# MAKING AND USING A KEY

## Description:

Students will compete in this two-part activity to properly develop a key and then use a previously developed key to correctly identify an unknown object.

Number of Participants: 2

Approximate Time: 60 minutes

### The Competition:

#### Part I

- 1. Students will be given various sizes of nuts, bolts, paper clips, marbles, pencils, or other objects.
- 2. Students will identify the group and begin to observe characteristics (attributes) that may be useful for identification.
- 3. Choose an attribute that will allow you to subdivide the objects into two groups, e.g., size (small/large), texture (rough/smooth), color (light/dark), weight (light/heavy), shape (square/round), or some other attribute.
- 4. Subdivide the whole group into two convenient groups (groups do not need to be of the same size).
- 5. Continue subdividing each group until you finally have each object in a single group.
- 6. Write a description of this process.
- 7. Turn in your results.

#### Part II

- 1. Pick up a key and an unknown object.
- Study the object. What attributes does the object have?
- 3. Begin at the top of the key.
- 4. Determine the name of the object by following through the key.

## Scoring:

Part #1 - 50%. Students receive one point for each step documented in the key. Usually there will be 8-10 steps and a bonus of 5 points if the event supervisor can follow through the entire key.

Part #2 - 50%. Students receive up to 15 points for properly determining the correct name of the object.

Ties will be broken with time for completion of Part #1.

