

## Heat Transfer *No Way!* Activity—Day 3 Instructions

### Day 3 Materials

- Day 3 Slideshow (*to show to the class*)
- “Zippy Pop! Ad Resources” (*one set for each group of four students*)
- “Zippy Pop! Ad: Checking Claims” worksheets (*two sets for each group of four students*)

### Implementation Steps

Tell students that this is the final story they’ll be investigating. They will use the same claims-checking process they used with the snowman story on Day 2.

1. **Discuss the claims in the advertisement “Zippy Pop!”** Have students share the four claims they listed on their worksheets, and have the class discuss whether or not the claims have been accurately phrased. Working from student examples, standardize the wording so that all students will be checking the same claims. List the following claims on the board.
  - 1. Water expands when it freezes.
  - 2. Salt water freezes at a lower temperature than plain water.
  - 3. Coldness flows from a cold substance to a warmer one.
  - 4. Convection and conduction don’t occur in a vacuum.
2. **Show the Day 3 Slideshow.** It provides a review of the process described in “Tim’s Guide” that students will use to check the claims in “Superplant Produces 32,000 Tomatoes!” **PAUSE the slideshow at Slide 8.** The rest of the slideshow should be shown after students have finished checking all four claims.
3. **Distribute “Zippy Pop! Ad Resources” and “Zippy Pop! Ad: Checking Claims” worksheets.** Students will use the worksheets to record information they find in the resources that is relevant to the claims they are investigating.

Place students in groups of four, and give each group a set of the resources and two sets of the worksheets. Each group should divide into pairs, and each pair should investigate two claims by examining the resources and looking for information relevant to those claims. Students use the worksheets to record the information they find. Caution students that a resource may not have information to support or contradict a particular claim they are investigating.

Next, students must decide if each claim is true or not. They do that by deciding if the information they recorded in the worksheets supports or contradicts the claim. Remind them that the rule at *NoWay!com* is that if they find counterevidence that invalidates a single claim, the story should not be published. Based on what they find, they should vote as a group whether or not to publish the story. Have each group share its decision with the class and discuss the evidence on which they based it. Have the class discuss whether or not they have identified the evidence correctly and whether the evidence supports or contradicts each claim. Evaluate the evidence. Tally the groups’ votes for or against publication on the board.

4. **Show the rest of the Day 3 Slideshow** (slides 9–15). These slides reveal that one of the four claims in this story can be invalidated by counterevidence in the resources. The claim that coldness flows from a cold substance to a warmer one is false, and so the ad shouldn’t be published. Groups who voted not to publish the ad made the right decision.