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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. |
| **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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| **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. |
| **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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| **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 |
| **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. | **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. |
| **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. | | |