



The Mall School

Scheme of Work 2023-2024

YEAR 2

Autumn Term				
Week	Topic	Learning Objectives	Activities/Resources/Links	Assessment
1-2	Exploring everyday Materials	To be able to identify a variety of materials and sort them according to a variety of criteria.	Provide children with the Picture Sheet showing a variety of different materials. Children to cut out the pictures and organise the materials according to their own criteria and then stick the pictures in the correct place on worksheet 1B.	<input type="checkbox"/> Can children identify and name a variety of different materials? <input type="checkbox"/> Can children organise a variety of materials into groups according to given criteria? <input type="checkbox"/> Can children organise a variety of materials into groups according to their own criteria?
3	Exploring everyday Materials	To be able to identify natural and man-made materials.	On worksheet 2B, children to decide what material they think each of the objects are made out of, and whether they are natural or man-made materials. Higher ability: Provide children with worksheet 2C which asks three questions: How is glass/paper/pottery made? Provide books, CD ROMs access to internet, etc. Children to use these sources to answer the questions, focusing on how the natural material is changed to produce a new material.	Can children recognise that some materials are naturally occurring and some are not? <input type="checkbox"/> Can children name some naturally occurring materials? <input type="checkbox"/> Can children identify objects that are made from naturally occurring materials?
4	Exploring everyday Materials	To identify that some materials can change shape by squashing, bending, stretching and twisting, and others can't.	Provide children with a ball of plasticine, an elastic band and a stone. Children to try bending, squashing, stretching and twisting each one. On worksheet 3B, children to follow the instruction in	<input type="checkbox"/> Do children know that some materials change shape when you bend, squash, stretch or twist them? <input type="checkbox"/> Can children identify some materials that can change shape temporarily?



			<p>the chart for each material and then describe what happened.</p> <p>Higher ability: Provide children with a ball of plasticine, an elastic band and a stone. Children to try bending, squashing, stretching and twisting each one. On worksheet 3C, children to make a prediction for each one and then describe what happened for each material. You may need to enlarge the sheet to A3 so children have enough space to record their observations.</p>	<p><input type="checkbox"/> Can children identify some materials that cannot change shape at all?</p>
5 & 6	Exploring everyday Materials	To identify the suitability of metal and plastic for a variety of purposes	<p>Provide children with worksheet 4B and a variety of metal and plastic objects. Children answer the questions about the materials and properties of each object</p> <p>Higher ability: Provide children with worksheet 4C and a variety of metal and plastic objects. Children write a description of each object saying which material they think it should be made from and why.</p>	<p><input type="checkbox"/> Do children know that metal and plastic are different materials?</p> <p><input type="checkbox"/> Can children identify some different things metal and plastic are used for?</p> <p><input type="checkbox"/> Can children explain why a particular material is chosen to be made into an object.</p>
7 & 8	Exploring everyday Materials	To identify different products that can be made from wood and their features and purposes.	<p>Provide children with worksheet 5B and Fact Sheets A and B. Children answer questions about how paper is made, where it come from and why we shouldn't waste paper.</p> <p>Higher ability: Provide children with worksheet 5C and Fact Sheets A and B. Children use the information on the Fact</p>	<p><input type="checkbox"/> Do the children know that paper and cardboard are made from wood?</p> <p><input type="checkbox"/> Can the children identify features of wood, cardboard and paper?</p> <p><input type="checkbox"/> Can children explain the advantages and disadvantages of using different wood products?</p>



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			Sheets to make a poster explaining why we shouldn't waste paper.	
	Exploring everyday Materials	To identify different materials that are used for the same product.	Provide children with worksheet 6B. The children will write why they think the named materials were chosen for each part of the pictured objects. Higher ability: Provide children with worksheet 6C. The children will record what materials have been used to make each of the objects and why they think that material was chosen.	<ul style="list-style-type: none">• Do the children know that different materials can be used to make the same product?• Can the children identify which materials have been used in a product?• Can children explain how the purpose of a product might affect the material that is used?
	Exploring everyday Materials	To identify material inventions and discoveries.	Provide the children with worksheet 7B. The children will record why they think each item was invented and how the material makes the invention possible. Higher ability: Provide the children with worksheet 7C. The children will record why they think each item was invented and how the material makes the invention possible.	<ul style="list-style-type: none">• Do the children know that products are improved and changed over time?• Can the children identify the different ways materials have been used?• Can children explain why their invention is an improvement on the original product?



