS can understand some important processes and changes including changing states of matter.</p> <ul style="list-style-type: none"> I can know the properties of some materials and can suggest some of the purposes they are used for. I am familiar with basic scientific concepts such as floating, sinking, experimentation. I can begin to understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. <p>History - toys are made from different materials and how this has changed over time</p>			Skills Statements		<ul style="list-style-type: none"> I can tell the difference between an object and the material from which it is made. I can name a variety of everyday materials, including wood, plastic, glass, metal, water and rock. I can make a prediction 	
Fundamentals	<ul style="list-style-type: none"> distinguish between an object and the material from which it is made identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock describe the simple physical properties of a variety of everyday materials compare and group together a variety of everyday materials on the basis of their simple physical properties. 			Key Facts/Sticky Knowledge		<p>An object is a thing that can be used</p> <p>Materials are what an object is made from eg. Plastic, metal, wood, fabric</p> <p>If something is hard it is not easily broken or bent e.g. metal</p> <p>If something is soft, it is easy to cut, fold or change the shape of such as fabric</p> <p>If something is stretchy it can be pulled to make it longer or wider without breaking it (e.g elastic band)</p>	

Our Curriculum Journey	<p>Stunning Start: <i>Game:</i> What is the object? What is it made from? Using a bag in small groups one person places object in bag and then each child puts hand in bag. They must feel the object but cannot look. Children to then guess - What is the object? What is it made from?</p> <p>Journey: Children will investigate materials wood, glass, metal, rock and plastic. They will identify objects made from these materials and begin to discuss why certain materials are better suited to particular uses. Children will sort objects. Children will conduct an experiment on the properties of paper. They will make and record a prediction, findings and results.</p> <p>Show stopper: Children will take part in a quiz</p>		
Key Vocabulary (revisited)	wood, metal, bricks, ice, plastic, metal, glass, water, leathers, fabric, wool, predict, hard, soft, fluffy, rough, smooth, shiny, dull, float, sink,	Key Vocabulary (new)	materials, wood, wooden, rock, brick, paper, predict, results

Pinner Wood Medium Term Planning

Lesson Number: Stunning Start Location: Class	Key Question: What object is this? What material is this?	Lesson Outcome Children to play game in group	
Introduction: Explain to chdn we are going to begin a topic and will be looking at what are objects made from?		Resources	

	Wood items
Main Teaching including differentiation:	Metal items
Game: What is the object? What is it made from?	Plastic items
Using a bag in small groups one person places object in bag and then each child puts hand in bag. They must feel the object but cannot look. Children to then guess - What is the object? What is it made from?	Bags
Were they correct? How did they know?	

Lesson Number: 1 Location: Class	Key Question: What material is this?	Lesson Outcome Children to label classroom using post it notes (wood, plastic, metal) - Upload on seesaw
	Introduction: As a class and using talk partners. Discuss: <ul style="list-style-type: none"> • What do you know about materials? • Can you name any materials? • What do these words mean? • Strong, weak, hard, soft, wood, metal, plastic • What do you think these word might mean? • Glass, china, fabric 	Resources Wood items Metal items Plastic items Hoops and labels
	Main Teaching including differentiation:	

Show children different samples from the wood offcuts and items made of wood . Pass some around the class and ask them

1. What are they made of?
2. What is the name of the material?
3. How are these samples/offcuts different from the items?
4. Where should these items be placed?

Put all the wooden items in large hoop labelled 'wood'.

Repeat this with the metal samples and metal items, and place them in a hoop labelled 'metal'. How are they different from the wooden ones? Focus on texture, weight, temperature and colour.

Repeat again with the plastic items, and place in a hoop labelled 'plastic'.

Take photo for project book

Main Activity

Mixed ability groups: Using coloured post it notes children to work in pairs to label objects in classroom

Yellow - plastic

Orange - metal

Pink - wood

T to take photos of children labelling classroom for project book and seesaw

Plenary:

What materials did we see in the classroom?

Watch children and talk to them as they carry out their sorting. Are children able to recognise objects made from wood, metal and plastic, and sort them into these groups? What words do they use to describe them? Do they recognise that some objects have been painted? Are they able to use the words 'wood', 'metal' and 'plastic' correctly when talking about objects? Can they give examples of other objects made from wood, metal and plastic? Do they recognise that some objects are made of more than

Post it notes (yellow, orange, pink)

one material? Do they suggest how to categorise these? Can they distinguish the object from the material(s) from which it is made?

