Explorer Education Programme

Explorers Science Experiments - Slime
Class: All classes
Strand: Materials
Strand Unit: Properties and characteristics of materials / Materials and change
Group size: Individuals. Demonstrate making slime, allow students to touch it when done.

Aim

To examine how simple substances can be mixed together to form a new independent substance with unique chemical properties.
Students completing the worksheets will also develop writing and literacy skills.
Experiment suitable for teacher demonstration and/or supervised group experiment for 5th and 6th Class students.

Materials

- 2 small glasses
- PVA glue
- Borax powder
- Spoon
- Food colouring
- A medium / large sealable jar
- Water

Methods

1. Add 100 ml of water to a small glass
2. Fill the rest of the glass with PVA glue
3. Fill a second glass of equal volume with water
4. Add 1 tablespoon of Borax powder (From pharmacy)
5. Stir both glasses until solutions are fully mixed
6. Into the borax / water mixture add a few drops of food colouring
7. Mix both glasses together into a sealable jar
8. Seal the jar and shake it until mixture turns into slime.

❖ This process may take from 5 – 20 mins. The mixture should be flexible but not too runny. The more the slime is handled the more solid it will become and the better it feels.

What Happens

- The ingredients will mix together to form a firm slime that can be played with.
- If it is really sticky and it hard to get off your fingers it is not ready to be removed from the jar and should be mixed for longer.

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Discussion Points

- Discuss with the students how you can physically change a substance and chemically change it. For example if you add iron filings to wood chips you have physically changed the substance that you have. However, by using a magnet to remove the iron filings you can revert the new substance back to the two original substances of wood chips and iron filings.
- The slime once made is chemically changed and cannot be reverted back to glue, water and borax powder.
- What part does slime play in nature? E.g. Animals excreting slime to avoid predation (butterfish).
- Get students to use the web and/or their school library to research these discussion points and the worksheet questions.

Outcome

The children in the class will have developed skills in the following:

- Questioning
- Observing
- Predicting
- Investigating and experimenting
- Analysing
- Recording and communicating
- Exploring
- Planning
- Making
- Evaluating

In addition the following skills in English will be developed:

- Reading for pleasure and information
- Developing competence, confidence and the ability to write independently
- Developing interests, attitudes, information retrieval skills and the ability to think

Useful Links

- http://www.arkansasstripers.com/fish-slime-coat.htm - Fish slime

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Worksheet

What is the difference between physically and chemically changing substances?

When adding iron filings to wood chips, is this a physical or chemical change? Can this change be reversed?

Is the creation of slime in this experiment a physical or chemical change? Can the slime be reverted back to glue, water and borax powder?

Can you give examples of slime in nature and what it is used for?