

# THERMAL ENERGY TRANSFER

A **GETWISE**  STEAM Activity Sheet

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**OBJECTIVE:** Test which materials insulate hot chocolate best.

**MATERIALS:**

- 3 identical cups
- Hot water (to represent hot chocolate\*)
- Cloth, aluminum foil, plastic wrap
- Thermometer
- Timer
- Paper and pencil



*\*Hot chocolate mix if you are able to use this in your classroom. If so, have students reuse the design that works best to have a cup at the end of the activity.*

**PROCEDURE:**

1. Pour equal amounts of hot water into each cup.
2. Wrap one cup in cloth, one in foil, one in plastic wrap.
3. Insert a thermometer and record the starting temperature for each.
4. Check and record the temperature every 5 minutes for 20 minutes.
5. Compare temperature loss in each cup.

**DATA/QUESTIONS:**

Predict which cup you think will retain the most heat and tell why.

Cup	Cloth	Aluminum Foil	Plastic Wrap	Observations
Starting Temp				
Temp 1 min.				
Temp 2 min.				
Temp 3 min.				

Which cup stayed warmest? \_\_\_\_\_

Why do you think that happened?

---

---

---