



Science Fair Projects

3rd Grade to 5th Grade

Plants (flowering bulbs)

Stating the Problem – The Big Question

Write one question which specifically asks what you want to find out from your research project.

Forming a Hypothesis – A Smart Guess

Before you do your experiment, form a hypothesis about the results of your experiment. How do you think the dept of the planted bulb will affect its growth? Will it affect different kinds of bulbs in the same way? Write a hypothesis that predicts what the results of your scientific investigation will prove.

Planning the Procedure

There are many steps that you must take before you can find out how the depth of the planted bulb affects its growth. Look at the different steps listed below. Use them to help plan the procedure for your project.

Before a scientist begins a project, he usually reads what other scientists have learned about the topic. Begin your project by reading books, magazines, and other articles about growing bulbs.

Write down the steps of your experiment, describing it in detail. The description should include the type of bulbs, length of time, kind of soil, frequency of watering, amount of light, temperature of the soil and any other factors that may affect your experiment. You should carefully control all of these conditions.

Make a list of all the materials that will be needed for your experiment.

Make a chart to record the data from your experiment.

Kind of Bulb	Depth Planted	Planting Date	Date 1 st Sprout Seen	Height after:		
				Day 5	Day 10	Day 12

This project is from Daryl Vriesenga's book, *Science Fair Projects, Grades 4-6*, Michigan, Schaffer Publications, 1990. The Guide is available on line at: SchooDoodle.com



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Recording Results

Now it's time to begin your experiment. Gather all of the materials you will need to set up your experiment. Remember to keep very careful records. Use the chart that you made to keep your records.

Drawing a Conclusion

Look back at the hypothesis that you formed before you began collecting your data. Study the results of your experiment. Did you find your hypothesis to be true? Did all of your bulbs grow at the same rate? If there were some differences in the growth of the plants, what do you think caused these differences?

Write a short report explaining what you found from your research. The report should include your Big Question, your hypothesis, what you did in your experiment, the records of the data you collected and what you found through your research.

Display

Make a display of your research project. You could include your report, pictures and diagrams of bulbs and plants, the plants that you used in your experiment, and any other information that you found in your research which would add interest to your display.



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Plants (growing organically)

Stating the Problem – The Big Question

In your experiment you will be comparing plants grown using commercial fertilizers with those grown using organic fertilizers. Write a question which asks what you want to learn from the experiment.

Forming a Hypothesis – A Smart Guess

Before you begin growing your plants, write a hypothesis about how the different kinds and amounts of fertilizers will affect the growth of your plants. Your hypothesis should be brief and answer your Big Question.

Planning the Procedure

In your experiment you will be growing plants organically. What does the phrase “organic gardening” mean? Find at least two books about organic gardening. Use these books to gather information on how to grow plants organically.

Locate information about making organic fertilizer. If your city has a garden club, you may try to visit a member who gardens organically and ask how he or she makes the organic fertilizer. After you have learned how to make organic fertilizer, try to make some for your experiment.

Choose one or two different commercial fertilizers to use in your experiment; there are many different kinds available. A salesperson at your local garden supply center can usually explain the advantages and disadvantages of the various types of fertilizers.

Write a description of your experiment. Include the following information:

- . The kind of plants that you will grow.
- . The kinds of fertilizers that will be used.
- . Where the plants will be grown and the conditions under which they will be grown, such as temperature, light, amount of water, etc.

Recording the Results

As you grow your plants, remember to give each one identical care. The only variable should be the kind or amount of fertilizer. All the plants should receive the same amount of water, light and heat.

Use your chart to record data and comments about each plant.

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Plants (growing organically)

(continued)

GROWING PLANTS ORGANICALLY

Plant	#1	#2	#3
Type of Fertilizer (Organic/Commercial)			
Amount of Fertilizer			
Planting Date			
First Bloom			
Number of Blooms at End of Experiment			
Height/Condition Day 5			
Height/Condition Day 10			
Height/Condition Day 15			
Height/Condition Day 20			
Height/Condition Day 25			

Drawing a Conclusion

What did you learn from your experiment? Write a report that includes your Big Question, your hypothesis, a description of your experiment, the data that was recorded and an explanation of what you learned about the different effects that commercial and organic fertilizers have on the growth of plants.

Display

Make a display of your research project. Include your report, graphs, charts, and, if possible, some of the plants from your experiment.

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