

3 The properties of materials can be explained using particle theory.

Brownian motion provides evidence to support particle theory.

(a) (i) Give an example of Brownian motion.

(1)

(ii) Explain how Brownian motion supports the idea that matter is made from tiny particles in continuous motion.

(2)

(b) These are some observations about samples of ice, water and steam.

	Shape	Size
ice	keeps a fixed shape	keeps a fixed size
water	takes the shape of the container	keeps a fixed size
steam	takes the shape of the container	fills the container



Explain each of the observations in terms of the arrangement and motion of the particles.

You may use diagrams to help your answer.

(6)

particles in ice

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particles in water

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particles in steam

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(Total for Question 3 = 9 marks)

