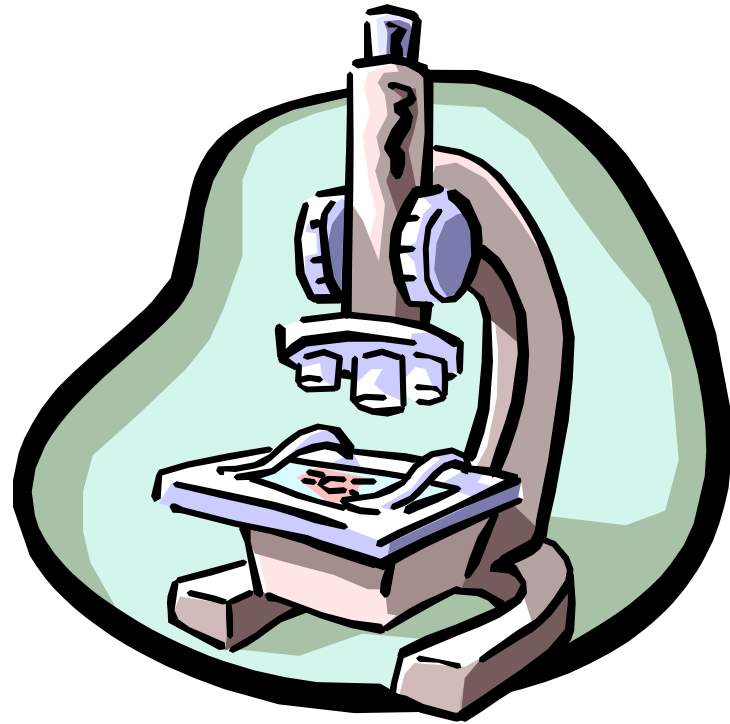


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- How do I prepare a science fair project?
- How do I choose a project?



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- How can you find a Science fair project idea?

Look at the world around you.
Does anything catch your interest



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1. Pick a science category and narrow that general area down to a topic
 - For example, if you picked chemistry then you may want to look at projects like:
 - Do plants placed in the sun use more water than plants placed in the shade?
 - Which batteries really do last the longest?

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- Test the claims made by television commercials or magazine advertisements:
 - Which hairspray holds the longest?
 - Does liquid soap last longer and lather better than bar soap?
 - How well do anti-bacterial soaps kill bacteria?

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Think about current events:

- People are suffering from harder to treat bacterial infections because of over use of antibiotics
- Do antibacterial dish soaps and bath soaps also promote the increase in antibiotic resistant bacteria?



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- Use Your Experiences
 - Remember a time when you wondered how something worked

 - Think about the times when you wondered what would happen if....

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I have picked a project.....



Now what?

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- Is your project a good project?
- Is it interesting to you
- Can you test the question you are asking
- A good project is an experiment.

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- *I have a good project... Now what?*
- Gather background information.
 - Learn all the background information regarding your topic. Learn the vocabulary.
 - Books.
 - Magazines.
 - Internet.
 - People.
 - Encyclopedias.
 - Keep notes on where you received your information.



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- Form a Hypothesis
 - This is a prediction of what you think will happen.
 - I think that liquid soap will last longer than bar soap and will give more lather for less soap.

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- **Use the Scientific Method!**

- Purpose – What are you trying to find out
- Select a Variable – this is what you are changing in the experiment to help you find your answer
- Hypothesis – guess what you think the answer will be
- Methods – what experiment did you use to test your hypothesis – how will you measure your results?

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- **Use the Scientific Method!**
- Results – What did you find or observe.
 - Present this in as clear a format as you can
- Conclusion – What did you learn from your experiment
 - Was your hypothesis correct?
 - If not, why was your guess wrong?

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- **What are some possible projects?**

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- Biology/Botany
- Topic:
 - Water usage in plants

I have house plants and noticed that when I forgot to water them for a week some looked wilted and some looked fine.

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- Question:

Do some plants require more water than other plants, or does where they are located in my house determine how much water they will use?

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- Background:
- Plants need water for photosynthesis and respiration. Plants also need sunlight to perform photosynthesis. Some plants have large leaves and others have small leaves.

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- Hypothesis:
- I think that plants that are different in size use the same amount of water in both the sun and shade.

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- Experiment:
- I cut three equal sized pieces of my plants and placed them each in 250 milliliters of tap water.
- I took one of each plant and placed it in a sunny window
- I took one of each plant and placed it in the corner away from the window
- I placed the third group of plants in the closet.