Spring Term				
Week	Topic	Learning Objectives	Activities/Resources/Links	Assessment
1 - 2	Materials – identifying materials.	<ul style="list-style-type: none"> To be able to sort materials according to their own criteria, based on observable features, and to explain what these are eg. Shape, colour, hardness. To learn that there are a range of materials with different characteristics. To know the names of and recognise common materials- wood, metal, plastic, glass. 	<p>Materials hunt: classroom Pupils to find objects made from glass, plastic, wood and metal inside the classroom and draw them under the correct heading.</p> <p>Materials hunt: school Pupils to guess which material each object on their sheet is made from. In groups walk around the school and look at each object in more detail and record their findings.</p> <p>Matching activity: Match each object to the material it is made from.</p>	<ul style="list-style-type: none"> Pupils can sort materials according to their own criteria, based on observable features, and to explain what these are eg. Shape, colour, hardness. Pupils know that different materials have different characteristics. Pupils know the names of and recognise common materials- wood, metal, plastic, glass.
3 - 4	Materials – properties of materials	<ul style="list-style-type: none"> To become familiar with the vocabulary relating to properties of materials and the meanings of each. To know that light goes through some materials and forms a shadow when it does not: translucent vs. opaque. 	<p>Match the definition to the corresponding property eg. Flexible, transparent, smooth, strong etc.</p>	<ul style="list-style-type: none"> Pupils can identify the vocabulary relating to properties of materials and the meanings of each. Pupils know that light goes through some materials and forms a shadow when it does not: translucent vs. opaque.
5	Materials and their uses.	<ul style="list-style-type: none"> To be able to link the use of common materials to their simple properties e.g. water resistance, strength, transparency. 	<p>Pupils to look at each picture and identify:</p> <ol style="list-style-type: none"> What it is The material it is made from The properties of that material Whether it is a good choice for the object. 	<ul style="list-style-type: none"> Pupils can link the use of common materials to their simple properties
6	Materials – magnetism	<ul style="list-style-type: none"> To know that some materials are attracted to a magnet and not others. To learn that iron needs to be present. 	<p>Investigation: which materials are attracted to a magnet? Pupils to test a range of objects and identify which are attracted and which are not attracted to a magnet.</p>	<ul style="list-style-type: none"> Pupils can identify that iron needs to be present for an object to be attracted to a magnet. Pupils can identify that a magnet has a north and south pole.



				<ul style="list-style-type: none">• Pupils know the difference between 'repel' and 'attract'.
7	Materials – reversible changes	<ul style="list-style-type: none">• To know that heating and cooling everyday materials can cause them to melt or solidify.	Investigation: Melting ice Pupils to choose a range of places within the classroom to see where the ice will melt the fastest/slowest.	<ul style="list-style-type: none">• Pupils can explain that some materials can be change by adding or removing heat.• Pupils understand that some materials can be changed back to their original state.
8	Materials – irreversible changes	<ul style="list-style-type: none">• To know that heating and cooling everyday materials can cause them to change permanently.	Investigation: Toast Pupils to write down observations about a slice of bread before and after it is toasted. a) What is looks like b) What is smells like c) What is feels like d) What is sounds like	<ul style="list-style-type: none">• Pupils can explain that some materials will change permanently when applying heat.
9	Materials – forces that change materials	<ul style="list-style-type: none">• To become familiar with words related to changing materials e.g. squash, bend, twist, stretch, heat, cool, freeze, melt, boil.	Investigation: What can you do to change a material? Pupils to experiment with a variety of objects to see which ones can be bent, stretched, twisted and squashed.	<ul style="list-style-type: none">• Pupils can identify a range of ways to change a material.
10-11	Materials – Natural vs. Manufactured.	<ul style="list-style-type: none">• To know that some materials occur naturally while many are made from raw materials.• To be able to identify some natural materials e.g. slate, stone, wood, clay, and some manufactured e.g. cement, plastic, glass, paper.	Sorting activity: Sort pictures under the correct headings of natural and manufactured. Matching activity: Match each object to the material they are made from. Extension: Youtube clips: "How things are made"	<ul style="list-style-type: none">• Pupils can identify a range of materials which are natural and manufactured.• Pupils know that some materials undergo a process which can change them completely eg. Sand becomes glass.



