#### Subject: Science

#### **Everyday Materials**

Pupils should be taught to:

- 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.

### Uses of Everyday Materials

Pupils should be taught to:

- 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.

#### Prior learning:

**FYFS** 

UW: ELG: Understand some important processes and changes in the natural world around them including the seasons and changing states of matter.

#### KS1

Plants (Year A Term 1 & 2)
Humans (Year A Term 3 & 4)
Working Scientifically/Forces & Movement
(Year A Term 5)
Materials (Year A Term 6)

Seasonal Changes (Year B Term 1) Animals (Year B Term 1 & 2) Everyday Materials (Year B Term 3)

#### Next steps learning:

#### K52

#### Year 3 Rocks

- 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.

### Year 3 Forces & Magnets

- compare how things move on different surfaces
- notice that some forces need contact between two objects, but magnetic forces can act at a distance
- observe how magnets attract or repel each other and attract some materials and not others
- compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials
- describe magnets as having two poles
- predict whether two magnets will attract or repel each other, depending on which poles are facing.

#### Year 4 States of Matter

- compare and group materials together, according to whether they are solids, liquids or gases
- observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C)
- identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.

### Small steps:

- 1) How can we test the absorbency of materials? To explore the properties of different kitchen paper and disposable cloths. To make predictions about which would be best at mopping up a spillage of water. To investigate which papers are the most absorbent by choosing a method and working in a group. To understand the different reasons why people may need to use absorbent materials.
- 2) Are bricks absorbent? To consider what buildings are made of and why. To generate questions about the absorbency of building materials. To devise an investigation to test a variety of materials for their absorbent property. To make predictions and to observe and record results.
- 3) How can we make fabric waterproof? To discuss waterproof materials and their uses. To investigate the absorbency of fabrics. To consider the question: How can we make the fabric waterproof? To discuss findings and suggest explanations.
- 4) Which objects are natural? Are there any similarities between these objects? To discuss the difference between natural and manmade objects. To explore the properties of a range of natural and manmade objects including observing any similarities and differences between the two groups. To describe the textures and appearance of the different items. To explore the texture and various

### Working Scientifically

- Ask simple questions
- Recognise questions can be answered in different ways
- Observe closely
- Use simple equipment safely and appropriately
- Identify and classify
- Use their observations and ideas to suggest answers to questions
- Perform simple tests
- Gather and record data to help answer questions

- properties by using them to print with paint. To display the artwork represent materials and their properties.
- 5) Why do some materials need to be made waterproof? To use wax drawing and colour washing as a reminder of the waterproof properties of wax. To make a wax resist picture using wax crayons, oil pastels and paint. To consider the questions: why is waterproof material sometimes used for making clothes? Can you think of other reasons why a material needs to be made waterproof?
- 6) How can we change the shape of certain materials? To learn about what happens when a material is heated up and why it changes shape. To role-play what happens to the particles in a material when it is heated. To investigate the changes to wax crayons caused by heat.
- 7) Which ball is the bounciest? To explore the properties of a variety of balls. To generate questions and discuss the similarities and differences between the balls. To discuss and design an investigation to test which ball is the bounciest. To make predictions, test, and record results. To learn about what makes a material have bouncy properties.
- 8) Which fabric is the stretchiest? To examine fabrics and discuss the requirements of some clothes.

  To talk about how to test fabric's elasticity properties and make predictions. To consider these questions: What length is the fabric at the start? To what length does it need to stretch? What length does it return to?
- 9) Which material bends the most? To understand that some materials need to be able to 'give' a little and not break (for bridges carrying heavy traffic, for example). To look at a selection of materials and discuss how they might be tested for their rigidity. To devise an investigation to test the flexibility of materials (by hanging weights from string onto the end of each strip of material). To make predictions and carry out the investigation, recording the results.
- 10) Why do we need some materials to have certain properties? To identify and discuss the materials/properties of objects and sort them according to criteria. To test materials for their durability and toughness and consider the usefulness of materials for our everyday lives. To consider the question: if everything I touched became flexible, how would my life be different? Tell stories to each other about an average day in a world where nothing was rigid.
- 11) Which is the strongest paper? To be challenged to find the strongest paper to wrap a present. To understand that paper varies in strength and think of a way to test the strength of different papers. To make plan, make predictions, and carry out an investigation.
- 12) Who can make the strongest bridge? To revise learning about materials and their properties. To work in small groups to design and make a paper bridge to hold a toy car. To explain selections and predictions for the success of their bridge. To consider the question: what happens if the paper is folded into a concerting shape?

