

Water State Loop

Track water as it changes state.

S4E3.a "Plan and carry out investigations to observe the flow of energy in water as it changes states from solid (ice) to liquid (water) to gas (water vapor) and changes from gas to liquid to solid."

NAME _____

DATE _____

1 LABEL THE MODEL _____ Word bank below

Write one process from the word bank in each numbered box. Match each process to the arrow that changes one stage into the next stage.

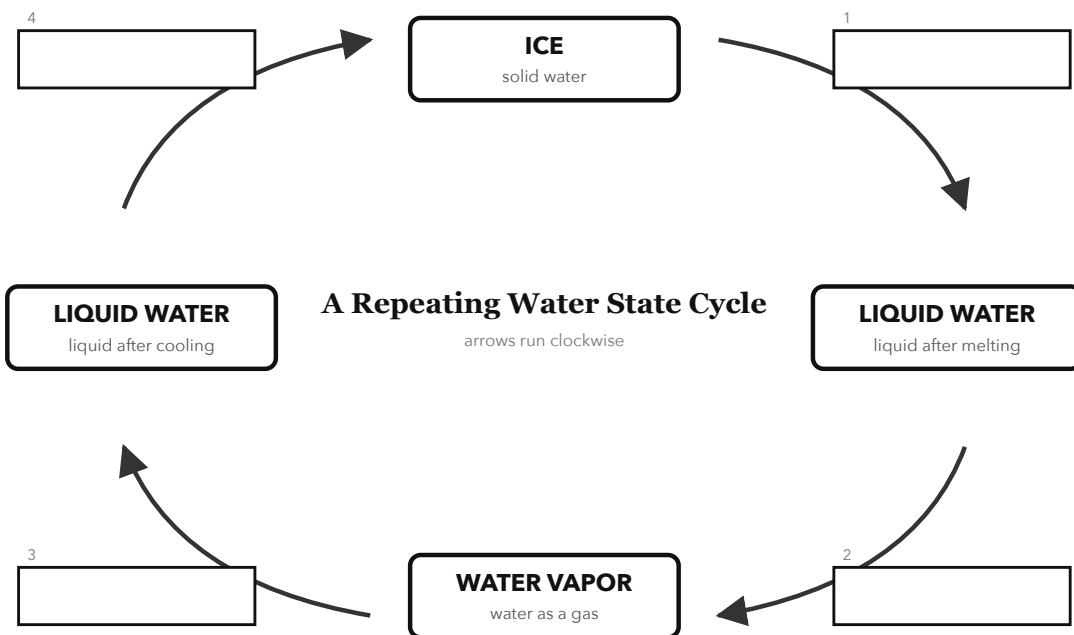
WORD BANK

condensation

evaporation

freezing

melting



2 RUN THE MODEL _____ Use your finished diagram

1 Which process changes liquid water into water vapor?

2 Which stage comes right after water vapor in the model?

3 Which two processes happen when water gains energy?

3 CHECK IT _____ Before you turn it in

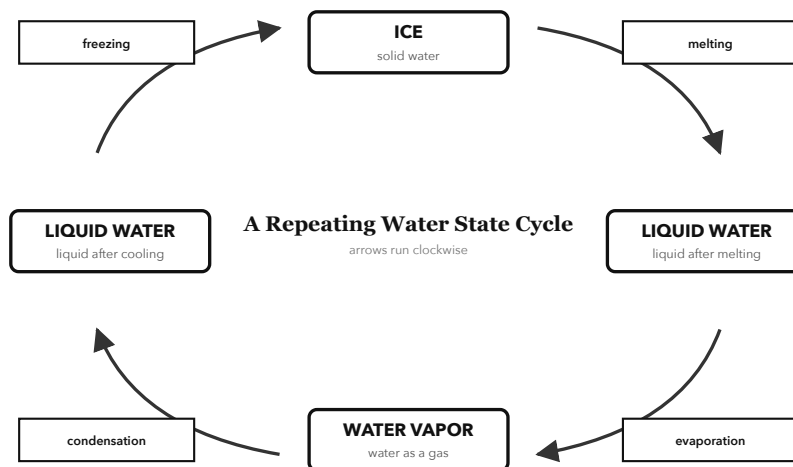
☐ I matched each process to an arrow.

☐ I used each word-bank process once.

☐ I checked that the last arrow returns to ice.

TEST THE MODEL What is one part of real water movement that this model leaves out?

PART 1 • COMPLETED MODEL



PART 2 • RUN THE MODEL

1. **evaporation** (Which process changes liquid water into water vapor?)
2. **liquid water** (Which stage comes right after water vapor in the model?)
3. **melting and evaporation** (Which two processes happen when water gains energy?)

TEST THE MODEL (SAMPLE ANSWERS)

- It leaves out where the water is, such as a lake or cloud.
- It leaves out how sunlight and cooling change the energy of the water.

The cycle is ice, melting, liquid water, evaporation, water vapor, condensation, liquid water, freezing, ice. Melting and evaporation require energy gain, while condensation and freezing occur as water loses energy.