

Name: _____

Date: _____



GENIUSCHALLENGE

INTRODUCTION TO THERMAL ENERGY

1. All matter has thermal energy because atoms are constantly _____.

2. Which would have more thermal energy: a cup of room temperature water or a cup of cold water?

3. Removing thermal energy from liquid water can cause it to change to what state?

4. Give two everyday examples of the thermal energy of a substance being increased.

a. _____

b. _____

5. Give two everyday examples of the thermal energy of a substance being decreased.

a. _____

b. _____

6. In which substance are molecules moving the fastest?

a. Solid water (ice)

b. Liquid water

c. Water vapor (gas)

7. Hand warmers and instant cold packs use _____ that release or absorb thermal energy.

8. If you sprain your ankle and place a cold pack on it, in which direction does thermal energy move?

9. If you sprain your ankle and place a cold pack on it, how does the motion of molecules in your ankle

change? _____

10. An inflated balloon placed in a freezer would get (smaller or larger) _____

because the air molecules in the balloon would (speed up or slow down) _____.