#### Key vocabulary

Material, properties, absorbency, waterproof, strong, weak, hypothesis, melting, particles, changing shape, shape, changed, twist/twisting, squash/squashing, bend/bending, stretch/stretching, rigid, flexible, hard, soft, stretchy, stiff, tear, rip, weight, grams, bar chart, results,

Assessment Opportunities: Investigation write ups, sorting activities, odd one out, true and false questions, photographs, quizzes,

#### Subject: Geography

- name, locate and identify characteristics of the four countries and capital cities of the United Kingdom and its surrounding seas.
- use basic geographical vocabulary to refer to: key physical features, including: beach, cliff, coast, forest, hill, mountain, sea, ocean, river, soil, valley, vegetation, season and weather

key human features, including: city, town, village, factory, farm, house, office, port, harbour and shop

- use simple compass directions (North, South, East and West) and locational and directional language [for example, near and far; left and right], to describe the location of features and routes on a map.
- use aerial photographs and plan perspectives to recognise landmarks and basic human and physical features; devise a simple map; and use and construct basic symbols in a key.

### Prior learning:

#### Early Learning Goals

UW: Describe their immediate environment using knowledge from observations, discussion, stories, non-fiction texts and maps.

Explain some similarities and differences between life in this country and life in other countries, drawing on knowledge from stories, non-fiction texts and where appropriate maps.

#### Key Stage One

Brazil (Year A Term 1)
London & the UK (Year A Term 3)
Human & Physical Features (Year A Term 4)
Map skills (Year A Term 5)
Australia (Year B Term 1)

#### Next steps learning:

#### Key Stage Two

- name and locate counties and cities of the United Kingdom, geographical regions and their identifying human and physical characteristics, key topographical features (including hills, mountains, coasts and rivers), and land-use patterns; and understand how some of these aspects have changed over time.
- describe and understand key aspects of:

 $\ \square$  physical geography, including: climate zones, biomes and vegetation belts, rivers, mountains, volcanoes and earthquakes, and the water cycle.

I human geography, including: types of settlement and land use, economic activity including trade links, and the distribution of natural resources including energy, food, minerals and water.

 use the eight points of a compass, four and six-figure grid references, symbols and key (including the use of Ordnance Survey maps) to build their knowledge of the United Kingdom and the wider world.

#### Small steps:

- Why are castles built on hills? To find out why castles are built on hills. To recognise physical features.
- 2. Which physical features make castles easier to defend? To name physical features and explain their benefits when building/defending castles.
- 3. How are castles similar/different in each of the UK's capital cities? To name and locate the 4 capital cities of the UK.
- 4. What makes England unique? To find out about the 4 nations which make up the UK focusing on England; To report research to peers and contribute to a large class poster/collage of information and images;
- 5. What makes Scotland different from England? To find out about the 4 nations which make up the UK focusing on Scotland; To recall some facts about Scotland; To make comparisons to England.
- 6. What makes Wales special? To find out about the 4 nations which make up the UK focusing on Wales; To recall some facts about Wales;
- 7. What is different about Northern Ireland? To find out about the 4 nations which make up the UK focusing on Northern Ireland; To compare the 4 nations of the UK.
- 8. How are maps useful? To devise a simple map and use and construct a simple key.

#### Cross curricular links

History - Monarchs.

#### Key vocabulary

Castle, hill, river, cliff, beach, forest, valley, lake, physical feature, human feature, UK, capital city, city, town, village, rose, lion, St George, thistle, St Andrew, daffodil, St David, St Patrick, compass, route, direction, map, key, symbol, north, south, east, west

Assessment Opportunities

Posters, videos, true/false questions, created maps, quiz

### Subject: Design & Technology

Moving Pictures with mechanisms Design

design purposeful, functional, appealing products for themselves and other users

based on design criteria

generate, develop, model and communicate their ideas through talking, drawing,

templates, mock-ups and, where appropriate, information and communication

technology

Make

select from and use a range of tools and equipment to perform practical tasks [for

example, cutting, shaping, joining and finishing]

select from and use a wide range of materials and components, including construction

materials, textiles and ingredients, according to their characteristics Evaluate

 $\ensuremath{\mathbb{I}}$  evaluate their ideas and products against design criteria

Technical knowledge

explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.