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- Variables:
- Two different plants
- Sun
- Shade
- No Sunlight (placed in closet)

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- Methods:
- Every day for one week, I removed the water from each plant, measured the water, then placed the plant and the water back in the same container.
- I tested a Miniature Rose that has small leaves and A Golden Pathos that has large leaves

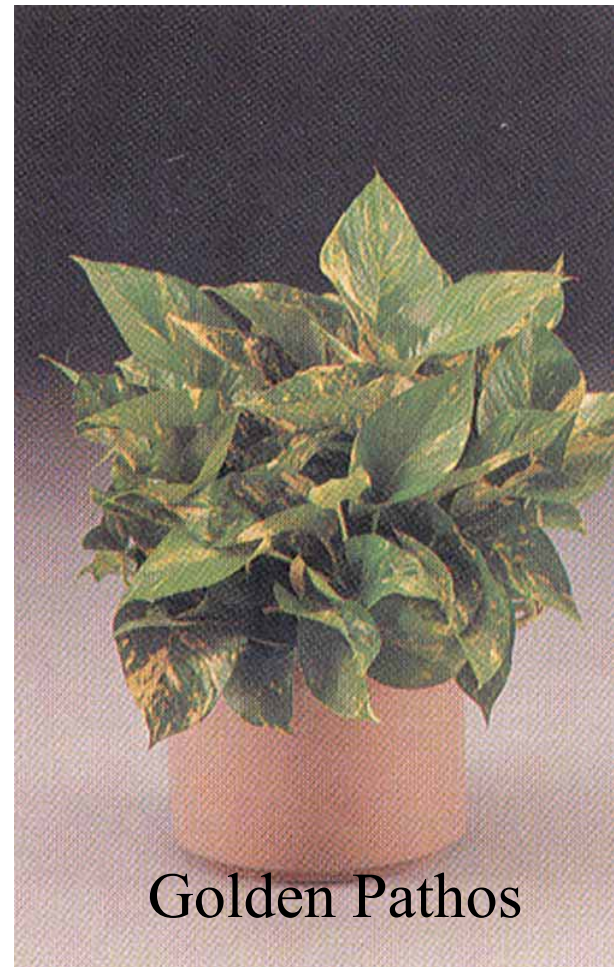
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Miniature Rose



Golden Pathos

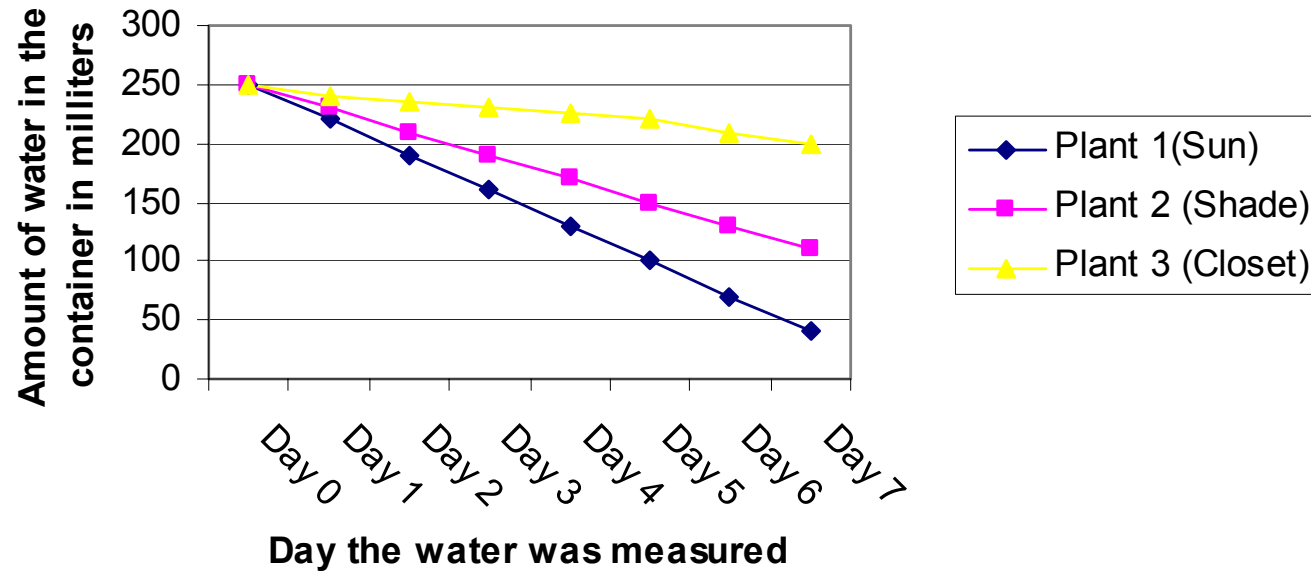
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- Results:

