



FSP22

WHITE POWDERS

Teacher activity information

The Student Handouts that relate to these activities are found in **Personal Dossier (FSP25)** under the section Observations of known substances.

In this activity the students will identify basic properties of a series of known white powders. They will complete a table that will act as a key for identification of the white powder that was left at the crime scene.

Essentially the students will observe and record physical and simple chemical properties of the white powders.

The unknown safe powders could be from the following list:

- Baking powder - sodium bicarbonate (NaHCO_3).
- Corn starch
- Chalk - calcium carbonate (CaCO_3)
- Plaster of Paris
- Table sugar
- Table salt
- Sherbet
- Talcum powder
- Epsom salts
- Baking soda – sodium bicarbonate (NaHCO_3)
- Cleaning product – Ajax

NB: the crime scene white powder is chalk!

Preparation

Prepare small zip-lock bags with about $\frac{1}{4}$ cup of each of the substances to be tested. Label the bags with the name of the substance.

Prepare enough bags so each lab group will have the required number of different bags.

Choose 4 white powders, at least one from each group

Group 1	Cornstarch
Group 2	Sugar Salt
Group 3	Baking powder Baking soda Sherbet Chalk
Group 4	Plaster of Paris Talcum powder

Tests on the powders include:

- Solubility
- Iodine test
- Appearance of bubbles (CO_2 is produced)
- pH