

Grade 2

Topic: Matter

Title: *Presto Change-O*

Objective:

The will understand things can be done to materials to change some of their physical properties (e.g., cutting, heating, freezing), but not all materials respond the same way (e.g., heating causes water to boil and sugar to melt).

Standards:

- 2.1.1 Manipulate an object to gain additional information about it.
- 2.1.3 Describe, both in writing and verbally, objects as accurately as possible and compare observations with those of other people.
- 2.3.5 Investigate that things can be done to materials — such as freezing, mixing, cutting, heating, or wetting — to change some of their properties. Observe that not all materials respond in the same way.
- 2.6.1 Investigate that most objects are made of parts.

Materials:

For the class:

Scale

Per student:

3"x5" paper (2 sheets per person)

Clay

Scissors (optional)

Pipe cleaners

BLM- Presto Change-O Record Sheet (see attached)

Per group of 4:

4 small plastic bowls

Measuring cup with ounces marked

Salt

Non-drying modeling clay

Powdered tempera paint

Water

Apple

Vocabulary:

Introduce (before the lesson) Mass and Matter

Activity:

1. Divide students in groups of four.

2. Ask the students how the materials (matter) in front of them could be changed. (I.e. allow the students to tear the paper, cut the paper, bend the pipe cleaner, etc.).
3. Discuss changes that have occurred and pose the question, “We have changed the physical appearance of these objects. Can matter be changed without us changing it?” Students should write a response to this question in their journal.
4. Pass out 4 bowls (with contents in each bowl) to each group. Students will observe the materials in the bowls and record their findings on the Record Sheet.
5. Weigh each of the bowls as a whole group and record findings on the Record Sheet. Weigh and record the weight of one bowl to serve as a reference to show that the bowl did not change weight during the experiment.
6. Let the materials sit for one week in a sunny window.
7. After one week, have students retrieve the bowls, record the changes, revisit their predictions, and write about the changes.

Conclusion/Extension Activity:

Choose four additional items for students to observe. Choose two items that will change over time and two that will not (i.e. Things that do not change- plastic material. Things that do change- banana.). Have students predict what will happen to each of the objects. They should be able to use what they learned from the lesson to make more accurate predictions. Observe any changes after one week. Discuss why some changed and some did not.

Assessment:

4	Identifies all four objects and provides logical explanation why or why not the matter changed or did not change.
3	Identifies at least three objects and provide a logical reason (for at least three) why or why not the matter will change.
2	Identifies at least two objects and provide a logical reason (for at least two) why or why not the matter will change.
1	Identifies at least one object and provide a logical reason why or why not the matter will change.

Source: Lesson plan is adapted from Grade 2 Indiana Academics Standards Resource Guide www.doe.state.in.us

