# Explore: Teacher Guide

*Changes in Matter Module*

Use this guide to reveal student knowledge and generate interest in and curiosity about the different changes matter can undergo.

**This teacher support document can be completed in conjunction with the online Explore.**

## Why Explore?

The purpose of the Explore phase is to provide students with a common experience that can be used to reveal student understanding of the concept and promote interest and curiosity.

In this interactive activity, students will observe physical and chemical changes to tomatoes, clay and paper as they apply different actions to each when they "visit" different booths at a fair.

## Reveal student knowledge and understanding

Use the following questions during the activity to encourage your students to think about how to best describe the changes they are making to matter. Recall that these questions are only meant to reveal current student knowledge of the concept and therefore should not be assessed as right or wrong.

- Use the following questions while the students are engaged in the activity:
  - Can a tomato be changed the same way a piece of paper can?
  - Which of the changes to the matter do you think will take the longest?
  - Which of the changes to the matter do you think will be the fastest?
  - Can the tomato be changed the same way a piece of clay can?
  - Look for changes to matter that can be reversed (changed back again).
  - Look for changes to matter that cannot be reversed (changed back again).

## Promote interest and curiosity

Use these questions to elicit a post activity discussion as your students reflect on the activity and its connection to the concept. Recall that these inquiry questions are meant to encourage students' interest and curiosity of the concept and therefore should not be recorded or assessed as right or wrong.

- What did this activity remind you of?
- What other things could you do to the paper/tomatoes/clay?
- What did you like best about this activity?
- If you cut or smash a tomato, is it still a tomato?
- Why can't the baked clay ever be molded again?
- Which change to the paper cannot be reversed (undone or changed back)?
- If you were choosing the shape for the clay molding or the paper folding what would you choose?
- If you rip the paper in half, is it still paper?
- If you roll the clay ball flat, is it still clay?