Water, Acids and Alkalis

Overview

We are studying the chemistry of water, acids and alkalis this term. These substances, in various forms, are all around us and it's important for our children to start to understand them and how they contribute to our daily lives. Without water, it is unlikely that any life would or could have begun on our planet whilst understanding how we use acids and alkalis and where these are present in some of the most common place items from vinegar and citric fruit to soap and baking soda.

Here are some key topic's we'll be studying:

- What is water, the water cycle and acid rain
- How acids and alkalis are measured on the pH scale
- Acids and alkalis in the home and in medicines

Key experiments

Our children love practical science and they will be involved in a number of investigations that really help them to develop their scientific skills; planning, data capture and analysis and evaluation. Here is an example of the type of investigation they'll be doing:

- Understanding the density of water across the world
- Making clouds in a bottle
- Testing bath bombs to measure alkali content
- Measuring the effectiveness of tooth brushing and the role acids play in tooth decay

Exciting things

Water is the only Universal Solvent – nearly everything will dissolve in water… eventually! Did you also know that the pH scale was invented by the Head of the Carlsberg laboratories Soren Sorensen in 1909! He was so tired of using indefinite terms around the 'acidity' of a liquid – rather random terms like very acidic or good - that he created a scale with a precise measurement. This meant the Carlsberg brewery could now check that the fermentation during the brewing of beer was proceeding as it should.

Things to do at home

Why not help your children make their own bath bombs? They can be colourful and exciting and keep them occupied for some time! Follow the instructions on the link below:

http://www.3plearning.com/blog/simple-chemistry-experiments-kids-home/#Bath

Send us some pictures of the finished bombs by sharing them online using the hashtag #empiriboxscience. We can't wait to see!

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