Year: 1/2 Subject: Science PoS: Everyday Materials Y1	Topic Question: *Why are objects made from different materials?*	Term - Autumn 1 and 2 Curriculum - B

Prior Knowledge	**Key Vocabulary**	**Outcome**
• Children will explore the natural world around them, making observations and drawing pictures of animals and plants • They will know some similarities and differences between the natural world around them and contrasting environments • They will draw on their experiences and what has been read in class • They understand some important processes and changes in the natural world around them, including the seasons and changing states of matter.	object, material, wood, plastic, glass, metal, water, rock, brick, paper, fabric, elastic, foil, card/cardboard, rubber, wool, clay, hard, soft, stretchy, stiff, bendy, floppy, waterproof, absorbent, breaks/tears, rough, smooth, shiny, dull, see-through, not see-through	Books About Materials A whole class knowledge organiser for each subject.
Future Learning • Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. (Y2 - Uses of everyday materials) • Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. (Y2 - Uses of everyday materials)	**Stimulus** Object treasure hunt in the grounds **First hand experiences (enrichment)** Practical experiences of handling objects and samples of materials. Materials hunts outdoors and around school.	**World of Work** Discussion about how and where things are made. Jobs where people make things – joiner,

National Curriculum PoS

- 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

Working Scientifically

Pupils will learn the following through the teaching of the content:

- Asking simple questions and recognising that they can be answered in different ways.
- Observing closely, using simple equipment
- Performing simple tests
- Identifying and classifying
- Using their observations and ideas to suggest answers to questions
- Gathering and recording data to help in answering questions.

Key Knowledge	Possible evidence
All objects are made of one or more materials. Some objects can be made from different materials e.g. plastic, metal or wooden spoons. Materials can be described by their properties e.g. shiny, stretchy, rough etc. Some materials e.g. plastic can be in different forms with very different properties.	• Can label a picture or diagram of an object made from different materials • Can describe the properties of different materials
Application of Key Skills	**Possible evidence**
• Classify objects made of one material in different ways e.g. a group of object made of metal. • Classify in different ways one type of object made from a range of materials e.g. a collection of spoons made of different materials. • Classify materials based on their properties. • Test the properties of objects e.g. absorbency of cloths, strength of party hats made of different papers, stiffness of paper plates, waterproofness of shelters.	• Can sort objects and materials using a range of properties • Can choose an appropriate method for testing an object for a particular property • Can use their test evidence to answer the questions about properties e.g. “Which cloth is the most absorbent?”

Year: 1/2 Subject: Science PoS: Seasonal Change Y1	Topic Question: *How do we know what season it is?*	Term - Autumn 2 and ongoing Curriculum - B

Prior Knowledge	Key Vocabulary	Outcome
• Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. (Early Learning Goal)	• Weather (sunny, rainy, windy, snowy etc.) • Seasons (winter, summer, spring, autumn) • Sun, sunrise, sunset, day length	Weather forecast given by the children
Future Learning • Recognise that light from the sun can be dangerous and that there are ways to protect their eyes. (Y3 - Light) • Use the idea of the Earth's rotation to explain day and night and the apparent movement of the Sun across the sky. (Y5 - Earth and space) • The seasons and the Earth's tilt, day length at different times of year, in different hemispheres. (KS3)	**Stimulus** Film clip – Earth, seasons and time Going outside to experience different weathers	**World of Work** Weather forecaster

National Curriculum PoS

- Observe changes across the four seasons.
- Observe and describe weather associated with the seasons and how day length varies

Working Scientifically

Pupils will learn the following through the teaching of the content:

- Asking simple questions and recognising that they can be answered in different ways.
- Observing closely, using simple equipment
- Performing simple tests
- Identifying and classifying
- Using their observations and ideas to suggest answers to questions
- Gathering and recording data to help in answering questions.

Key Knowledge	Possible evidence
In the UK, the day length is longest at mid-summer (about 16 hours) and gets shorter each day until mid-winter (about 8 hours) before getting longer again. The weather also changes with the seasons. In the UK, it is usually colder and rainier in winter, and hotter and dryer in the summer. The change in weather causes many other changes. Some examples are: numbers of minibeasts found outside; seed and plant growth; leaves on trees; and type of clothes worn by people.	• Can name the four seasons and identify when in the year they occur. • Can describe weather in different seasons over a year • Can describe days as being longer (in time) in the summer and shorter in the winter • Can describe other features that change through the year
Application of Key Skills	**Possible evidence**
• Collect information about the weather regularly throughout the year. • Present this information in tables and charts to compare the weather across the seasons. • Collect information, regularly throughout the year, of features that change with the seasons e.g. plants, animals, humans. • Present this information in different ways to compare the seasons. • Gather data about day length regularly throughout the year and present this to compare the seasons.	• Use the evidence gathered to describe the general types of weather and changes in day length over the seasons. • Use their evidence to describe some other features of their surroundings, e.g. themselves, animals, plants that change over the seasons • Demonstrate their knowledge in different ways e.g. making a weather forecast video, writing seasonal poetry, creating seasonal artwork

