MTP Science Autumn Humankind	Engages with Debate	Vocabulary	Objectives	Objectives	Scientific Enquiry	Scientific Enquiry
KS1 Animals including Humans and Seasonal Changes	**How do humans survive?**	Develop Adult Life cycle Offspring Survival Young Diet Disease Germs Nutrition Seasons Weather Daylight	Children know: **AH4** That humans have offspring that grow into adults. **AH5** The basic needs of a human for survival. **AH6** That exercise, eating the right amounts of food and hygiene are important to stay healthy. 	Children know: **SC1** The changes that take place throughout the seasons. **SC2** The length of the day varies throughout the year. **SC3** That the weather changes depending on the season. 	Can you stop a germ from spreading? **SE5** Asking simple questions. Ask questions about germs and find out answers through books, the internet and testing. **SE3** Perform simple tests. Set up a test where pupils have glitter mixed with washing up liquid on their hands and then get on with their lesson. Later on look for the glitter around the room.	**SE4** Use their observations and ideas to suggest answers to questions. After looking at the amount of glitter everywhere come to conclusions about how germs spread. 
LKS2 1st Half Term Rocks	**What makes a rock valuable?**	Igneous rock Sedimentary Metamorphic Magma Lava Sediment Permeable Impermeable Fossilisation Palaeontology Erosion	**Children know:** **R1** That rocks can be grouped based on their appearance and physical properties. **R1** That rocks can have value for a range of reasons	**Children know:** **R2** That fossils are formed when things that have lived get trapped inside rocks. **R3** Soils are made from rocks and organic matter. 	 **Are all rocks as hard as each other?** **SE2** Create ways to test the hardness of different rocks E.g. sandpaper. **SE4** Classify rocks based on their tests.	**SE5** Record findings in their own way. **SE6** Attempt to place rocks in order of hardness. **SE7** Raise further questions from results such as the big question, do rocks stay the same forever?
LKS2 **2nd Half Term States of Matter**	**What makes water so special?**	 States of matter Solids Liquids Gases Water vapour Melt Freeze Evaporate Condense Precipitation	**Children know:** **SM1** They can group materials together into solids, liquids and gases. **SM2** Some materials change state when they are heated or cooled and we can measure the temperature when the changes happen.	**Children know:** **SM3** That as part of the water cycle, water evaporates and causes condensation and the rate that this happens is affected by the temperature. 	**Do Materials have different melting points?** **SE2** Set up a test to find out the melting point of different materials. Test 3 different materials, ice, chocolate, butter. **SE3** Predict then take the temperature of each melting point using a thermometer. **SE4** Record the temperatures.	**SE7** Children to think of other materials that might have similar melting points because they have similarities. e.g. lard/butter, ice cream/ice. **SE8** Children look for similarities, differences and patterns in data. **SE9** Children research the melting points of the materials that they suggested could have similar melting points.

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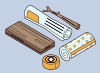
  **UKS2** **Properties of Materials**	**How can we provide everyone with clean water?**	Materials Solids Liquids Gases Melting Freezing Solution Reversible Changes of State Mixture Filtering Evaporating Condensing Conductor Insulator Transparency Solubility Magnetic	 **Children know:** **PM1** How to group materials based on their properties (hardness, solubility, transparency, conductivity, response to magnets). **PM4** The reasons why some materials are used for a particular purpose, based on evidence from tests. **PM2** Some materials dissolve in liquid to form a solution and could recover a substance from a solution.	 **Children know:** **PM5** That dissolving, mixing and changes of state are reversible and can demonstrate this. **PM3** That mixtures can be separated through filtering, sieving and evaporating. **PM6** Some changes result in the formation of new materials and this kind of change is not usually reversible e.g. burning.  	 **Where would be the best place to put a solar still in the school grounds?** **SE1** Children set up 3 solar stills in different places in the school grounds. Think about the variables. **SE2** Take regular measurements of the amount of purified water being formed in the solar stills.	**SE3** Record their results using an appropriate graph. **SE5** Use results to draw conclusions about where to put a solar still.