



Homantin Government Secondary School

S1 Integrated Science

Ch. 16 -- Water as a wonderful solvent

Investigating the factors increasing the rate of dissolving (Part I)

(Modelling & Deconstruction, Guided Construction)

Name: () Class: 1 Date:

A. Discussing factors increasing the rate of dissolving (Group discussion)

What can you do to dissolve sugar more quickly in a cup of water?

(Recall what you have observed in restaurants.)

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-
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B. Writing your hypothesis

Now, you are going to test ONE of the above factors.

The factor you have chosen is : More solvent



Hypothesis: When there is more solvent, the rate of dissolving increases.

C. Constructing a variable table (Group discussion)

What will you keep the same? (_____ variables) (the other factors from your classmates)	What will you change? (_____ variable) (the factor you have chosen)	What will you measure? (_____ variable)
	Volume of solvent (more solvent)	

D. Sketching the experimental set-up

Set-up A (control)

Set-up B



E. Planning your experiment

What materials and apparatus will you need?

Materials or apparatus	Amount (How many/ how much)
beaker	2
tap water	25cm ³ (for set-up A) and 75cm ³ (for set-up B)

How many beakers will you need?

F. Writing the experimental procedures

NUMBER the steps.

What do you need in step one?: 2 beakers and 100cm³ of tap water (beakers /water)

What will you DO? What is the action?
Add (Place a verb at the front)

How many beakers will you need? 2

How much water will you need?

1. Add 25cm³ of tap water into beaker A and 75cm³ of tap water into beaker B.

What do you need in step two?: _____
How many/ much of this will you need?

ACTION:
(Place a verb at the front)

- 2. _____
- 3. _____
- _____
- _____
- _____

G. Constructing a result table & writing the conclusion

	Set-up A (control)	Set-up B
Time taken for the sugar to _____ (s)		

Conclusion:

When _____ (the factor you have chosen),
the rate of dissolving increases / does not increase.



S1 Integrated Science
Ch. 16 -- Water as a wonderful solvent
Investigating the factors increasing the rate of dissolving (Part II)
(Independent Construction)

Name: () Class: 1 Date:

Now, you are going to investigate ANOTHER factor that increases the rate of dissolving.

A. Discussing other factors that increase the rate of dissolving

Apart from the factor investigated in Part I, what else can you do to dissolve sugar more quickly in a cup of water?

B. Writing your hypothesis

The factor you have chosen is : _____

Hypothesis: When _____, the rate of dissolving increases.

C. Constructing a variable table (Group discussion)

What will you keep the same? (_____ variables)	What will you change? (_____ variable)	What will you measure? (_____ variable)

D. Sketching the experimental set-up

Set-up A (control)



E. Planning your experiment

What materials and apparatus will you need?

Materials or apparatus	Amount

F. Writing the experimental procedures

1. _____

Verb: _____ (*verb in the imperative*)

2. _____

G. Constructing a result table & writing the conclusion

Conclusion:

When _____,

_____.