

The Primary Stage of Grades (4-5) School Year 2022 - 2023

Name: Key _____

Unit (6): Physical and
Chemical Changes
Worksheet (3): Dissolving
Grade 5 CP (All sections)

Date: / /

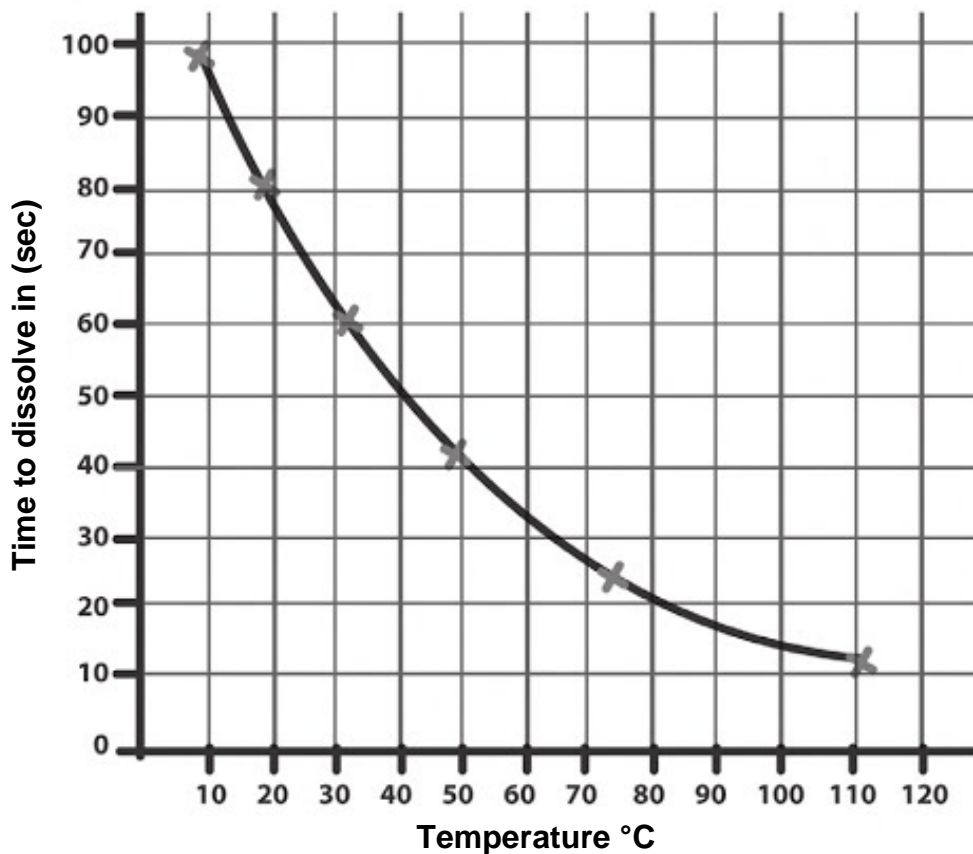
Objective:

- Investigate the factors that affect the rate of dissolving.

Question 1:

Interpreting a graph of dissolving rates:

Class 5 conducted a fair test to find out how different temperatures affect the rate at which sugar dissolves in water. They drew the following graph to represent their results.



1. a. Name the solute used? **sugar**
- b. Name the solvent used? **Water**
2. a. At which temperature did the sugar dissolve fastest? ... **110 °C**.....
- b. How long did it take the sugar to dissolve at 40°C? ... **50 sec**.....
- c. How long did it take the sugar to dissolve at 20°C? **80 sec** ...
- d. At which temperature did the sugar dissolve slowest? ... **10 °C**.
3. In order to make the investigation a fair test, name:
 - a) Two factors that class 5 kept the same. **(controlled variables)**

The same volume of water.

The same mass and grain size of sugar.

The stirring speed.

- b) One factor that they changed. **(Independent variable)**

The temperature of the solvent.

4. Write a conclusion for their investigation.

The higher the temperature of the solvent is, the faster the solute dissolves.

.....

Q 2 Ming and Kumei compared how long it took for different kinds of sugar to dissolve in warm water and cold water. They conducted a fair test. These are their results.