### Prior learning:

### **EYFS**

PD: Fine Motor ELG - Use a range of small tools including scissors, paintbrushes and cutlery; begin to show accuracy and care when drawing.

EAD: Creating with materials ELG - Safely use and explore a variety of materials, tools and techniques experimenting with colour, design, texture, form and function; Share their creations, explaining the processes they have used;

#### **KS1**

- Sewing Christmas Tree Decorations (Year A Term 2)
- Food (Year A Term 4)
- Vehicles axles (Year A Term 5)
- Free Standing Structures (Year A Term 6)
- Textiles/Sewing Christmas Stockings (Year B Term 2)

### Next steps learning:

#### **KS2**

Design

Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups

I generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design Make

I select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately

 $\ensuremath{\mathbb{I}}$  select from and use a wider range of materials and components, including construction

materials, textiles and ingredients, according to their functional properties and aesthetic qualities

Evaluate

I investigate and analyse a range of existing products

Use evaluate their ideas and products against their own design criteria and consider the views of others to improve their work

 $\hfill \square$  understand how key events and individuals in design and technology have helped shape the world

Technical knowledge

Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]

### Small steps:

- 1) To create a sliding mechanism
- 2) To be able to use levers to create a moving mechanism
- 3) To investigate and create wheel mechanisms
- 4) To plan and design a moving picture with a mechanism
- 5) To follow a design to make a moving picture with a mechanism
- 6) To evaluate a moving picture

### Cross curricular links:

Key vocabulary:

Slider, lever, wheel, mechanism, move, direction, pivot,

Assessment Opportunities

Assessment Opportunities

Scratch Jr saved program, evaluation sheets, video explanations,

Pictures, video explanations, evaluation sheets,

| Programming Quizzzz  | Subject: Computing   | Prior learning:   | Next steps learning:  |
|--|--|---|---|
| programs on digital devices: and that programs execute by following precise and unambiguous instructions.    Create and debug simple programs.   | Programming Quizzes  | EYFS  |   |
| Small steps:  1. To explain that a sequence of commands has a start. 2. To explain that a sequence of commands has an outcome. 3. To create a program using a given design 4. To change a given design 5. To create a program using my own design 6. To decide how my project can be improved  Cross curricular links:   | understand what algorithms are; how they are implemented as programs on digital devices: and that programs execute by following precise and unambiguous instructions. create and debug simple programs. use logical reasoning to predict the behaviour of simple | - Exploration of technology in provision  KS1  - Online Safety - term 2 (PSHE) - Computer systems (Year A term 1) - Data & information (Year A term 2) - Digital Photography (Year A Term 3) - Word processing (Year A Term 4) - Programming Beebots (Year A Term 5) - Programming ScratchJr (Year A Term 6)  - Technology Around Us (Year B Term 1) - Digital Painting (Year B Term 2) | design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.  use sequence, selection, and repetition in programs; work with variables and various forms of input and output.  use logical reasoning to explain how some simple algorithms work and to |
| <ol> <li>To explain that a sequence of commands has a start.</li> <li>To explain that a sequence of commands has an outcome.</li> <li>To create a program using a given design</li> <li>To change a given design</li> <li>To create a program using my own design</li> <li>To decide how my project can be improved</li> </ol>   | Small steps:   | - Robot Programming (year B Term 3)   | Cross curricular links:   |
| <ol> <li>To explain that a sequence of commands has an outcome.</li> <li>To create a program using a given design</li> <li>To change a given design</li> <li>To create a program using my own design</li> <li>To decide how my project can be improved</li> </ol>  |  | start.  | 5,555 541,1544 MINS   |
| <ul> <li>4. To change a given design</li> <li>5. To create a program using my own design</li> <li>6. To decide how my project can be improved</li> </ul>   | 2. To explain that a sequence of commands has an outcome.  |   |   |
| <ul><li>5. To create a program using my own design</li><li>6. To decide how my project can be improved</li></ul>   | 3. To create a program using a given design  |   |   |
| 6. To decide how my project can be improved  | 4. To change a given design  |   |   |
| A CONTRACTOR OF THE CONTRACTOR | 5. To create a program using my own design   |   |   |
|  | 6. To decide how my project can be improved  |   |   |
| Key vocabulary:  | Key vocabulary:  |   |   |

| Subject: Music                            | Prior learning: | Next steps learning: |
|---|-----------------|----------------------|
| Kapow Music - Superheroes - Pitch & Tempo | <u>ELG</u>      | <u>KS2</u>           |
|   |                 |                      |

Key Skills

Recognising basic tempo, dynamic and pitch changes.

