

Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

Complete the following statements.

- 1 a When a candle burns, some candle wax turns from solid to liquid. The name of this state change is \_\_\_\_\_.
- b In a diesel engine, liquid diesel fuel changes to a gas. The name of this state change is \_\_\_\_\_.
- c When you breathe on a cold window, water forms on the glass. Water vapour in your breath turns to liquid water on the glass. The name of this state change is \_\_\_\_\_.
- d On cold nights in winter, puddles of water may turn to solid ice. The name of this state change is \_\_\_\_\_.
- e In the theatre, dry ice is used to produce fog because it turns into carbon dioxide gas. The name of this state change is \_\_\_\_\_.
- 2 All the changes described in question 1 are **physical changes**. This means that after the change, the particles of the substance are only different in how they are \_\_\_\_\_ and how they \_\_\_\_\_.
- 3 Read the sentences in question 1 again. Fill in the blank boxes in the table below.

	Substance	Arrangement of particles before change	Arrangement of particles after change
a	candle wax	regular, close together, vibrate around fixed positions	close together, move around each other
b	diesel fuel		
c	water	far apart, move fast in all directions	
d	water		
e	dry ice		

- 4 Look again at question 1. Do the particles of each substance have more energy before or after the change? Circle the correct answer for each example.
- a The particles in candle wax have more / less energy after the change.
- b The particles in diesel fuel have more / less energy after the change.
- c The particles in water have more / less energy after the change.
- d The particles in water have more / less energy after the change.
- e The particles in carbon dioxide have more / less energy after the change.
- 5 A kettle is filled with cold water. The electricity is turned on and the kettle becomes hotter. The water turns into steam.
- Explain why the water changes to steam. \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_