

MYSTERY POWDER

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

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: powdered sugar, granulated sugar, baking soda, all purpose flour, salt, plaster of Paris, cornstarch, nonfat dry milk (Kroger brand), and white sand. Mixtures will ONLY be selected from the items listed. (cream of tartar has been dropped)
2. Students will be given twenty minutes to correctly identify as many powders as possible.
3. No tasting 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, pocket-scope (30x), hand lens, small paper plate, toothpicks, and black paper. Safety precautions and safety goggles should be used. Students must bring and wear their own safety goggles. If a candle test is used, this station must be manned by an adult at all times. Students will not be able 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 MUST be brought to the tournament with the participants. This 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.

POWDERS USED IN COMPETITION WILL DEFINITELY COME FROM THIS LIST:

baking soda
plaster of Paris
flour
cornstarch
white sand

salt
nonfat dry milk (Kroger brand)
powdered sugar
granulated sugar

- ** Competitors must specify powdered or granulated sugar.
- ** Samples in the competition may consist of one, two, or three powders.
- ** Competitors will NOT be told how many powders make up each sample.

If you need a data table or chart sample, please contact the event captain.