Describing the character, mood, or 'story' of music they listen to (verbally or through movement).

Describing the differences between two pieces of music.

Expressing a basic opinion about music (like/dislike).

Listening and responding to other performers by playing as part of a aroup.

Selecting and creating short sequences of sound with voices or instruments to represent a given idea or character.

Creating simple melodies using a few notes.

Choosing dynamics, tempo and timbre for a piece of music.

Responding to simple musical instructions such as tempo and dynamic changes as part of a class performance.

Key Knowledge

To understand that tempo can be used to represent mood or help tell a story.

To understand that 'tuned' instruments play more than one pitch of notes

To know that following a leader when we perform helps everyone play together accurately

EAD; Being Imaginative & Expressive ELG: Sing a range of well known rhymes & songs; Perform songs, rhymes, poems, and stories with others and try to move in time with the music.

<u>KS1</u>

(Year A Charanga Music)

Term 1 - Your imagination - beat/pitch (Year A Term 1)

Term 2 - Ho Ho Ho - using voices in different ways (Year A Term 2)

Term 3 - Hands, Feet, Heart - Pitch (Year A Term 3)

Term 4 - In the groove - Music for storytelling (Year A Term 4)

Term 5 - Friendship Songs - dynamics/notation (Year A Term 5)

Term 6 - Round Round - Consolidation (Year A Term 6)

(Year B Kapow Music)

Term 1: Animals - Classical Music, dynamics & tempo

Term 2: Musical Me - Use of Voice & Musical Notation

Term 3 - Fairy Tales - Timbre

Pupils should be taught to sing and play musically with increasing confidence and control.

They should develop an understanding of musical composition, organising and

manipulating ideas within musical structures and reproducing sounds from aural memory.

Pupils should be taught to:

Delay and perform in solo and ensemble contexts, using their voices and playing musical instruments with increasing accuracy, fluency, control and expression.

improvise and compose music for a range of purposes using the inter-related dimensions of music.

### Small steps:

- 1. To understand the concept of pitch
- 2. To create a pattern using two pitches
- 3. To understand the concept of tempo
- 4. To create a superhero theme tune.
- 5. To perform confidently as part of a group.

Cross curricular links:

English

### Key vocabulary:

Accelerando, high pitched, low pitch, Perform, performance, pitch, pitch pattern, tempo

### Assessment Opportunities

End of unit quiz, video of performances, children's evaluation comments, vocabulary definition matching

| <u>Subject: PSHE</u>      | Prior learning:  | Next steps learning:               |
|---------------------------|--|------------------------------------|
| Growth Mindset & Positive | ELG:   | <u>KS2</u>                         |
| Thinking & Wellbeing      | PSED: Show an understanding of their own feelings and those of others and begin to regulate their behaviour accordingly. | H11, H12, H13, H14, H15, H16, H17, |
| H1.                       | Be confident to try new activities and show independence, resilience, and perseverance in the face of challenges.        | H18, H19, H20, H21, H22, H23, H24, |
| H11.                      |  | H25.                               |
| H12                       | <u>KS1</u>   |                                    |
| H13.                      | Year A   |                                    |
| H17.                      | Term 1 - Staying Safe H.8, H.28, H.29, H.30, H.31, H.32, H.33, H.35, H.36, R.13, R.14, R.15, R.16, R.18, R.19, R.20      |                                    |
| H18.                      | Term 2 - Digital Wellbeing H28, H 34, R 10, R11, R12, R14, R15, L7, L8, L9   |                                    |
| H19.                      | Term 3 - Be Yourself H12, H13, H14 H15, H16, H18, H19, H20, H21, H22, H23, R25   |                                    |
| H23.                      | Term 4 - One World R2, R3, R4, L1, L2, L3, L6  |                                    |
|                           | Term 5 - TEAM - R1 R2 R7 R9 R10 R11 R12 R21 R22 R23 R24 H23 L4 L14   |                                    |

