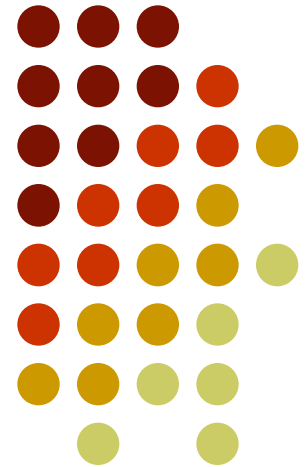


Examples for Simple Science Research

1. What happens to seeds if they are kept at different temperatures before they are planted?



Steps in scientific method



- Identify a problem.
- Study the problem (Literature Search).
- Formulate a hypothesis.
- Conduct an experiment.
- Get Results
- Reach a conclusion.

Identify the problem



“What happens to seeds if they are kept at different temperatures before they are planted?”

Research Question

Your research question is what you hope to figure out. It is your "**what if**" question. Should be able to write the research question in a simple sentence.



Study the Problem



- Study previous research findings
- Study the factors that effect the spouting of seeds

Literature Search

- Books
- Magazines
- Journals
- Internet



Formulate a Hypothesis



"higher temperatures will make seeds sprout faster."

Hypothesis

The hypothesis is what you expect to happen in your experiment.



Plan & conduct the experiment



Plan the experiment

1. What are the seed / seeds that I am going take ?
2. Where am I going to conduct the experiment ?
3. What is the variable I am going to measure ?
4. How am I going to measure the variable ?
5. What is the sample size ? How many seeds I will test at each temperature?
6. How long will my experiment take?

The procedure is the plan for how you will conduct your experiment.

Plan & conduct the experiment

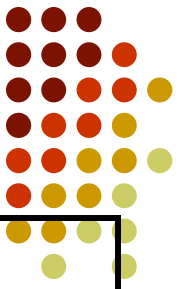


Procedure

1. I am going to conduct the experiment for three types of seeds
Beans, Chilies , Mun (fast growing varieties)
2. I am going to conduct the experiment at my home garden
3. I keep each group of seeds (10 seeds from each group) at constant temperatures (40 C, 50 C, 60) in an oven for the same amount of time (10 minutes) before spout. Then measure the height of the plant with the time.

My control experiment is seeds which kept at room temperature

Plan & conduct the experiment



	Average height of the 10 plants (cm)			
	40 C	50 C	60 C	Room temp
Day 1				
Day 2				
Day 3				
Day 4				
Day 5				
Day 6				
Day 7				

Plan & conduct the experiment



- **Variables**

Only one independent variable

i.e : Temperature of which the seeds are kept before sprouting

All other conditions variables should be constant

e.g : Soil conditions, environment conditions (temperature, pressure, humidity, light)

Plan & conduct the experiment



- Measurements

I will measure the height of the plants in cm using a meter ruler

I will take the measurements in every two days..... Till one month time

Note down any other important observations



Get results

- Measure the heights accurately and table
- Maintain a data book

Results are the data, or information, that you collected.

	Average height of the 10 plants (cm)			
	40 C	50 C	60 C	Room temp
Day 1				
Day 2				
Day 3				
Day 4				
Day 5				
Day 6				
Day 7				

Analyze the results and reach a conclusion



- Analyze the results statistically, draw graphs and then test your hypothesis is correct or not.

The conclusion is what you learned from doing the experiment. You might also think of the conclusion as a summary. In just a few sentences, your conclusion explains what happened in your experiment and whether it supported your hypothesis.