Language Provision Termly Science Learning Journey Overview

Spring Term 2024

As Scientists, we will be covering the following topic:
Investigate Materials

Topic	Investigate Materials	
Progression Step/Year Curriculum	**By the end of the learning journey, I will be able to:**	**Vocabulary**
Progression Step 1	• Explore objects and materials they are given. • Test new/unfamiliar objects, for example through manipulation/squeezing. • Identify if a material can be pulled, bend, squashed after manipulating. • Look at/examines a collection of similar objects and may give a property to classify them (eg, all coins are money). • Start to be able to find an object with specific characteristics, eg, an object that is green/hard/little etc. • Sort objects by a given criteria when a contrast is obvious. • Sort materials into a simple group, eg rough. • Names a single property of an object or animal, eg hot or cold. • Identify textures I feel on materials after verbal prompt, eg hard/soft, smooth/rough, shiny/dull. • Identify a simple difference between objects and materials.	Material, object, hot/cold, hard/soft, rough/smooth, shiny/dull, squeeze, roll, pull, bend, squash, sort, group, same/different.
Progression Step 2	• Experiment with materials to see if they can change them, eg squashing it to make it smaller, pulling it to make it bigger etc. • Independently explore objects, finding and communicating simple differences they find. • Identify and pick out objects made of plastic/wood/paper/cardboard. • Find common attributes of objects, eg both balls bounce.	Paper, cardboard, wood, metal, experiment, change, similar/differences, properties, describe.

	• Identify the differences between 2 similar objects, eg one ball is red and one ball is blue. • State the names of materials that they have examined. • Give a simple reason why an object is made of a certain material. • Collect similar objects and identifies differences in materials, eg wooden, plastic and metal spoons. • Describe an object that they are familiar with, giving one or several properties.	
Progression Step 3	• Identify and sort a range of objects into groups (eg, wood, metal, plastic). • Identify a range of items that are made from a specific material. • Describe the quality of an object using appropriate language, eg big/small. • Recognise links between objects eg car/garage, leaf/tree. • Identify why some materials are used for certain objects and why they are not used for others. • Make simple comparisons between materials, identify similarities and differences. • Classify easily observable properties of a material with support. • Describe textures using simple vocabulary. • Test different materials with simple equipment.	Texture, feel, touch, test, equipment, compare.
Year 1	• Talk about and classify objects as being made from: wood, plastic, glass, metal, water, fabric, rock. • Sort objects by simple properties: colour, shape, size. • Make collections of objects with a common property, eg natural, metal, wooden. • Identify and group everyday materials. • Talk about how objects/materials feel. • Describe the properties of a material. • Classify properties of materials such as: opaque, transparent, absorbent, waterproof. • Make simple comparisons between materials. • Distinguish between an object and what it is made from.	Classify, colour, shape, size, wood, plastic, glass, metal, water, fabric, rock, collection, properties, identify, comparison, opaque, transparent, absorbent, waterproof.

	• Observe a range of materials closely using simple equipment, eg using a magnifying glass. • Help to plan an experiment to find which materials are best, eg making a parachute, keeping something dry/warm. • Suggest what might happen and make sensible predictions. • Suggest another material an object could be made from based on its properties. • Recognise the term "fair testing." • Observes how the materials act in experiments. • State what I found out during the experiment. • Work well with others to follow experiment to a conclusion. • Keep notes on findings, eg lists/charts/pictures.	Observe, simple, equipment, experiment, prediction, properties, fair test, conclusion.
Year 2	• Recognise the common materials an object is made from. • Classify materials according to a property. • Group materials according to more than one given property. • Describe similarities and differences between materials.	Common, classify, group, similarities/differences, describe, test, transparent, light/heavy, hard/soft, rigid/malleable, water resistant/proof, absorbent, chart, findings, results, contributions.
	• Plan a simple experiment to describe and test the properties of materials such as: transparent, light/heavy, hard/soft, rigid/malleable, water-resistant/proof, absorbent. • Suggest ways to test ideas, stating how it would be a fair test. • List appropriate equipment and use constructively. • Take simple measurements using familiar equipment. • Talk about what they think will happen to the materials in the experiment. • Observe closely when testing the materials. • Create a simple chart to record findings and compares the findings. • Check results and findings against predictions made. • Base their conclusion on their findings. • Makes contributions in group experiments.	

Year 3	• Gives 2 or more reasons why specific objects are made from metal, plastic, glass, fabric, brick, wood, paper. • Includes scientific vocabulary when giving reasons why an object is made from a specific material, eg electrical conductor. • Lists some properties materials could have (eg, malleable). • State how I know a material has a specific property. • Completes a chart to show properties materials have. • Finds links between the properties of objects used in different areas (eg, outside of buildings are all waterproof). • Finds out about a person who has developed/created a new material (eg Roy Plunkett's Teflon).	Object, material, properties, malleable, flexible, rigid, electrical, links, developed, observation, prediction, results, data, conclusion, compare, similar, difference, substance, change, dissolve, reversible, irreversible, fair test, investigation, equipment.
	• Tests a range of materials to find out their properties. • Makes careful observations and present my findings in written/oral form. • Discuss results and compare with my prediction. • Conclude why materials are used for specific objects based on the properties that I have tested and observed. • Describes simple observable changes when materials are mixed. • Mix different substances in water. • Records if the substance has dissolved and predicts if the substance can be recovered. • Report back what I have found. • Investigate the difference stirring makes to the speed different substances dissolve (eg, table/ground rock and rock salt). • Talk about how I will make it a fair test and pick equipment to help the investigation from a range offered. • Use simple equipment correctly (eg stop watch to time how long a substance will take to dissolve). • Discuss and compare how some materials can change over time. • Describe a change as reversible and irreversible.	

Year 4	• Give examples of materials which are suitable for making a specific item because of their properties. • Discuss the advantages and disadvantages of using a specific material. • Give an example of the same material being used for different purposes. • Lists useful properties of materials. • Suggest a use for a material based on its properties (eg light and waterproof). • Defines words to describe properties of materials, eg make a glossary which includes examples. • Classify materials in respect of their properties. • Asks questions about materials, (eg, how they are made). • Suggests where I can find more information about materials. • Suggest how to test the different properties of materials. • Research new materials which are more environmentally friendly version of a material already created. • Suggest how to test how different processes can change a material. • Pinpoints what they do to a material to change it (eg, heat it). • Describe ways to recover substances from a solution.	Glossary, advantages, disadvantages, purpose, research, environmentally friendly, processes, change, recover, substance, mixture, separate, safety.
	• From a mixture of sand, soil and stones, can suggest how to separate substances. • After mixing salt in water, discuss how to separate the salt from the water. • Plan the equipment I might need to separate salt from the salt water mix. • Show care and awareness for safety in my experiments. • Describe the process of separating salt from salt water.	