Term 6 - Aiming High - H20, H21, H23, H24, L14, L15, L16, L17, R23, R25,

Year B

Term 1 - Online Safety H28, H 34, R 10, R11, R12, R14, R15, L7, L8, L9

Term 2 - VIPs - friendships & relationships H14, H16, H23, H33, R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R12, R16, R21, R23, R25

Term 3 - Money Matters - L10, L11, L12, L13, L14, L15, L16

Cross curricular links:

### Small steps:

- 1. To describe and understand their feelings. To develop simple strategies for managing these feelings.
- 2. To understand the difference between a growth mindset and a fixed mindset
- 3. To begin to recognise some of the characteristics of a growth mindset.
- 4. To set themselves growth mindset targets
- 5. To recognise positive language used with a growth mindset.

### Key Vocabulary

Emotion, feelings, happy, joy, sadness, anger, disgust, growth mindset, fixed mindset, resilience, perseverance, challenge,

### Assessment Opportunities

World special creation belief same similar different

Written outcomes

Shared discussions

| Subject: RE  | Prior learning:   | Next steps learning:  |
|--|---|---|
| Why is it important to look  | EYFS  | KS2   |
| after our world?   | UW: People, Culture & Communities - know some similarities and differences between different        | Core Questions:   |
|  | religious and cultural communities in this country, drawing own their experiences and what has been | · What is most important in life?   |
|  | read in class.  | · How do people show what is most important to them?                          |
|  |   | <ul> <li>How does this affect their attitudes to themselves, other</li> </ul> |
|  | <u>KS1</u>  | people and the world around them?   |
|  | Celebrations (Year A Term 2)  | Enquiries (referencing back to the core questions)                            |
|  | Belonging (Year A Term 3)   | <ul> <li>Are places of worship really needed?</li> </ul>                      |
| Christianity (Year A Term 4)   |   | <ul><li>What holds communities together?</li></ul>                            |
| Islam (Year A Term 5)  |   | • What do celebrations show about what we think is important in               |
| Stories (Year A Term 6)  |   | life?   |
| What makes some things sacred to some groups of people? (Year B Term 1)            |   |   |
|  | Why do people celebrate important occasions? (Year B Term 2)  |   |
|  | What makes some stories so important to different people? (Year B Term 3)                           |   |
| Small steps:   |   | Cross curricular links:   |
| 1. To identify things that ma  | ike our world special.  | British Values - Mutual respect   |
| 2. To explore the Jewish, Ch   | ristian and Islamic creation stories.   | - Tolerance of those with different   |
| 3. To explore the Hindu creation story.  |   | faiths and beliefs and those without faith.                                   |
| 4. To explore different accounts of the creation of the sky and Heaven.            |   |   |
| 5. To explore different accounts of the creation of plants                         |   |   |
| 6. To explore different religious accounts of how animals and people were created. |   |   |
| Key vocabulary:  |   |   |

**Assessment Opportunities** 

Quiz, posters,

# Subject: PE

# <u>KS1</u>

Attacking & Defending

participate in team games, developing simple tactics for attacking and defending.

## Prior learning:

### **EYFS**

PD: Gross Motor Skills - ELG: Negotiate space and obstacles safely with consideration for themselves and others; demonstrate strength, balance and coordination; move energetically such as running, jumping, dancing, hopping, skipping and climbing.

KS1 Year A

Year B

Term 1 - Ball Skills

Term 2 - Invasion Games (applying ball

skills)

Term 3 - Dance

### Next steps learning:

### K52

play competitive games, modified where appropriate [for example, badminton, basketball, cricket, football, hockey, netball, rounders and tennis], and apply basic principles suitable for attacking and defending.

### Small steps:

- 1. To use space to try to score points in a team game.
- 2. To mark another player
- 3. To defend space between players
- 4. To get past a defender
- 5. To use attacking and defending skills in a team game

# Cross curricular links:

### Key vocabulary

Accurate, aim, attack, coordination, defend., dodge, eye contact, goal, intercept, mark, opponent, passing, player, possession, referee, skill, space, tactic, teammate, teamwork, cooperation, communicate,

# Assessment Opportunities

Photographs, Videos,