Epistemic Insight

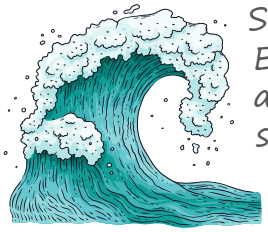
Essential Experiences in Science

How salty is the sea?

On the Earth we can find two different types of water, freshwater and seawater.

Freshwater is found in lakes, rivers and streams. We drink and wash in freshwater and observe it falling to the ground as rain.

Plants and animals found in lakes, rivers and streams are adapted to live in freshwater and would not be able to survive in saltwater.



Seawater is found in the Earth's seas and oceans, and unlike freshwater it is salty. Plants and animals found in oceans and seas are adapted to live in saltwater and would not be able to survive in freshwater.

Just by looking, it is not possible to observe a difference between freshwater and seawater. How could we observe the difference? And, how could we find out how much salt is in seawater?

Predict, Observe, Record

Into two small bowls put two tablespoons of warm water. Add to one of the bowls half a teaspoon of salt. Stir the salt in the water until it dissolves, so you can no longer see the grains of salt.

Place the bowls near a radiator or somewhere warm and leave for 1 hour. Predict what will be in the bowls when you return.

Record your observations and think about how they could be explained.

You could extend your experiment by placing cling film over the two bowls and making further observations to test your ideas.

Canterbury Christ Church University

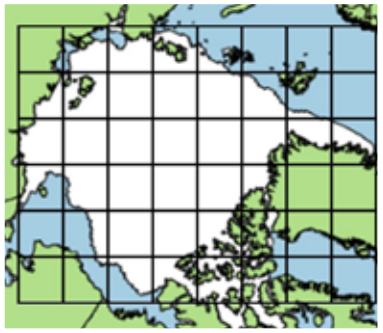
Epistemic Insight

How does global warming affect life in the arctic?

Essential Experiences in Science

Scientists collect data and use tools and models to help them understand and predict the effects of global warming.

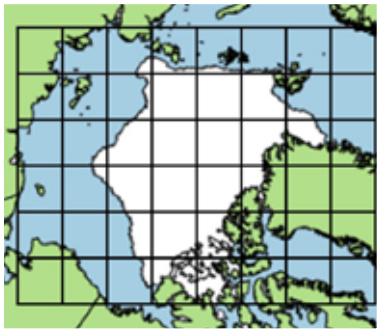
The following two pictures show the arctic ice cap in 1980 and again in 2020.



Arctic Ice Cap - Sept 1980

The two pictures are scientific data and we can use them to investigate how the arctic ice cap has changed in the past 40 years.

Count the squares in the overlayed grids to work out how much the ice cap has reduced. For sections that don't fill a whole square you will have to estimate how much of the square is covered.

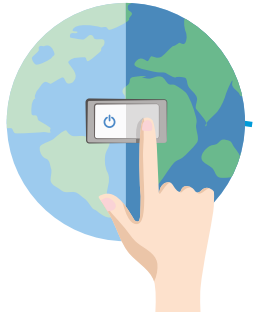


Arctic Ice Cap - Sept 2020

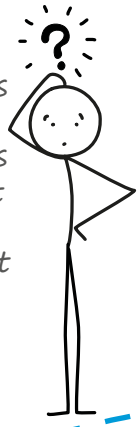
Create a piece of art work to encourage and remind members of your school about how they can help our planet.

For example, reducing waste, litter less lunches, switching off lights and taps, using recycling bins.

Our lifestyles can have an impact on living things that are near us and those far away.



As the freshwater ice caps melt how will this affect the saltiness of the water around them? How might this affect the wildlife that lives in this water? How can scientists test these predictions?



Scientists can use records like this to make predictions about how global warming affects fish and other living things in the arctic.