

Preparation (for the Activity Leader)

Game 1: Order by Volume

Find 5 containers, each a different shape but comparable in volume. Useful choices include bowls of various sizes, a small plastic terrarium or shoebox, a pitcher, a vase, and a deep casserole dish or baking tray. Use sticky notes to label the containers, A-E.

Use a graduated cylinder or measuring cups to measure different volumes of water, perhaps between 350 and 500 mL (1.5 and 2 cups). Pour a different volume of water into each container, and record the volumes in a key.

Place the 5 filled containers with their sticky-note labels at a station, along with a graduated cylinder or other measurement tool and the printed instructions for students. (See following pages of this document.)

Game 2: Order by Length

Place a ruler and the printed instructions for students at a station.

Game 3: Order by Mass

Find 5 objects of comparable but different masses. Use a balance or scale to measure their masses. Useful choices include bunches of paper clips, thumbtacks, coins or counters, game tokens, and pencil erasers. You may wish to tie the bunches together with rubber bands or place them in envelopes.

Place the 5 objects, a balance or scale, and the printed instructions at a station.

Game 4: Guess the Volume

Fill a 500-mL or 1000-mL beaker with pebbles, gravel, or small rocks. Do not use sand, which will retain water from one pouring to the next. Fill the beaker just below its highest measurement mark.

Place the beaker of rocks, a beaker or pitcher of water, a graduated cylinder or measuring cups, and the student instructions at a station.

Game 5: Guess the Number

Count out between 80 and 100 small objects, such as paper clips, marbles, counters, or game tokens. You may use a variety of objects, or have them all be identical. Place the objects in a jar or other transparent container.

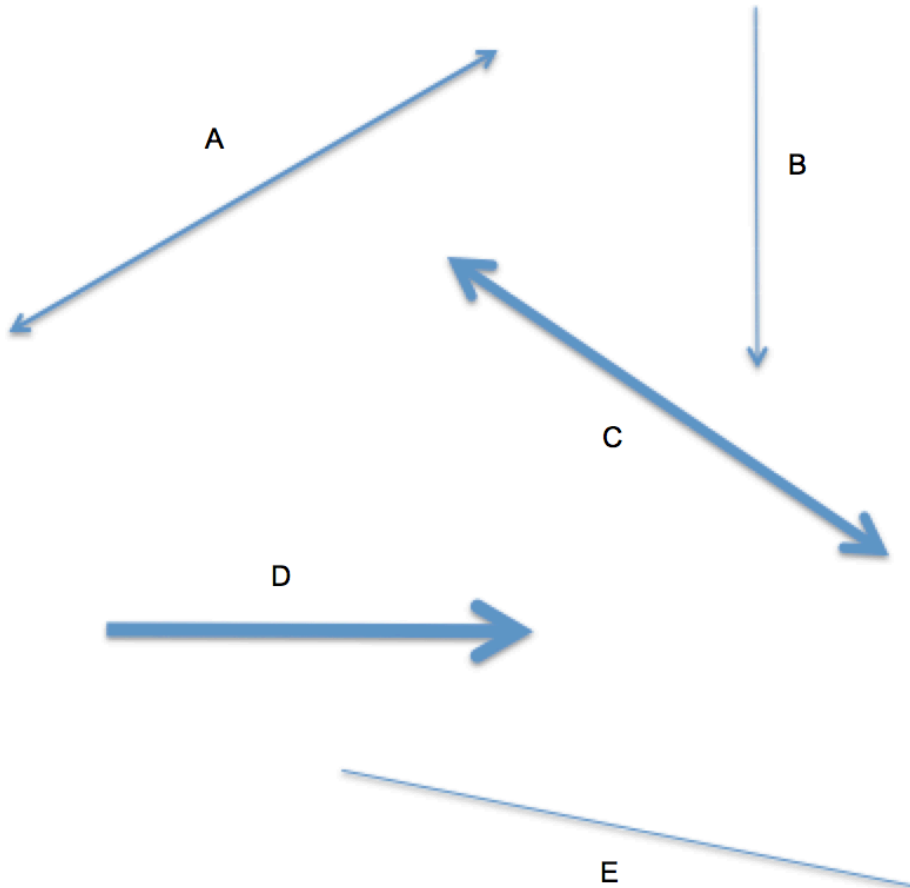
Place the container of objects and the student instructions at a station.

Game 1: Order by Volume

1. Observe the containers of water. Record your guess for the order by volume of water in the containers, from least to greatest.
2. Measure the volumes. For each container, carefully pour the water into the graduated cylinder or other measurement tool. Record the volume, and then pour the water back into the container.
3. Score 50 points if you ordered the volumes correctly.
Score 20 points if you identified either the least or greatest volume.

Game 2: Order by Length

1. Without touching the paper or using the ruler, guess the order of the 5 lines, from shortest to longest. Record your guesses.
2. Use the ruler to measure each line. If arrows are present, measure from the tip of the arrow head.
3. Score 50 points if you ordered the lines correctly. Score 20 points if you identified either the shortest or longest line.



Game 3: Order by Mass

1. Lift each object or each bundle of objects. Record your guess for their order by mass, from lightest to heaviest.
2. Use the scale or balance to measure the mass of each individual object or bundle.
3. Score 50 points if you ordered the objects correctly. Score 20 points if you identified either the lightest or heaviest object.

Game 4: Guess the Volume

1. The beaker is filled with rocks and air. What is the volume of space filled only by the rocks? Record your guess.
2. Pour water into the beaker to fill it to the top measurement line, which may be 500 mL or 1000 mL.
3. Pour out the water into a graduated cylinder or other measurement tool. Record the volume of the water.
4. Subtract the volume of the water from the volume of the rocks plus water in the beaker. The difference is the volume of the rocks.
5. Score 50 points if your guess was within 10 mL of the actual volume. Score 20 points if your guess was within 50 mL.

Game 5: Guess the Number

1. Guess how many small objects are in the container.
2. Remove the objects and count them.
3. Score 50 points if your guess was within 5 of the actual number. Score 20 points if your guess was within 20.