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| **ADVENT TERM****SCIENCE – Year 1 - Medium Term Planning – CHEMISTRY: EVERYDAY MATERIALS** |
| **LESSON  1**  | **LESSON  2**  | **LESSON  3**  |
| **LEARNING INTENTION:** To know that objects are made from different materials. Skills: Talk about what they have done and say, with help, what they think they have found out.Aim: Pupils should name, discuss and raise and answer questions about everyday objects, so that they become familiar with materials.  | **LEARNING INTENTION:** To know that some materials can be natural. Skills: Identify and name what an object is made from, including wood, plastic, glass, metal, water and rock.Aim: Develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them. | **LEARNING INTENTION:** To know that some materials can be human-made. Skills: Identify and name what an object is made from, including wood, plastic, glass, metal, water and rock.Aim: Develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them. |
| **Key Vocabulary:** wood, plastic, glass, metal, card, rubber, fabric, paper, wool, brick, elastic, foil, metal, water, rock | **Key Vocabulary:** wood, metal, card, rubber, fabric, paper, wool, brick, elastic, foil, metal, water, rock | **Key Vocabulary:** hard, soft, stretchy, stiff, shiny, dull, rough, smooth, bendy, waterproof, not waterproof, absorbent, not absorbent, opaque, transparent. |
| **Recap & retrieval:** | **Recall & retrieval:*** Materials are important because we use them to make everyday objects
 | **Recall & retrieval:*** Materials are important because we use them to make everyday objects.
* Natural materials come from the world around us, such as the ground, plants and animals.
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| **Key Knowledge:** **Child:** * Materials are all around us, such as in the home, garden, school and park.
* Materials are important because we use them to make everyday objects.

**Teacher:*** Examples of materials include glass, wood, fabric, plastic, stone and metal.
* They are important because we use materials to make the objects we use every day.
 | **Key Knowledge:** **Child:** * Natural materials come from the world around us, such as the ground, plants and animals.

**Teacher:*** Natural materials include wood, metal, cotton, wool, leather, stone, rubber, clay, silk, oil, water and sand.
 | **Key Knowledge:** **Child:*** People make new materials from natural materials.
* Materials made from natural materials are called human-made materials.

**Teacher:*** Examples of human-made materials include glass, paper, plastic, brick, metal alloys, synthetic fabrics and concrete.
* Human-made materials look and feel different to the natural materials they are made from.
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| **ADVENT TERM****SCIENCE – Year 1 - Medium Term Planning – CHEMISTRY: EVERYDAY MATERIALS** |
| **LESSON  4**  | **LESSON  5**  | **LESSON  6**  |
| **LEARNING INTENTION:**To know that some objects are transparent and opaque.Skills: Investigate objects to group them into opaque and translucent. Aim: Develop scientific knowledge and conceptual understanding through the specific discipline of chemistry. | **LEARNING INTENTION:**To know that some objects consist of more than one property.Skills: Investigate and describe the simple physical properties of some everyday materials, such as hard or soft; stretchy or stiff; rough or smooth; opaque or transparent; bendy or rigid and waterproof or not waterproof.Aim: Develop scientific knowledge and conceptual understanding through the specific discipline of chemistry. | **LEARNING INTENTION:** To know that the scientist Charles Macintosh invented a waterproof fabric.Skills: Research and link the scientist to their learning.Aim: Are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.  |
| **Key Vocabulary:** transparent, opaque, property | **Key Vocabulary:** hard, soft, stretchy, stiff, shiny, dull, rough, smooth, bendy, waterproof, not waterproof, absorbent, not absorbent, opaque, transparent. | **Key Vocabulary:** invention, scientist, pioneering, waterproof, fabric, patent |
| **Recall & retrieval:*** Materials are important because we use them to make everyday objects.
* Natural materials come from the world around us, such as the ground, plants and animals.
* Materials made from natural materials are called human-made materials.
 | **Recall & retrieval:*** Materials are important because we use them to make everyday objects.
* Natural materials come from the world around us, such as the ground, plants and animals.
* Materials made from natural materials are called human-made materials.
* Transparent means you can see clearly through it.
* Opaque means that you cannot see through it.
 | **Recall & retrieval:*** Materials are important because we use them to make everyday objects.
* Natural materials come from the world around us, such as the ground, plants and animals.
* Materials made from natural materials are called human-made materials.
* Transparent means you can see clearly through it.
* Opaque means that you cannot see through it
* A property is a quality a material has.
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| **Key Knowledge:** **Child:*** Transparent means you can see clearly through it.
* Opaque means that you cannot see through it.