<p>Lesson Number: 2</p> <p>Location: Class</p>	<p>Learning objectives:</p> <p>What material is this?</p>	<p>Lesson Outcome</p> <p>Children to investigate rock samples using magnifying glasses (record in project book)</p>	
		<p>Introduction:</p> <p>Show children examples of objects made from glass. Pass carefully around circle</p> <p><i>Ask: Do you know what these things are made from? Why must we be very careful with them? Can you think of words to describe glass?</i></p> <p>Answers should focus on texture, colour, weight, temperature and transparency (use the term see through).</p> <p>Ask them if they can name anything made of glass in the classroom and then carefully label the objects with a sticky note. Do they know any other glass objects? Place the glass objects in a labelled hoop.</p>	<p>Resources</p> <p>objects made from glass</p> <p>selection of rock samples,</p> <p>.</p>
		<p>Main Teaching including differentiation:</p> <p>Show children examples of bricks/rock, if possible small and light enough for children to handle. Pass them around and ask if they know what they are.</p> <p><i>Ask: Can you think of any words to describe brick?</i></p> <p>Place the objects in a labelled hoop. Show children Naturally occurring rocks (Slideshow 1), which has rock samples and pictures of rocky environments. Pass the rock samples around the class and ask them if they know what they are. It may be necessary to let children know that the proper scientific word for these samples is</p>	

'rocks', as they might call them 'stones'. What words describe the rocks? Place the samples in a labelled hoop.

Show children different fabrics and discuss these

Main Activity 1: Mixed ability groups: Children investigate and describe rock and brick samples:

Give the children the rock and small brick samples, and magnifiers. Allow them to look at the samples with the magnifiers. Ask them what they can see. Explain to the children how to use a magnifier in the correct way. Ask them to look at the rock samples and bricks and tell a partner two things about what they see.

Main Activity 2: Children to investigate different fabrics. What is the same about them? What is different?>?

Main Activity 3: As class

Recap on what we have found out about glass, rock and fabric record in project book.

What objects are made from these?

What are the properties of this material?

Plenary:

Recap on what we have found out about wood, plastic, metal and record in project book if not previously.

What objects are made from these?

What are the properties of this material?

<p>Lesson Number: 3</p> <p>Location: Class</p>	<p>Learning objectives:</p> <p>What is the object made from?</p>	<p>Lesson Outcome</p> <p>Sort objects using Venn Diagram or table (sheet in books)</p>	
<p>Introduction:</p> <p>Show children objects. What material is this made from?</p>		<p>Resources</p> <p>Objects made from wood, metal, glass, rock, fabric, plastic</p>	
<p>Main Teaching including differentiation:</p> <p>Show children some of the objects from previous lessons and ask them to name the material from which they are made.</p> <p><i>Ask: What are the names of the materials from which it is made? Where should this toy be put in the sorting hoops?</i></p> <p>Record this using a table</p> <p>Send LA/SEN to complete activity</p> <p>Teach HA/MA - Show them that the hoops can be overlapped so that the toy would be in both the plastic and metal sorting hoops. Show children an object made from wood and fabric or an object made from two materials which are different from the first object.</p> <p><i>Ask: Which materials is the object made from? Where should it be placed in the sorting hoops?</i></p> <p>Explain to children that they are going to sort a collection of objects made from more than one material and identify from what materials each object is made.</p>			

Main Activity

Give the children 10 objects made from two materials and What are they made from?

HA/MA: model using a Venn diagram for recording. Ask them if they can place the objects in Venn Diagram/overlapping sorting hoops.

LA: Children investigate objects made from two materials and use table to record. Ask them to tick the materials from which each object is made on the table.

SEN: 4 items. Ask them to tick the materials from which each object is made on the table.

Plenary:

Discuss what children have found. What objects were made from 2 materials? 3 materials? More?

<p>Lesson Number: 4</p> <p>Location: Class</p>	<p>Learning objectives:</p> <p>How are objects similar and different?</p>	<p>Lesson Outcome</p> <p>Sort objects as group in different ways - take photo and talk over</p> <p>(Discussion and practical - SeeSaw)</p>
<p>Introduction:</p> <p>What materials have we learnt about so far?</p> <p>What can you remember about these?</p>		<p>Resources</p> <p>Collect categories of objects made from different materials, such as metal, wooden and plastic</p>

Show Venn Diagram. - Remind children that this can be used for sorting and comparing similarities and differences.

spoons, metal and plastic paperclips, and metal, plastic, wooden and fabric toys.

Main Teaching including differentiation:

Lay out three sorting hoops labelled 'metal', 'wood' and 'plastic'. Place a selection of the resources in a large plastic carry box. Show children what is in the box. Select one object and ask in which hoop it should be placed. Start with ones that correspond with the labels. Select a glass tumbler.