Year: 1/2 Subject: Science PoS: Uses of materials Y2	Topic Question: *What is a material's superpower?*	Term - Spring 1 Curriculum - B

Prior Knowledge

- 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 Vocabulary

Names of materials – wood, metal, plastic, glass, brick, rock, paper, cardboard
Properties of materials - stretchy, stiff, bendy, floppy, waterproof, absorbent, breaks/tears, rough, smooth, shiny, dull, opaque, transparent and translucent, reflective, non-reflective, flexible,

Outcome

Poster with prompts annotated with uses of materials

Future Learning

- Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties. (Y3 - Rocks)
- Notice that some forces need contact between two objects, but magnetic forces can act at a distance. (Y3 - Forces and magnets)
- Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets. (Y5 - Properties and changes of materials)
- Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic. (Y5 - Properties and changes of materials)

Stimulus

Materials bingo

World of Work

People who make things eg. builder, dressmaker

National Curriculum PoS

- Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.
- Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.

Working Scientifically

Pupils will learn the following through the teaching of the content:

- Asking simple questions and recognising that they can be answered in different ways.
- Observing closely, using simple equipment
- Performing simple tests
- Identifying and classifying
- Using their observations and ideas to suggest answers to questions
- Gathering and recording data to help in answering questions.

Key Knowledge	Possible evidence
Objects made of some materials can be changed in shape by bending, stretching, squashing and twisting. For example, clay can be shaped by squashing, stretching, rolling, pressing etc. This can be a property of the material or depend on how the material has been processed e.g. thickness.	• Whilst changing the shape of an object can describe the action used • Can use the words flexible and/or stretchy to describe materials that can be changed in shape and stiff and/or rigid for those that cannot • Can recognise that a material may come in different forms which have different properties

Application of Key Skills	Possible evidence
• Test the properties of materials for particular uses e.g. compare the stretchiness of fabrics to select the most appropriate for Elastigirl's costume, test materials for waterproofness to select the most appropriate for a rain hat	• Can begin to choose an appropriate method for testing a material for a particular property • Can use their test evidence to select appropriate material for a purpose e.g. Which material is the best for a rain hat?

Year: 1/2 Subject: Science PoS: Uses of Materials Y2	Topic Question: *Do materials have secret strengths?*	Term - Spring 2	Curriculum - B

Prior Knowledge

- 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 Vocabulary

rigid, shape, push/pushing, pull/puling, twist/twisting, squash/squashing, bend/bending, stretch/stretching

Outcome

Video explanation of how materials can be changed

Future Learning

- Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties. (Y3 - Rocks)
- Notice that some forces need contact between two objects, but magnetic forces can act at a distance. (Y3 - Forces and magnets)
- Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets. (Y5 - Properties and changes of materials)
- Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic. (Y5 - Properties and changes of materials)

Stimulus

BBC Science Clip

World of Work

People who make things eg. potter, car manufacturer

National Curriculum PoS

- Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.
- Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.

Working Scientifically

Pupils will learn the following through the teaching of the content:

- Asking simple questions and recognising that they can be answered in different ways.
- Observing closely, using simple equipment
- Performing simple tests
- Identifying and classifying
- Using their observations and ideas to suggest answers to questions
- Gathering and recording data to help in answering questions.

Key Knowledge	Possible evidence
.All objects are made of one or more materials that are chosen specifically because they have suitable properties for the task. For example, a water bottle is made of plastic because it is transparent allowing you to see the drink inside and waterproof so that it holds the water. When choosing what to make an object from, the properties needed are compared with the properties of the possible materials, identified through simple tests and classifying activities. A material can be suitable for different purposes and an object can be made of different materials.	• Can name an object, say what material it is made from, identify its properties and make a link between the properties and a particular use • Can label a picture or diagram of an object made from different materials • For a given object can identify what properties a suitable material needs to have
Application of Key Skills	**Possible evidence**
• Classify materials. • Make suggestions about alternative materials for a purpose that are both suitable and unsuitable	• Can sort materials using a range of properties • Can explain using the key properties why a material is suitable or not suitable for a purpose

