The Canons CE Primary School

Year 2 – Uses of Everyday Materials

Prior Learning

In Year 1 children will be taught to:

- describe why certain materials are used for certain purposes e.g. bricks and houses
- group materials by their properties
- describe the similarities and differences between everyday materials
- describe the properties of everyday materials
- recognise objects and the materials they are made from
- identify and name everyday materials. *(Everyday materials)*

In Year 2

In Year 2 children will be taught to:

- squash, bend, twist and stretch certain objects and describe how the material makes the shape change
- recognise that certain objects can be made using different materials
- recognise that certain materials can be used for more than one purpose e.g. wood can be used for matches and floors
- identify the suitability of everyday materials for particular uses.

Key Vocabulary

- names of materials – wood, metal, plastic, glass, brick, rock, paper, cardboard
- properties of materials – object, material, wood, plastic, glass, metal, water, rock, brick, paper, fabric, elastic, foil, rubber, card/cardboard, wool, clay, hard, soft, stretchy, stiff, bendy, floppy, waterproof, absorbent, breaks/tears, rough, smooth, shiny, dull, see-through, not see-through, opaque, transparent and translucent, reflective, non- reflective, flexible, rigid
- shape, push/pushing, pull/puling, twist/twisting, squash/squashing, bend/bending, stretch/stretching

Future Learning

In Year 3 children will be taught to:

- compare different kinds of rocks based on their simple physical properties
- compare different kinds of rocks based on their appearance *(rocks)*

- investigate how magnets attract some materials and not others
- describe how objects move on different surfaces
- 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. *(Forces and magnets)*

In Year 5 children will be taught to:

- compare and group everyday materials on the basis of their properties e.g. hardness, solubility, transparency, conductivity (electrical and thermal and response to magnets
- use evidence from their tests to decide how to use everyday materials effectively. *(Properties and changes of materials)*

The Canons CE Primary School

Famous Scientists	Common Misconceptions	Possible Evidence to be Secure
• Charles Macintosh – waterproof material • John MacAdam – tarmac	Some children may think: • only fabrics are materials • only building materials are materials • only writing materials are materials • the word rock describes an object rather than a material • solid is another word for hard.	Children 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 • label a picture or diagram of an object made from different materials • identify what properties a suitable material needs to have (for a given object) • describe the action used whilst changing the shape of an object • 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 • recognise that a material may come in different forms which have different properties.

The Canons CE Primary School

Working Scientifically

National Curriculum Statutory Requirements

1. Ask simple questions and recognise that they can be answered in different ways.
2. Observe closely, using simple equipment.
3. Perform simple tests.
4. Identify and classify.
5. Use their observations and ideas to suggest answers to questions.
6. Gather and record data to help in answering questions.

Highlighted = main focus during this topic

Teaching Ideas – Different Types of Scientific Enquiry

Comparative and Fair Testing	Identifying and Classifying	Observation Over Time	Pattern Seeking	Research
Which shapes make the strongest paper bridge? Which material would be best for the roof of the little pig's house?	Which materials are shiny and which are dull? Which materials will let electricity go through them, and which will not?	How long do bubble bath bubbles last for? What will happen to our snowman? Would a paper boat float forever?	Do magnetic materials always conduct electricity?	How have the materials we use changed over time? How are plastics made?

Teaching Ideas – How Pupils Could Work Scientifically

(Bracketed Number = National Curriculum Statutory Requirement Link)

- Classify materials. (4)
- Make suggestions about alternative materials for a purpose that are both suitable and unsuitable. (5)
- 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 hard. (3)

Teaching Ideas – Possible Evidence to be Secure

Children can:

- sort materials using a range of properties (4, 5)
- explain using the key properties why a material is suitable or not suitable for a purpose (5)
- begin to choose an appropriate method for testing a material for a particular property (3)
- use their test evidence to select appropriate material for a purpose e.g. which material is the best for a rain hat? (5, 6)