Ask: Where do you think it should be placed without adding another hoop?

Place it outside the three hoops. Select more objects that fit the three criteria and then select a fabric toy and ask where it should be placed. Place it with the glass (cup). Continue selecting objects and then select a china plate. Explain to children that the sorting is not very tidy with several objects outside the hoops.

Ask: Can you think of another way to sort the objects?

Help them, if necessary, by placing a wooden toy, a plastic toy and a fabric toy together in a hoop.

Ask: What type of thing are all of these objects?

Explain to children that they are going to sort objects by their names and what they are used for, such as a cup for drinking and a toy for playing, and that they will also investigate what materials they are made from

Main Activity

In groups find items in your classroom

Sort them (use a table or venn diagram)

Take a photo and upload onto see saw

Explain how you have sorted them (record voice and label)

Ideas: What they are made from?

What they are used for?

Where they belong?

Mixed ability groups: children to sort objects and then take photo of how they have sorted objects and chdn record verbal explanation on see saw

SEN: with adult sort objects by

1. Material
2. Used for
3. Choice of own idea

Plenary:

Show children a table from each group to show how objects can be made from different materials. Show children a real brick and some plastic and wooden bricks. Ask children to talk to their partners about which is suitable for them to use in the classroom for building and which is better for building outside.

Ask: Why is this?

Show children a plastic plate and a china plate. Ask children to talk to their partners about the plates and why they think the plastic plate is better for children to use.

Ask: Can you think of a material that would not be good to make a plate, a spoon, or a brick from? Why do you think that? Which material do you think is good for making a spoon? What makes you say that?

Talk about what materials would be good for a teddy?

Lesson Number: 5 Location: Class	Learning objectives: Is all paper the same?	Lesson Outcome Prepare for Experiment:
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		Make prediction (verbal and written in science books)
	<p>Introduction:</p> <p>Show and pass around the class samples of types of paper, Ask: <i>Do you know what they are all made from?</i></p>	<p>Resources</p> <p>Collect many different forms of paper. (Kitchen towel Wrapping paper Glossy paper, paper)</p>
	<p>Main Teaching including differentiation:</p> <p>Task 1 As class: Show them the 'presents' wrapped in kitchen towel. Show them a roll of kitchen towel and explain to them that the presents were very difficult to wrap. Why do you think this? Do you think they are well wrapped? <i>Which paper would you rather receive a present wrapped in – kitchen towel or wrapping paper?</i></p> <p><i>Task 2: I need to write a message to Miss Munroe – Which paper do you think would be best to do this? Kitchen towel Wrapping paper, Glossy paper</i></p> <p><i>Can you make a prediction (record this in project book)</i></p> <p><i>Give children different papers and pens in groups and find the answer</i></p> <p><i>Bring back to carpet and ask children which was best</i></p> <p><i>Record in Project book</i></p> <p><i>Results:</i></p> <p><i>The ... was better because</i></p> <p><u>Main Activity</u></p> <p>Oh no! Some water has been spilt. It is going to ruin the toys! What paper should we use to mop it up?</p> <p>Which paper do you think will be best?</p>	<p>Presents wrapped in kitchen towel</p>

Children to record prediction in book

LA given sentence starter

SEN Stick the paper they think will be best in book

Plenary:

Create a List of what we will need to create experiment

What will we do in the experiment

<p>Lesson Number: 6</p> <p>Location: Class</p>	<p>Learning objectives:</p> <p>Is all paper the same?</p>	<p>Lesson Outcome</p> <p>Complete experiment and record results in table and sentence (in science books)</p>
<p>Introduction:</p> <p>Recap = Oh no! Some water has been spilt. It is going to ruin the toys! What paper should we use to mop it up?</p> <p>Which paper do you think will be best?</p> <p>Recap on what Children predicted</p>		<p>Resources</p> <p>(Kitchen towel Wrapping paper Glossy paper, paper)</p> <p>Pipette</p> <p>Water</p> <p>Sheets</p>
<p>Main Teaching including differentiation:</p> <p><u>Part 1</u></p> <p>Explain to children we are going to carry out the investigation</p> <p>We are going to drop 5 drops of water on the paper and see what happens to the paper and underneath.</p>		

Children will record how well the paper mopped it up. Teacher to model one example

Main Activity

Mixed ability groups children to carry out experiment

Record in table in books

Can use numbers 1bad 5 good

Or smiley faces

Or tick or cross

Part 2

What did you find out? Which paper was best? Was it what you predicted?

Model to chdn how record Results in sentence

Plenary:

Is all paper the same? Discuss how there are variations of materials and these have dislightky different properties that make them better for different purposes.

Look at other examples of wood, glass etc