

Name _____ Date _____

Worksheet 2.4

Chemical reactions

Plaster of Paris is a white powder that you mix with water. Doctors use it to help broken arms and legs grow back together properly. You can also make models with it.

Class 6 used plaster of Paris to investigate evidence for chemical reactions.

They mixed 75 ml of plaster of Paris powder with different quantities of water at a temperature of 35 °C.

They measured the temperature every 15 minutes for one hour.

The table shows their results.

Group	Amount of water used	Temperature in °C				
		Start	15 min	30 min	45 min	60 min
1	75 ml	35	37	40	44	39
2	100 ml	35	38	44	50	40
3	150 ml	35	40	50	60	45
4	200 ml	35	37	41	45	41
5	250 ml	35	36	38	40	37

- 1 a Identify the variables in the investigation.

Dependent variable _____

Independent variable _____

Control variables _____

- b Was the test fair or not? Say why or why not.

2 a What evidence for a chemical reaction does the investigation show?

b Name two other types of evidence for a chemical reaction.

3 How does the quantity of water added to the plaster of Paris affect the highest temperature reached? Describe the pattern you see in the results.

4 When we dissolve Epsom salts in water the temperature decreases.

Is the change in temperature evidence of a chemical reaction? Say why or why not.