**Teacher:*** Light is allowed through an object so it is transparent.
* No light is allowed through an object so it is opaque.
 | **Key Knowledge:** **Child:*** Materials can be grouped according to their properties.
* A property is a quality a material has.
* Materials have different properties, such as hard or soft; stretchy or stiff; rough or smooth; opaque or transparent; bendy or rigid; waterproof or not waterproof.

**Teacher:*** A material’s properties make it suitable for a particular use.
 | **Key Knowledge:** **Child:*** Charles Macintosh invented a waterproof fabric.
* This fabric was used in making raincoats.
* 'Mackintosh' remains a popular name for a raincoat to this day.

**Teacher:*** Charles Macintosh set up the first alum works in Scotland in 1797.
* He went on to develop new methods for the bleaching, printing and dyeing of cloth and for the manufacturing of iron.
* He was elected to the Royal Society for discoveries in chemistry.
* He produced his famous waterproof material by combining naphtha - a by-product of tar - with rubber and obtained a patent for the process in 1823.
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| **ADVENT TERM****SCIENCE – Year 1 - Medium Term Planning – CHEMISTRY: EVERYDAY MATERIALS** |
| **LESSON  7**  | **LESSON  8** | **LESSON  9**  |
| **LEARNING INTENTION:** To know that materials can be waterproof and absorbent.Skills: Compare and group materials in a variety of ways, such as based on their physical properties; being natural or man-made and being recyclable or non-recyclable.Aim: Develop understanding of the nature, processes and methods of science through different types of science enquiries that help them to answer scientific questions about the world around them. | **LEARNING INTENTION:** To know that simple tests can be carried out by following a set of instructions.Skills: With support, follow instructions to perform simple tests and begin to talk about what they might do or what might happen.Aim:  Are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.  | **LEARNING INTENTION:** To know that the results are information that has been found out from an investigation.Skills: Observe objects, materials, living things and changes over time, sorting and grouping them based on their features.Aim:  Are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.  |
| **Key Vocabulary:** waterproof, not waterproof, absorbent, non-absorbent, soak, liquid | **Key Vocabulary:** investigate, investigation, record, predict, venn diagram, sorting, grouping, property  | **Key Vocabulary:** observe, record, information, results, conclusion |
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* Materials made from natural materials are called human-made materials.
* Transparent means you can see clearly through it.
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* A property is a quality a material has.
* Charles Macintosh invented a waterproof fabric.
 | **Recall & retrieval:*** Materials are important because we use them to make everyday objects.
* Natural materials come from the world around us, such as the ground, plants and animals.
* Materials made from natural materials are called human-made materials.
* Transparent means you can see clearly through it.
* Opaque means that you cannot see through it
* A property is a quality a material has.
* Charles Macintosh invented a waterproof fabric.
* Waterproof means that the material will keep out water.
* Absorbent means that the material will easily soak up liquid.
 | **Recall & retrieval:*** Materials are important because we use them to make everyday objects.
* Natural materials come from the world around us, such as the ground, plants and animals.
* Materials made from natural materials are called human-made materials.
* Transparent means you can see clearly through it.
* Opaque means that you cannot see through it
* A property is a quality a material has.
* Charles Macintosh invented a waterproof fabric.
* Waterproof means that the material will keep out water.
* Absorbent means that the material will easily soak up liquid.
* A Venn diagram is a way of grouping information or objects using overlapping circles.
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| **Key Knowledge:** **Child:*** Waterproof means that the material will keep out water.
* Absorbent means that the material will easily soak up liquid.

**Teacher:*** The properties of a material determine its uses.
* Materials can be grouped according to their properties.
* Non-waterproof means the material will not keep water out.
* Non-absorbent means that the material will not soak up liquid.
 | **Key Knowledge:** **Child:*** Materials can be grouped according to their properties.
* A Venn diagram is a way of grouping information or objects using overlapping circles.

**Teacher:*** It can be used to group objects according to their properties to find their similarities and differences.
 | **Key Knowledge:** **Child:*** Objects, materials and living things can be looked at and compared.
* The results are information that has been found out from an investigation.

**Teacher:** |
| **Assessment**  Cumulative Quiz. Retrieval Practice. |