Science Department

2023/2024 Year 4

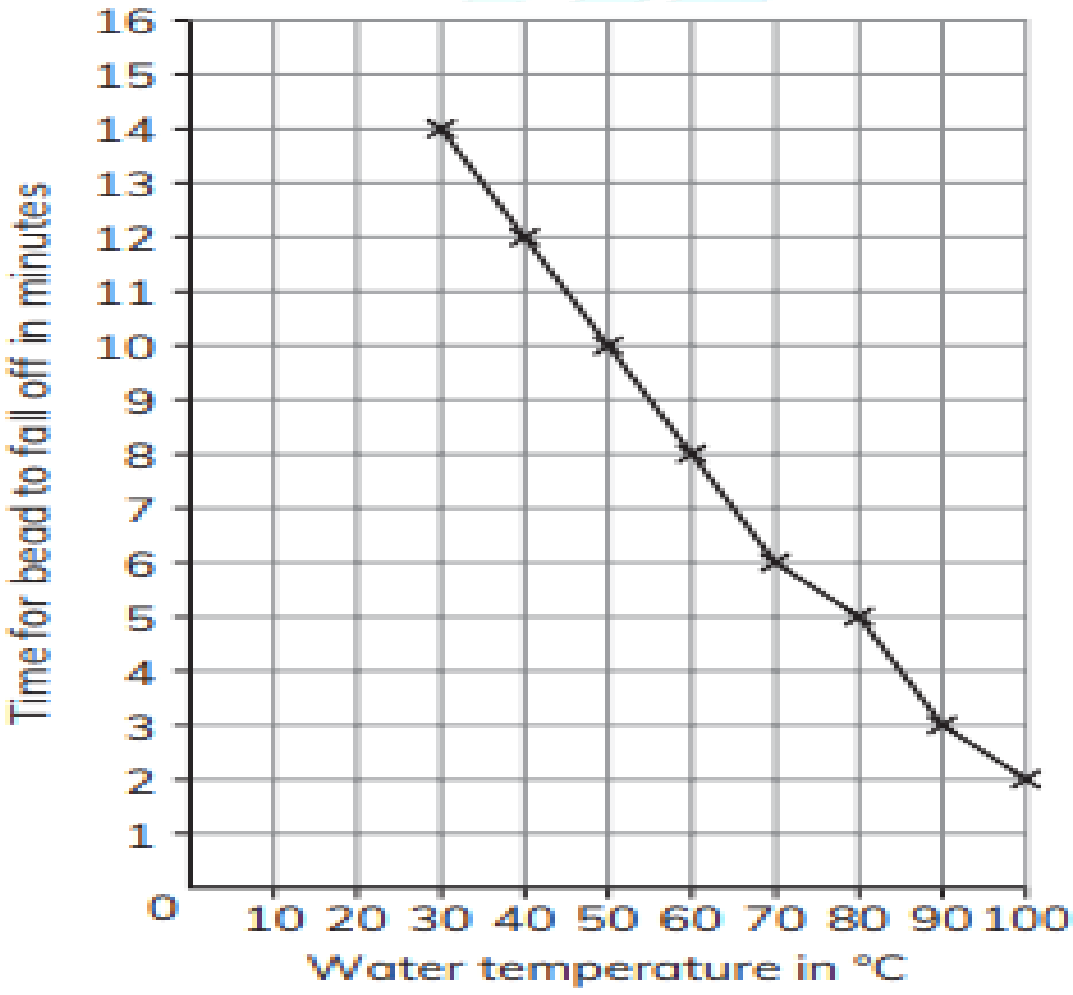
Term 1, Week 7

Name: ……

Class: ……

1. Class 4 investigated energy transfers. They measured the time it took for a bead in a blob of petroleum jelly to fall off a spoon in hot water at different temperatures. Here are their results.

Water temperature in °C	Time for bead to fall off in minutes
40	12
50	10
60	8
70	6
80	5
90	3
100	2



a. Why did the bead fall off the spoon?

Heat moves from the hot water to the spoon. The heat moves from the spoons to the petroleum jelly and melts it, which makes the bead fall off.

b. which temperature did the bead take the longest time to fall off the spoon?

40°C

c. At which temperature did the bead fall off the spoon quickest?

100°C

d. Describe any pattern that you can see in the results.

The bead falls off faster when the temperature is higher.

e. Write a reason for the pattern.

The hotter the water, the more energy it has that can be transferred/move to the

f. Predict how much time it will take for the bead to fall off the spoon if the water temperature is 30 °C. Add this data point to your graph and join the dots.

Any from 13 to 15 minutes is acceptable. Data point and line segment added to graph.