****

**Knowledge Rich Curriculum Plan**

SCIENCE- Air pollution and evaporation



| **Lesson/Learning Sequence** | **Intended Knowledge:**  *Students will know that…* | **Prior Knowledge:**  *In order to know this, students need to already know that…* | **Working Scientifically** | **Tiered Vocabulary and Reading Activity** | **Assessment** | **Support** |
| --- | --- | --- | --- | --- | --- | --- |
| ***Air quality*** | *The atmosphere is a mixture of gasses and is mainly made from Nitrogen.*  *The main pollutants in the atmosphere are sulphur dioxide, nitrous oxides, carbon dioxide and methane.*  *Global dimming is a decrease in the amount of sunlight reaching the surface of the earth, believed to be caused by pollution in the atmosphere.*  *Particulates are a cause of global dimming.*  *Pollutants move away from the source and can be invisible.* | *The air is a mixture of different gasses.*  *Humans inhale oxygen and exhale carbon dioxide*  *That carbon dioxide is released during combustion of fossil fuels.* |  | *Pollution- The introduction of harmful materials into the environment.*  *Particulates- Microscopic particles of solid or liquid matter suspended in the air.*  *Dimming- To make or become less bright or distinct.* | *Retrieval questions*  *Simple exam questions*  *Homework quizzes*  *Summative assessment 3* | *Knowledge organiser (provided on Teams and in class)*  [*https://www.bbc.co.uk/bitesize/guides/zym2k2p/revision/7*](https://www.bbc.co.uk/bitesize/guides/zym2k2p/revision/7) |
| ***Explaining evaporation*** | *Evaporation will occur in liquids with a temperature that is less than or greater than that of the surroundings.*  *Evaporation happens on the surface of liquids*  *Boiling is when a liquid is heated and turned to a gas happens quickly and throughout the liquid*  *Evaporation can occur at any temperature, is slower and happens at the surface of the liquid* | *The three states of matter are solid, liquid and gas*  *Will know that the 6 changes in state are;*   * *Melting - changing from solid to liquid.* * *Freezing - changing from a liquid to a solid.* * *Evaporation - changing from liquid to gas.* * *Condensation - changing from gas to a liquid.* * *Deposition - changing from gas to a solid.* * *Sublimation - changing from a solid to gas* | *Communicate: Students will be able to construct an explanation of the differences between boiling and evaporation* | *Deposition - changing from gas to a solid.*  *Sublimation - changing from a solid to gas* | *Retrieval questions*  *Simple exam questions*  *Homework quizzes*  *Summative assessment 3* | *Knowledge organiser (provided on Teams and in class)*  [*https://www.bbc.co.uk/bitesize/topics/zych6g8/articles/z9rwwnb#:~:text=Evaporation%20describes%20the%20process%20of,temperature%20depending%20on%20the%20liquid*](https://www.bbc.co.uk/bitesize/topics/zych6g8/articles/z9rwwnb#:~:text=Evaporation%20describes%20the%20process%20of,temperature%20depending%20on%20the%20liquid)*.* |