Summer Term				
Week	Topic	Learning Objectives	Activities/Resources/Links	Assessment
1.	Growth and Survival	To find out about the offspring of a variety of different animals. Slides Worksheet 1A/1B/1C	Show children the pictures of a variety of baby animals on the slides. What do all these animals have in common? Children to think, pair, share their ideas. <ul style="list-style-type: none">• Explain that all species of animals have babies, just like humans do. Why do you think it is important for animals (including humans) to have babies? Invite children to share their ideas then go through the information on the slides.• Show children the baby and adult animals on the slides. Which baby do you think goes with which adult? Match each of the animals as a class. Which animal do you think is most different to its offspring when it is an adult? Invite children to share their ideas.	Do children know that all animals, including humans, have offspring that grow into adults? <ul style="list-style-type: none">• Can children match a variety of adult animals to their offspring?• Do children know that growth from offspring to adult is a gradual process?
2.	Growth and Survival	To find out about the different ways in which animals reproduce.	Go through the pictures of different baby animals on the slides. What will this animal grow up to be? Invite children to guess, then check each one on the slides. <ul style="list-style-type: none">• Explain that not all animals have babies in the same way. Some animals lay eggs for their babies to grow in while other animals grow babies in their tummies, like humans do. Go through the further information about animal reproduction and gestation on the slides.• Which of these animals does not lay eggs? Children show the four animals on the slides and ask them to identify which does not lay eggs. Repeat with the other questions and animals on the slides, e.g. Which of these animals is pregnant for the longest?	Do children know that animals have offspring that grow into adults? <ul style="list-style-type: none">• Can children describe some of the different ways animals have offspring?• Do children know that not all animals reproduce in the same way?.



3	Growth and Survival	<ul style="list-style-type: none">• To explore how humans grow as they get older.	<p>Show children the pictures of a baby, a child and an adult on the slides. Which of these people is youngest? Which of these people is oldest? How do you know? Invite children to share their ideas.</p> <ul style="list-style-type: none">• Explain that from the time you are born, you grow until you become an adult. Which parts of your body do you think grow as you get older? Children to think, pair, share their ideas.• Go through the information on the slides about the stages of human development.• Explain that your body grows in proportion. This means that as your feet get bigger, your legs get longer, your arms get longer and your hands get bigger. Did you know that your foot is the same size as your forearm? Children to take off their shoes and check!	<p>Do children know that humans grow as they get older?</p> <ul style="list-style-type: none">• Do children know that body parts will grow in proportion?• Can children describe the stages of human development?
4	Growth and Survival	<p>To find out what animals, including humans, need to survive.</p>	<p>Show children the various animals on the slides. What are the differences between each of these animals? What do they have in common? Give children some time to discuss their ideas.</p> <ul style="list-style-type: none">• Explain that although animals are all different, they all need the same things to survive. What do you think animals, including humans, need to stay alive? Children to think, pair, share their ideas, then go through the information on the slides about how animals need food, water and air to survive and why they need each of these things.• Show children the picture of a fish on the slides. Does a fish need air to survive? Invite children to share their ideas, then explain that fish need oxygen, just like animals on land do, but that they take in oxygen through their gills instead of breathing it in like other animals. <p><input type="checkbox"/> Where do animals get their food from? Where do they get their water from? Invite children to share their ideas, then go through the information on the slides.</p>	<p>Do children know that all animals, including humans, need food to survive?</p> <ul style="list-style-type: none">• Do children know that all animals, including humans, need water to survive?• Do children know that all animals, including humans, need air to survive?



5	Growth and Survival	To explore the environment as a factor of survival for animals, including humans.	<p>Can you remember what three things all animals, including humans, need to survive? Children to think, pair, share their ideas, then check on the slides.</p> <ul style="list-style-type: none">• Where do you live? Why do you live there? Children to share their ideas as a class.• What is different about where these animals live? Show children the three animals on the slides and ask children to talk about the different places they live.• Go through the information on the slides about animals living in particular habitats.• What do you think would happen if a cow and a fish swapped homes? What do you think would happen if a penguin and a camel swapped homes? Children to think, pair, share their ideas.	<p>Do children know that animals need air, water and food to survive?</p> <ul style="list-style-type: none">• Do children know that an animal's survival often depends on its environment?• Can children suggest reasons for why a species might become extinct?
6	Growth and Survival	To find out how to eat a healthy, balanced diet.	<p>What is your favourite food? Invite children to share their ideas.</p> <ul style="list-style-type: none">• Why do we eat food? Children to think, pair, share their ideas.• Go through the information about why we eat and why it is important to eat the right things.• Show children the food pyramid on the slides and explain what it shows.• Show children the two examples of meals on the slides. Which of these would you most like to eat and why? Which of these two meals is the most healthy? How do you know? Children to share their ideas. Repeat this for other sets of meals.	<p>Do children know why we eat and why it is important to eat a balanced diet?</p> <ul style="list-style-type: none">• Do children know which foods we should eat most and least of?• Can children suggest meals that would be good for them?



