

Scientific Investigations:

- Identifying and Classifying Things
- Comparative and Fair Testing

Scientific Skills Taught:

ASK

- To explore the world around them
- To ask their own questions
- To find answers from books, photographs, videos (secondary sources)

BREAKDOWN

- To carry out simple tests
- To use simple measurements
- To use simple equipment

CAPTURE

- To observe closely
- To compare using simple features
- To record what they notice in different ways
- To sort things using simple features
- To notice patterns and relationships
- To group things using simple features

DESCRIBE

- To explain what they found out
- To talk about what they have seen
- To use simple scientific language
- To know there are different ways to answer

Scientists:

- Ole Kirk Christiansen – invented Lego.

Prior Learning:

- EYFS: Naming materials in the model making areas e.g., cardboard, paper, plastic; talking about waterproof materials we wear when we play in the rain, looking at magnets and what kinds of materials are magnetic and non-magnetic.
- Children know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur and talk about changes. (Early Learning Goal)

Curriculum	Learning Intention	Knowledge and Key Vocabulary
<p><u>Making links to previous learning and discuss the model (if needed)</u></p>	<p>What do you already know about everyday materials pre assessment task?</p>	
<p><u>Knowledge and skills through investigations</u> Pupils should be taught to:</p> <ul style="list-style-type: none"> - distinguish between an object and the material from which it is made 	<p>What is an object? What is a material? To distinguish between an object and the material from which it is made.</p> <p>What are the properties of materials?</p>	<p><u>Knowledge:</u></p> <ul style="list-style-type: none"> - Chn can name objects made from 3 amounts of different materials. - Children know some of the properties that materials can have.

<ul style="list-style-type: none"> - 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. <p>Notes and guidance (non-statutory)</p> <ul style="list-style-type: none"> - Pupils should explore, 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. - Pupils should explore and experiment with a wide variety of materials, not only those listed in the programme of study, but including for example: brick, paper, fabrics, elastic, foil. <p>Pupils might work scientifically by:</p> <ul style="list-style-type: none"> - performing simple tests to explore questions, for example: 'What is the best material for an umbrella? ...for lining a dog basket. ...for curtains? ...for a bookshelf? ...for a gymnast's leotard?' 	<p>Describe the properties of a range of materials.</p> <p>What are the properties of objects, materials and why they are chosen? Identify materials and their properties. Explore how an object's properties make it suitable for particular things. To understand the difference between natural and man-made.</p> <p>What is the best material to use for Teddy's roof? To understand what waterproof means. To test different materials to see if they are waterproof. Perform simple tests Make careful observations Use what is learnt to make a decision</p> <p>What is the best material to use for Teddy's curtains? To understand what opaque and transparent mean. To assess how opaque or transparent different materials are. To carry out a basic science investigation.</p> <p>What is the best material for Teddy to use as a towel? To understand what absorbent means. To assess how absorbent different materials are. To carry out a basic science investigation.</p>	<ul style="list-style-type: none"> - Children can identify objects that have given properties and that are made of given materials. - Children are be able to say in their own words what waterproof means. - Children are be able to say in their own words what transparent and opaque means. - Children are be able to say in their own words what absorbent means. - Children understand that some materials are more suitable than others for making different objects. <p><u>Vocabulary:</u></p> <ul style="list-style-type: none"> - 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, opaque, transparent
<p><u>Application and Assessment Activity</u></p>	<p>https://www.educationquizzes.com/ks1/science/</p>	
<p>Thinking Deeper: Why are certain materials used for certain objects? To understand why certain materials are suitable and unsuitable for different objects.</p> <ul style="list-style-type: none"> - Children must understand that some materials are more suitable than others for making different objects. 		

Links to other subjects:

- Subject Specific links –
 - English: new vocabulary, explaining their work and their ideas, describing images and layout for non-fiction (science investigation format).
 - Maths: sorting activities, comparing materials and amounts.
 - ICT: learning from online activities.
 - Art & DT: why we use different materials for different things.
- Personal Development – working in pairs, small and larger groups.
- SMSC – talk of recycling and the overuse of plastic.
- Cultural Capital –looking at objects made from different materials from different cultures
- Careers – builder, architect, interior designer linked to teddy’s houses project.
- British Values – deciding which experiences they want to carry out as a class.
- Equality – to understand that each child has the right to live in a home and be clothed appropriately.