

TOOLBAR



Time Required

One 45-minute period



Materials Needed

- Question list
- Pencil

Suggested Activities

More Than One Answer

Activity Objective

To challenge students to come up with more than one answer to a question; students will be able to answer questions by using several interpretations of words and meaning.

What To Do

Hand out a list of questions and instruct students to answer them in more than one way. Tell them to be creative and that there are no wrong or right answers. Use the example: “How do you keep a fish from smelling?” Possible answers: throw it back in the water; cook it as soon as you catch it; eat hamburger; wrap it in plastic; hold its nose. Next, have students write their answers and present the one they like the best for you to write on the board.

Extension

Find more silly jokes and riddles that use words two ways and post them around the room.

Suggested Activities

Deconstruction



Time Required

Two 45-minute class periods



Materials Needed

- Tools: two sets of screwdrivers (various sizes), pliers, hammer, magnifying glass, tape, ruler
- Two small mechanical devices such as wind-up clocks or toys (avoid electrical appliances with blades, sharp components or capacitors)
- Goggles and work gloves
- Several zipper-closure freezer plastic bags (large and small sizes)
- Larger boxes to keep loose parts that will be left over—these will come in handy once you get to the model-making phase

Activity Objective

Students demonstrate journal-entry specificity, practice writing and following a sequence of instructions. Students practice taking things apart and putting them back together.

What To Do

Two teams of students should sit in groups, each with a toolkit and a mechanical device. Tell students that they will spend this period taking turns dismantling the item they have in front of them. If you have safety goggles, ask students to put them on. Remind the students never to touch anything sharp or any wires. If they have difficulty removing a part, they should move to another part. Remind the students that violations of these rules or any unsafe behavior will remove them from the activity.

Day 1: While one student is dismantling, another is carefully writing up what is happening. Explain to students that when they invent, they need to be very specific in writing about what they do, so that someone else can easily follow the steps they took. They need to be very careful about the little pieces and screws, which should go into the zipper-closure bags. Remind them that they can make a picture of a part that doesn't have a name. They should also measure the screws and tell whether they are Phillips or flathead. When the period is almost over, hand out boxes to each team to put their item and parts in—their worksheet goes in the box, too. They should label the box with their names and store it in an out-of-the-way place.

Day 2: Tell students that they have finished with deconstruction, and will now follow their notes in reverse to reconstruct the item. Circulate around to the teams, checking progress and offering assistance. At the end of this period, debrief. Ask students how they did, and how they felt during the reconstruction process. Take notes on the board, and try to elicit the need for exact instructions.