

- 7 A student blows up two balloons to the same size.
She puts one balloon into a freezer.
After a while, the student compares the two balloons.
The balloon that has been cooled is smaller.



- (a) Use ideas about particles to explain why the cooled balloon is smaller.

(4)

.....

.....

.....

.....

.....

.....

.....

.....



- (b) The student decides to investigate the link between temperature and the size of the balloon.

She writes a plan.

I will change the temperature of the balloon by putting it into a freezer.

To get a range of different temperatures I will put the balloon into the freezer for different times.

I will measure the temperature of the balloon using a thermometer.

To measure the size of the balloon I will take it out of the freezer and line it up next to a ruler.

To make sure it is a fair test I will repeat the experiment three times.

I will plot a graph of size against temperature.

There are several faults in the student's plan.

Identify **three** of these faults and suggest an improvement to correct each one.

(6)

1

.....

.....

.....

2

.....

.....

.....

3

.....

.....

.....

(Total for Question 7 = 10 marks)

TOTAL FOR PAPER = 60 MARKS