7	Growth and Survival	To find out why exercise is important to keep our bodies healthy.	<p>Ask children to stand up and jump up and down on the spot for 1 minute, then ask them to do star jumps for 1 minute. Once children are sitting down again, ask them how they are feeling. What does your body feel like now? Children to share their ideas.</p> <ul style="list-style-type: none">• Explain that they have just been exercising. Exercise is when we use our bodies for physical activity, such as running, lifting, throwing or swimming. Why do you think it is important for us to exercise? Children to think, pair, share their ideas, then go through the information on the slides.• How many types of exercise can you name? Children to list ideas on mini-whiteboards with a partner, then check the suggestions on the slides. Which of these did you think of? Which of these have you done before? Which would you like to try?	<p>Do children know that exercise is an important part of keeping our bodies healthy?</p> <ul style="list-style-type: none">• Can children identify some of the changes that take place in our body when we exercise?• Can children name various ways they can exercise different parts of their bodies?
8	Growing Plants	To understand that different seeds grow into different plants and to describe them.	<p>Ask the children: What do seeds grow into? Are seeds important? The children can think, pair, share their ideas, then show the information on the slides detailing a variety of plants grown from seeds.</p> <ul style="list-style-type: none">• Explain to the children that all seeds have the potential to grow into a plant. Show the children the unnamed seeds on the slides then ask, How do we know what these seeds will grow into?• Show the slides with the seeds named then ask, Is the seed's name the only important thing we need to know about it? Explain that different seeds need to be planted at different times and need to be looked after in different ways. The packets tell us this information.• Show the slide with the seed packets on. What information can you find out about these seeds?	<p>Do the children know seeds grow into plants?</p> <ul style="list-style-type: none">• Can the children name any plants that grow from seeds?• Do the children understand seed packets tell us what seeds need to grow?



9	Growing Plants	To understand that plants can be grown from bulbs	<p>Ask the children what plants grow from. Do they only grow from seeds? Show the children the information on the slides about bulbs. Explain that bulbs are larger than seeds because they contain food for the plant.</p> <ul style="list-style-type: none">• Ask the children why some plants might need to have a store of food. Show the children the images on the slides of some bulbous plants. When do these plants normally flower?• Go through the information on the slides explaining the flowering and harvesting time of the bulbous plants. Explain they grow in the winter and spring so they cannot rely on the weather to be warm or sunny like other seed plants can.• Plant a bulb in a transparent container (see slides for details) to show the children a plant growing from a bulb. <p><i>NB: If planting a Hyacinth ensure you wear gloves and keep it out of reach of the children as the bulb can irritate skin.</i></p> <p><i>NB: You will either need to use the plants grown from bulbs in this lesson or the plants grown from seeds in lesson 1 for lesson 5.</i></p>	<p>Do the children know plants grow from seeds and bulbs?</p> <ul style="list-style-type: none">• Can the children name any plants that grow from bulbs?• Can the children explain why some plants need to grow from a bulb?
10	Growing Plants	To be able to explain why and how seeds are dispersed.	<p>Which of these plants are fruits? Children to think, pair, share their ideas for the pictures on the slides.</p> <ul style="list-style-type: none">• Explain that all of these plants have fruits on them but some are fleshy fruits (e.g. apple) and some are not (e.g. wheat). Where are the seeds in these fruits? How many seeds do you think are inside each one? Children to think, pair, share their ideas for each of the fruits shown on the slides.• Explain that fruits very rarely have only one seed. Why do you think this is? Invite children to share ideas.• Go through the information on the slides about seed dispersal. Why do some fruits have lots of seeds? Why are they dispersed? What are some of the different ways in which they are dispersed (e.g. humans, animals, wind)?	<p>Can children explain why seeds need to be dispersed?</p> <ul style="list-style-type: none">• Can children give suggestions as to why fruits have so many seeds?• Can children describe some of the ways in which seeds can be dispersed?



11	Growing Plants	To plan, carry out and evaluate an investigation into the conditions that affect germination.	<p>Do you know what the word 'germination' means? Children to think, pair, share their ideas.</p> <ul style="list-style-type: none">• Explain that germination is when a seed starts to grow into a plant and that sometimes seeds can be in the ground for a long time before they start to germinate. What time of year do seeds usually start to germinate? Why do you think this is? Children to share ideas.• Show children the pictures of the seeds on the slides. If we wanted to make these seeds germinate, what would we have to do? What conditions do you think would be best? Would they need warm or cold conditions? Wet or dry? Children to discuss ideas.• Tell children that today they will be planning and setting up an experiment to find out about the best conditions for a seed to germinate. How could we do this? How would we make it a fair test? Children to think, pair, share their ideas. <p><i>NB: Seeds that germinate quickly include, mung beans (2-5 days), cress (3-7 days), lima beans (4-7 days), sprouting seeds (4-12 days), radishes (7-14 days)</i></p>	<p>Can children ask questions that can be investigated scientifically and suggest how to answer them?</p> <ul style="list-style-type: none">• Can children plan and carry out an investigation, making sure it is a fair test?• Can children evaluate their results and draw conclusions?
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