

## Science – Year 1

### Content- Materials

***How can I identify a variety of materials based on their properties?***

***Which materials can be recycled?***

NC objectives - areas of study	End point of area of study	Vocabulary		
		Basic	Adventurous	Technical
<ul style="list-style-type: none"> <li>• distinguish between an object and the material from which it is made</li> <li>• identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock</li> <li>• describe the simple physical properties of a variety of everyday materials</li> <li>• compare and group together a variety of everyday materials on the basis of their simple physical properties.</li> </ul>	<p>-Pupils have explored, name, discuss and raise and answer questions about everyday materials so that they become familiar with the names of materials and properties such as: hard/soft; stretchy/stiff; shiny/dull; rough/smooth; bendy/not bendy; waterproof/not waterproof; absorbent/not absorbent; opaque/transparent.</p> <p>-Pupils have explored and experimented with a wide variety of materials, for example: brick, paper, fabrics, elastic, foil.</p> <p>-Pupils perform simple tests to explore questions and explain their observations and what they might mean.</p>	<p>Hard, soft, stretchy, stiff, shiny, dull, rough, smooth, bendy/not bendy, floppy, object , material, wood, plastic, glass, metal, water, rock, brick, elastic, foil, rubber, card, cardboard, wool, clay</p>		<p>waterproof/not waterproof, absorbent, see-through, not see-through</p>

### Knowledge

Substantive Knowledge	Disciplinary Knowledge
<p><b>Lesson 1</b></p> <p><b>LO To know that an object is made from a material.</b></p> <p><b>object , material, wood, plastic, glass, metal, brick</b></p> <p>(object names- for example spoons which may be made from different materials, table, chair, ball, marble)</p> <p>Know that an object is made from/of a material – children name objects and the material they are made from, understanding the difference. This may include naming the materials different spoons are made from- they are all spoons but are all made from different materials.</p>	<p><b>Working as a chemist to identify materials and their properties, they develop the skills of an inventor as they choose materials for specific purposes.</b></p> <p><b>Evidence</b></p> <p>Children make close observations of objects and name the object and the material it is made from through first-hand exploratory activities. They ask and answer questions about materials and begin to suggest ways they can find answers to their questions. They are able to perform simple tests, talk about their findings and explain their observations using the data they have gathered.</p>

## Lesson 2

### To know the names of materials.

Know some examples of everyday materials wood, plastic, glass, metal, water, rock., **cardboard, card, rubber, foil, wool, clay.**

Children are able to name materials around the school and what things are made from.

## Lesson 3

### LO To know how to describe different materials.

Know that materials can be **hard, soft, strong, weak, absorbent, heavy, light, solid and runny, smooth and rough**; these descriptions denote the properties of a material.

Explore different materials and name their properties using the correct vocabulary- first hand experiences.

Respond to sensory feelings and use to describe objects.

## Lesson 4

### LO To know the properties of materials.

Know that materials can be **hard, soft, strong, weak, absorbent, heavy, light, solid and runny, smooth and rough**; these descriptions denote the properties of a material.

Children group objects according to their material, they are then able to collect descriptions of the materials properties common to it.

## Lesson 5

### LO To know the features of different materials

**See-through, not see-through, shiny, solid, hard**

Know from observation how to distinguish between objects made of wood, plastic, glass, metal, water, rock.

Solid, hard,

Children group objects by their features and not just what they are made from, they are able to describe the features of that material.

## Similarities and differences

Identifying objects and the materials they are made from, they are able to compare two or more objects and explain their similarities and differences. Given a range of objects, they are able to name them and classify them in different ways. This may be according to the material they are made from or a shared characteristic, eg heavy, smooth or rough.

## Lesson 6

LO To know how to compare and group everyday materials.

**See-through, not see-through, shiny, solid, hard**

Know how to compare and group together a variety of everyday materials on the basis of their simple physical properties. Children group objects in different ways using the vocabulary taught to support them.

Create opportunities for pupils to ask questions.

## Lesson 7

LO To know the properties of materials.

**Sturdy, strong, waterproof**

Three little pigs houses what are they made from? Children make homes from different materials- art straws, lego bricks, lollysticks- can they be blown down? Why what are the properties of the materials?

Have an instant response to something incredible happening.

## Lesson 8

LO To know the features of different materials.

**Waterproof, not waterproof**

Know how to choose materials suitable for a given purpose. Mend the broken umbrella make an umbrella for teddy. What must the material be like? Suggest materials, test and make observations to enable them to choose the material needed.

## Lesson 9

To know water is a material

**Freeze, solid, frozen, liquid**

Make observations of water freezing, describe it, observe what happens when it melts. How could we make an ice cube melt quickly?

## Lesson 10

LO To know which materials can be recycled.

Recycle, reuse, glass, plastic, cardboard, paper

Visit from Boston Borough Council representative about using our recycling bins at home properly and what can go in each. How can we recycle in school?

Be able to verbalise how we can help care for the environment.

### Concepts

Biology

Chemistry

Physics

### SKILLS

1. Compare

2. Explore

3. Identify

4. describe

5. classify

6. Question

7. observe

8. test

9. record

10. research

### ASSESSMENT

KNOW MORE, REMEMBER MORE, DO MORE...

In this unit of learning, progress has been made when a learner knows more. This 'distance travelled' from the starting point is evidenced through them remembering more and doing more: in books, low stakes quizzes, retrieval, use of mind maps, answering the big question and being able to feel more confident about this unit.