

# THE SCIENTIFIC METHOD

MATCH THE VOCABULARY WORDS TO THE CORRECT DEFINITIONS.

Hypothesis	The variable that is measured
Control	Using your five senses to determine information
Independent/ Manipulated Variable	Making a conclusion using the evidence
Dependent Variable	Group that receives the "normal" conditions
Constant	The variable that the scientist changes
Observation	A condition during the experiment that stays the same for all groups being tested
Deduction	A testable prediction

1) MAKE A PREDICTION

2) ASK A QUESTION

3) MAKE A CONCLUSION

4) GATHER DATA

WHICH OF THE FOLLOWING PUTS THE STEPS OF A SCIENTIFIC EXPERIMENT IN THE CORRECT ORDER?

a 2,3,1,4

b 2,1,4,3

c 2,1,3,4

d 4,2,3,1

WHAT IS THE PURPOSE OF AN EXPERIMENT?

a To communicate data

b To test a hypothesis

c To prove a scientific law

d None of these

## GLOBAL WARMING EXPERIMENT

Iker is worried about global warming. He believes that much of the problem is caused by the intense heat that comes from the surfaces of streets and the roofs of buildings. Iker convinces his teacher to do an experiment. With the help of other students, Iker builds a rooftop garden to cover one half of his school building. For one semester, Iker records the air temperature on the half of the building with the rooftop garden and the half of the building without the garden. He finds that the average temperature near the rooftop garden is 23°C. The average temperature away from the garden is 29°C.

WHAT IS THE MANIPULATED VARIABLE FOR THE GLOBAL WARMING EXPERIMENT?

a Air Temperature

b Location

c Global Warming

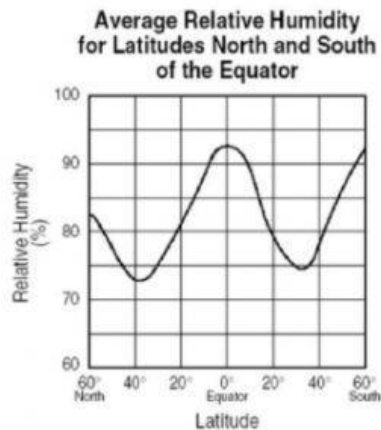
d Time of Day

WHAT IS THE DEPENDENT VARIABLE FOR THE GLOBAL WARMING EXPERIMENT?

- a** Air Temperature      **b** Location      **c** Global Warming      **d** Time of Day

WHAT IS A CONSTANT IN ORDER FOR THE GLOBAL WARMING EXPERIMENT TO BE VALID?

- a** Air Temperature      **b** Location      **c** Global Warming      **d** Time of Day



**Hypothesis: The average relative humidity decreases north and south of the equator.**

ACCORDING TO THE DATA SHOWN IN THE GRAPH, THE HYPOTHESIS IS ONLY CORRECT FOR LATITUDES-

- a** up to 40 degrees from the equator      **b** from the poles to 40 degrees from the equator      **c** between 20 degrees and 60 degrees from the equator      **d** farthest from the equator

THERE IS A GREATER AVERAGE HUMIDITY IN THE

- a** north      **b** south

Fertilized eggs from the same species of sea turtle were incubated at different temperatures. The hatching data is shown in the table below.

Egg incubation temperature	# eggs used	# of embryos that died	# of hatched males	# of hatched females
26° C	100	80	0	20
28° C	100	4	0	96
30° C	100	3	0	97
32° C	100	2	13	85
34° C	100	6	94	0
36° C	100	86	14	0

Which of the following is supported by the data?

Choose 1 answer:

- a** The largest number of male sea turtles will develop at 28 degreesC.      **b** Female sea turtles develop at higher temperatures.      **c** Most of the sea turtle eggs hatched if incubated at 26 degreesC.      **d** The sex of sea turtle babies depends on the incubation temperature.