Students will investigate what happens to different sized chocolate chips when heated and cooled. Duration: 45 minutes.

**MATERIALS**

- Chocolate bar (Partially melted for engagement)
- Foil muffin cups
- Clothes pins
- Chocolate chips of different sizes (Mini, Regular, Hershey Kisses)
- Small plastic container (2 per group)
- Ice cubes
- Hot tap water
- Toothpicks
- Science notebook

**DIY Activity**

- 7 Crayons with paper peeled off
- Hair Dryer
- Piece of paper
- Cardstock (9 x 12)
- Glue stick
- Double sided piece of tape
- Pair of safety goggles

**EXPLORE**

Students will investigate how different sized chocolate chips melt when they are heated. To heat the chocolate, have students make mini frying pans from foil muffin cups and wooden clothespins. Working in groups, have students discuss which sized chocolate chip they think will melt the fastest. Ask the students to record their predictions in their science notebooks. Next, instruct students to hold their “frying pans” so that they are touching the surface of the hot water tub. (Be sure to warn students that the water in the plastic container is hot, so they should not touch it with their hands.) Students can time how long it takes to melt each chocolate chip. They can also use a toothpick to check to see if the chocolate chip is all the way melted by poking it and moving it around a little. Students can repeat this process with each size of chocolate chip.
For part 2 of the experiment, students will place their foil cups of melted chocolate in a second square plastic container that has ice. Students can predict what they think will happen to the chocolate before the lab, record their hypothesis in their science notebooks, and then add their observations after the lab.

**EXPLAIN**

Ask student groups to share their findings. Prompt with questions: “Which size of chocolate chip was the quickest to melt?”, “Why do you think this happened?”, “What happened to the melted chocolate when you placed the foil cups in the ice?”, “When were your chocolate chips liquids?” and “When were they solid?”

Share the vocabulary “Reversible Change” with your students. Explain that a reversible change is a change that can be reversed. Tell them that melting chocolate is a change that happened from heating. Ask, “How did you reverse this change?” Students should respond with the idea that the chocolate got hard again after it was cooled down in the ice.

Ask the students if they can think of more examples where something melts and then becomes a solid again. (Butter, popsicles, ice cream, ice cubes)

**ELABORATE**

Explain that not all changes that occur from heating or cooling are reversible. To learn about that…

**WATCH THE GENERATION GENIUS HEATING AND COOLING VIDEO AS A GROUP**

Facilitate a discussion using the discussion questions before and after the video.

**EVALUATE**

Students can play the online Kahoot! quiz game located below the video which provides downloadable scores at the end of the quiz game. Alternatively, you can use the paper quiz or the exit ticket questions. All these resources are located below the video in the Assessment section.