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| **States of Matter** | | **Working Scientifically** | | | |
| * Can they compare and group materials together, according to whether they are solids, liquids or gases? * Can they explain what happens to materials when they are heated or cooled? * Can they measure or research the temperature at which different materials change state in degrees Celsius? * Can they use measurements to explain changes to the state of water? * Can they identify the part that evaporation and condensation has in the water cycle? * Can they associate the rate of evaporation with temperature? | **Planning** | | **Obtaining and presenting evidence** | | **Considering evidence and evaluating** |
| * Can they set up a simple fair test to make comparisons? * Can they plan a fair test and isolate variables, explaining why it was fair and which variables have been isolated? * Can they suggest improvements and predictions? * Can they decide which information needs to be collected and decide which is the best way for collecting it? * Can they use their findings to draw a simple conclusion? | | * Can they take measurements using different equipment and units of measure and record what they have found in a range of ways? * Can they make accurate measurements using standard units? * Can they explain their findings in different ways (display, presentation, writing)? | * Can they find any patterns in their evidence or measurements? * Can they make a prediction based on something they have found out? * Can they evaluate what they have found using scientific language, drawings, labelled diagrams, bar charts and tables? * Can they use straightforward scientific evidence to answer questions or to support their findings? * Can they identify differences, similarities or changes related to simple scientific ideas or processes? | |
| **Challenge** | | | | | |
| * Can they group and classify a variety of materials according to the impact of temperature on them? * Can they explain what happens over time to materials such as puddles on the playground or washing hanging on a line? * Can they relate temperature to change of state of materials? | * Can they plan and carry out an investigation by controlling variables fairly and accurately? * Can they use test results to make further predictions and set up further comparative tests? | | * Can they record more complex data and results using scientific diagrams, classification keys, tables, bar charts, line graphs and models? | | * Can they report findings from investigations through written explanations and conclusions? * Can they use a graph or diagram to answer scientific questions? |