Sugar	Time to dissolve in seconds A	Time to dissolve in seconds B
sugar lump	90	150
sugar grains	45	85
powdered sugar	30	50

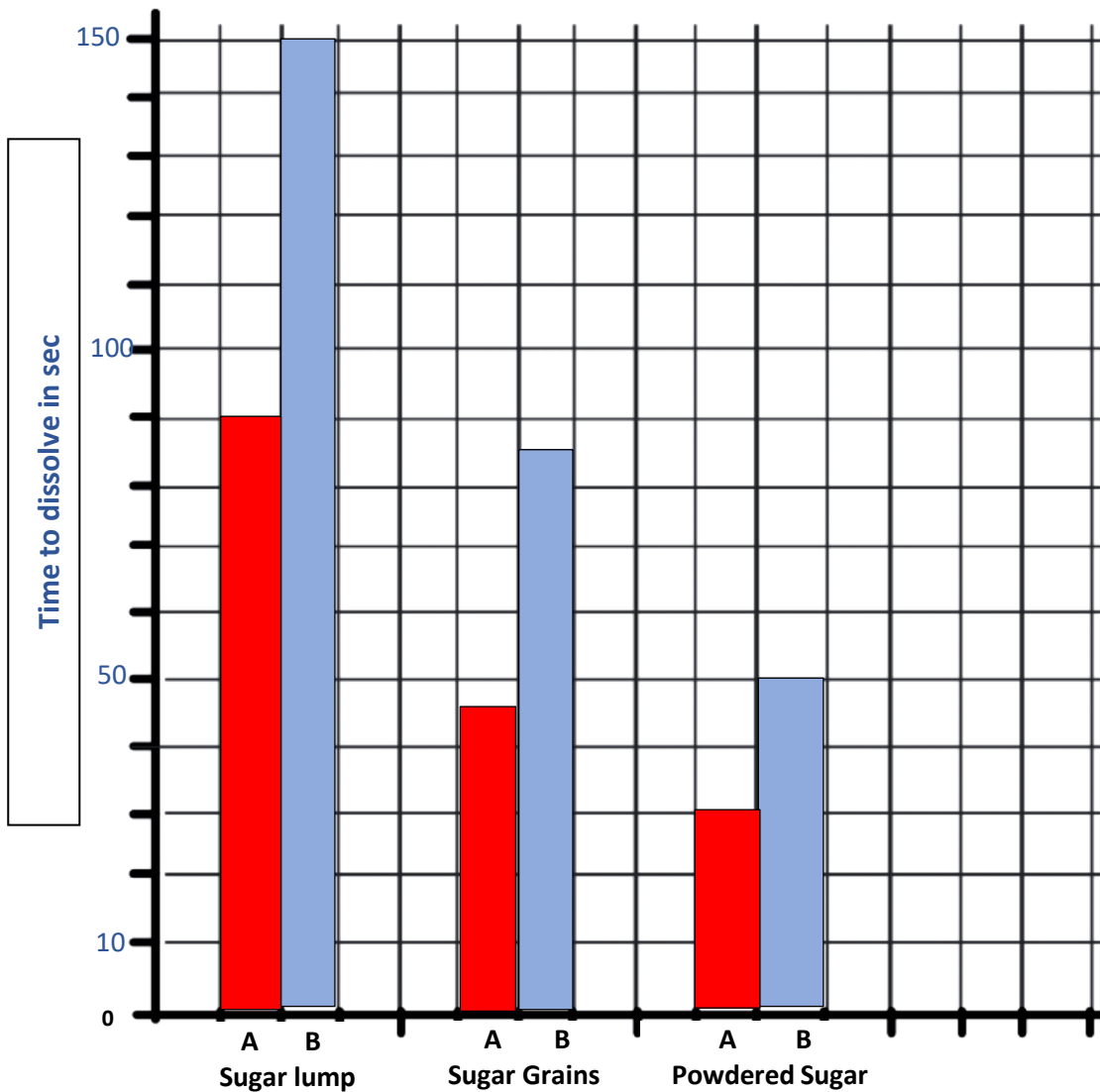
1 a Which set of results is for the warm water? A

b Say how you know this.

It took sugar less time to dissolve in A.

Title: Dissolving of different types of sugar
in cold and warm water

2 Draw a bar chart of the results.



Conclusion:

The **factors** that affect the rate of dissolving are:

1 Temperature of the solvent

2 ... Grain size of the solute

3 ... Stirring speed