



Scientist Dr. E. McSquare is compiling his scientific findings into a single volume. He forgot to give titles to the sections of his reports and now they're all mixed up! Use the definition guide to help Dr. McSquare label his reports.

Definition Guide:

Q = Question: The question is the first part of the scientific process. What question do you want to answer?

H = Hypothesis: A hypothesis is a statement that can be proven true or false. It is often written in the form "If (a) then (b)."

E = Experiment: The experiment is an activity that is used to test if your hypothesis is true or false.

D = Data: Data are the results of the experiment.

C = Conclusion: The conclusion is a final statement that describes what you learned from the experiment and results.

C The results of this experiment show that the boiling point of water does rise as the amount of salt in the water increases.

E I will drop a variety of objects from a height of 10 feet and use a stopwatch to record the time it takes for them to hit the ground.

H Ignoring wind resistance, if two objects are dropped at the same time, they will both hit the ground at the same time because gravity is the same for both of them.

C The results of this experiment showed that objects fall at the same rate despite weight differences.

D **Object (weight) (drop time)**

Shoe: (15 oz) (.82 seconds)

Bowling ball: (12 pounds) (.82 seconds)

Pencil: (2 oz) (.84 seconds)

E I will put a thermometer in each of 3 pots of boiling water. Each pot will contain a different amount of salt. I will observe and compare the temperatures in each pot when the water begins to boil.

Q Does adding salt change the temperature at which water begins to boil?

Q Do heavier objects fall faster than lighter objects?

D **Temperature when boiling begins (salt quantity)**

Pot 1: 214.2 F (0g)

Pot 2: 216.3 F (50g)

Pot 3: 218.3 F (100g)

H If adding salt to water increases the density of water, then it requires more energy to make it boil, thus increasing the boiling point temperature.

