

MYSTERY POWDERS

Description:

A team of two contestants will be asked to identify a mixture of common white household powders.

Number of Participants: 2

Approximate Time: 20 minutes

We provide the safety glasses and magnifying glasses. Be sure YOU have the Charts Reaction Sheet and give it to the judges – it proves you know what you know and is the decider in case of a tie.

The Competition:

1. Three mixtures containing one to three powders will be placed in vials marked A, B and C. Mixtures could include such powders as: sugar, baking soda, flour, salt, plaster of Paris, corn starch, white sand. Mixtures will ONLY be selected from the items listed.

Mixture A will have two mystery powders; mixtures B and C will contain three mystery powders. For younger students or an introductory tournament, mixture A could have one powder; mixture B - two powders; and mixture C - three powders.

2. Students will be given twenty minutes to correctly identify as many powders as possible.
3. No tasting or touching of powders will be allowed!
4. Teams will be supplied with the following materials to aid in the identification of the powders: vinegar, water, a candle, aluminum foil, a clothespin, iodine solution, magnifying lens, and black paper. Safety precautions must be used. Students must bring and wear their own splash-proof safety goggles. If a candle test is used, an adult must man this station at all times. Students will not be allowed to bring other materials for testing.
5. Participants will be asked to collect evidence and complete a chart describing the powders' reactions to the above materials BEFORE attending the tournament. This chart should be brought to the tournament with the participants. The chart and answer sheet will be collected at the end of the event.

Scoring:

1. The team with the greatest correct number of powders identified in the shortest period will be declared the winner. For example, if several teams identify six powders correctly, the team with the shortest time will be the winner even if another team finishes ten minutes earlier but identifies only five powders correctly.
2. In case of ties, the team with the most complete data table/chart will be declared the winner.