Year: 1/ 2 Subject: Science PoS: Animals Including Humans Y2	Topic Question: *Where do babies come from?*	Term - Summer 1 Curriculum - B

Prior Knowledge

- Explore the natural world around them, making observations and drawing pictures of animals and plants
- Identify and name a variety of common animals that are carnivores, herbivores and omnivores. (Y1 - Animals, including humans)
- Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. (Y1 - Animals, including humans)

Key Vocabulary

Offspring, reproduction, growth, child, young/old stages (examples - chick/hen, baby/child/adult, caterpillar/butterfly)

Outcome

The life cycle of a duck

Future Learning

- Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat. (Y3 - Animals, including humans)
- Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. (Y5 - Living things and their habitats)
- Describe the life process of reproduction in some plants and animals. (Y5 - Living things and their habitats)
- Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function. (Y6 - Animals, including humans)

Stimulus

Eggs to observe
Video resources
First hand experiences (enrichment)
Butterfly gardens

World of Work

Doctor, nurse or vet

National Curriculum PoS

- Notice that animals, including humans, have offspring which grow into adults.

Working Scientifically

Pupils will learn the following through the teaching of the content:

- Asking simple questions and recognising that they can be answered in different ways.
- Observing closely, using simple equipment
- Performing simple tests
- Identifying and classifying
- Using their observations and ideas to suggest answers to questions
- Gathering and recording data to help in answering questions.

Key Knowledge	Possible evidence
Animals, including humans, have offspring which grow into adults. In humans and some animals, these offspring will be young, such as babies or kittens, that grow into adults. In other animals, such as chickens or insects, there may be eggs laid that hatch to young or other stages which then grow to adults. The young of some animals do not look like their parents e.g. tadpoles.	• Can describe how animals, including humans, have offspring which grow into adults, using the appropriate names for the stages
Application of Key Skills	**Possible evidence**
• Ask people questions and use secondary sources to find out about the life cycles of some animals. • Observe animals growing over a period of time e.g. chicks, caterpillars, a baby.	• Can describe, including using diagrams, the life cycle of some animals, including humans, and their growth to adults e.g. by creating a life cycle book for a younger child

Year: 1/2 Subject: Science PoS: Animals including humans	**Topic Question:** *How can I be a healthy hero?*	Term - Summer 2 Curriculum - B

Prior Knowledge	**Key Vocabulary**	**Outcome**
• Explore the natural world around them, making observations and drawing pictures of animals and plants • Identify and name a variety of common animals that are carnivores, herbivores and omnivores. (Y1 - Animals, including humans) • Identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. (Y1 - Animals, including humans)	exercise, heartbeat, breathing, hygiene, germs, disease, food types (examples – meat, fish, vegetables, bread, rice, pasta)	Life cycle of a human
Future Learning • Identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat. (Y3 - Animals, including humans) • Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird. (Y5 - Living things and their habitats) • Describe the life process of reproduction in some plants and animals. (Y5 - Living things and their habitats) • Recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function. (Y6 - Animals, including humans)	**First hand experiences (enrichment)** Fruit tasting Visit from a mum and baby	**World of Work** Nurse, doctor, cook

National Curriculum PoS	Key Knowledge	Possible evidence
• Find out about and describe the basic needs of animals, including humans, for survival (water, food and air). • Describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.	All animals, including humans, have the basic needs of feeding, drinking and breathing that must be satisfied in order to survive. To grow into healthy adults, they also need the right amounts and types of food and exercise. Good hygiene is also important in preventing infections and illnesses.	• Can state the basic needs of animals, including humans, for survival • Can state the importance for humans of exercise, eating the right amounts of different types of food, and hygiene • Can name foods in each section of the Eatwell Guide
Working Scientifically Pupils will learn the following through the teaching of the content: • Asking simple questions and recognising that they can be answered in different ways. • Observing closely, using simple equipment • Performing simple tests • Identifying and classifying • Using their observations and ideas to suggest answers to questions • Gathering and recording data to help in answering questions.	Application of Key Skills	Possible evidence
	• Ask questions of a parent about how they look after their baby • Ask pet owners questions about how they look after their pet. • Explore the effect of exercise on their bodies. • Classify food in a range of ways, including using the Eatwell Guide. • Investigate washing hands, using glitter gel.	• Can measure/observe how animals, including humans, grow. • Show what they know about looking after a baby/animal by creating a parenting/pet owners' guide • Explain how development and health might be affected by differing conditions and needs being met/not met