Starters for Science: Y5 Properties and changes of materials

Starters for Science are 4 activities that parents can use at home to help children develop their science alongside the key learning and vocabulary children are using at school. The activities are easy to resource and provide children with the stimulus to learn and talk about their science topic. Encourage children to use the correct vocabulary as they talk about what they are doing and finding out. Don't forget to share your work on social media

#ScienceFromHome

Key Learning:

Generally, all things can be sorted into solids, liquids or gases.

A solid changing into a liquid is called a change of state. A liquid changing into a solid is also called a change of state.

Heating and cooling are involved in changes of state.

A mixture of different materials may be separated based on the properties of the individual materials.

Some materials are thermal insulators and others are thermal conductors.

Thermal conductors allow heat to travel easily through them. Thermal insulators do not allow heat to travel easily through them.

A reversible change means a substance has changed physically, but not chemically. The original substances can be recovered.

A irreversible change means that a chemical change has occurred and the original substance(s) can not be got back very easily.

Vocabulary:

solid

liquid

gas

states of matter

change of State

melt

freeze

evaporate

mixture

separation

dissolve

thermal insulator

thermal conductor

irreversible change

reversible change

observation

Creating crystals

Fill an old jar with water and pour in salt, stirring to dissolve it. Keep adding salt until no more can dissolve. Tie a paperclip onto a length of cotton and hang it from a straw, or piece of wood placed across the top of the jar. Leave the jar somewhere safe and obverse what happens over the next few days and weeks.

Hot drinks hot and cold drinks cold

Which cup is best at keeping your cold drink cold in the summer? A glass, a mug or a plastic cup? Place an ice cube in your drink and see which one stays frozen the longest. What other cups could you test? https://www.stem.org.uk/rxtd2

Sorting salt and pepper

Mix some salt and pepper in a bowl. Use everything you know about separating materials to help solve the problem. Clue: dissolving and evaporation. https://www.stem.org.uk/rx32po

Baking soda rocket

Find a small plastic bottle and a cork to fit in the top. Tape some straws to the bottle so it stands up like a rocket and pour a little vinegar or lemon juice into the bottle. Take half a sheet of kitchen paper and pour a teaspoon of bicarbonate of soda onto it. Wrap it up. Push the wrapped up paper into the bottle, seal with the cork and stand up in a safe space outside. Move away quickly and watch what happens. https://www.science-sparks.com/baking-soda-rocket/