Volume of Water Left in Minature Rose Container

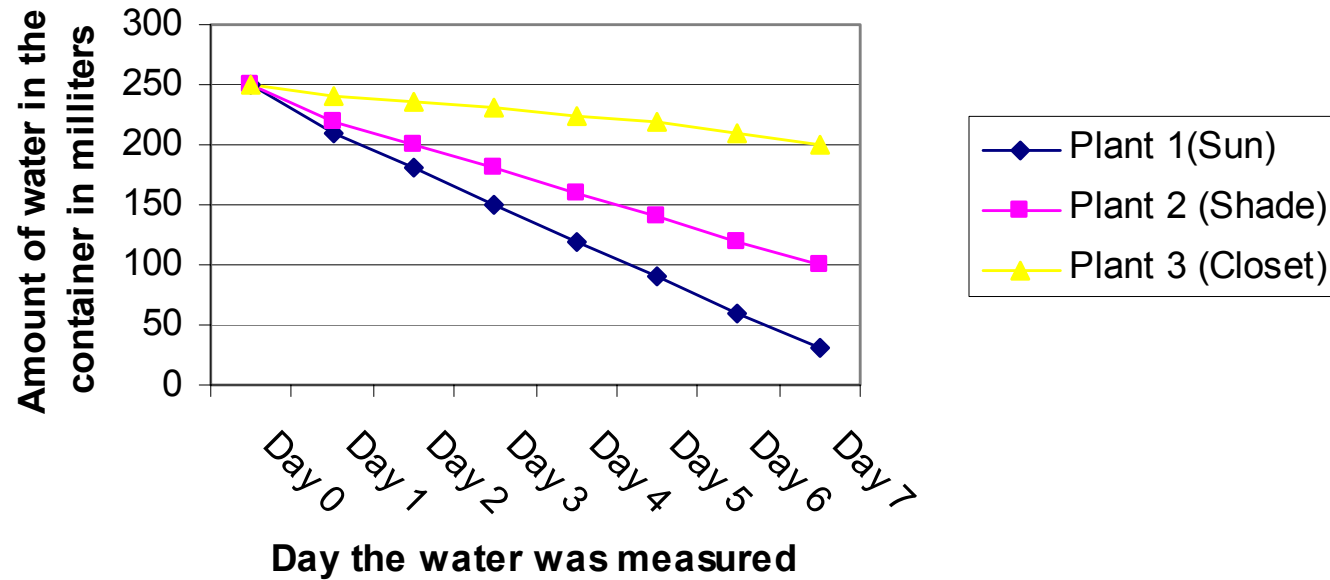


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- Results:

Water Left in Golden Pathos Container

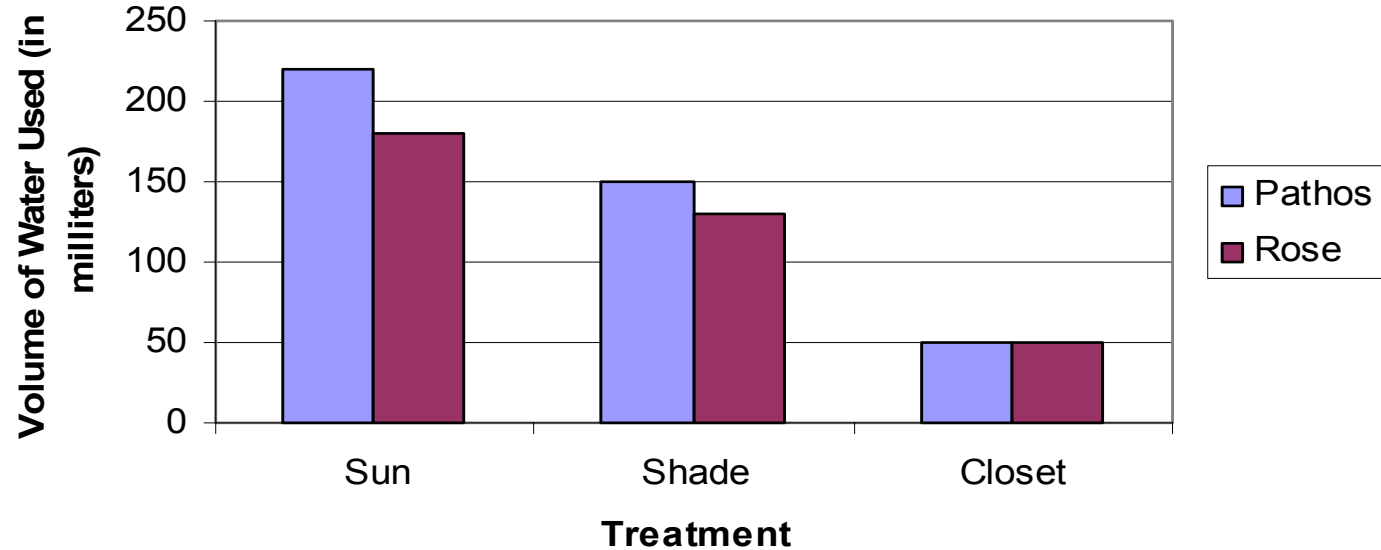


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- Results:

Comparison of the Total Amount of Water Used by Each Plant



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- Conclusion – Summarize Results
- I found that both plants used more water in the sun than they used in the shade. Plants that did not receive any sunlight used very little water.
- I also found that the larger Golden Pathos used more water than the miniature rose in the sun and shade but when there was no sunlight both plants used the same amount of water.

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- Conclusion – What about my hypothesis
- My hypothesis was correct because I thought that plants in the sun used more water than plants in the shade.
- I was not completely correct when I guessed that large plants used the same amount of water as smaller plants.

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- New Questions:
- Next I would like to discover if the size of the leaf has an effect on the amount of water used by a plant. I would also like to know if the number of leaves effects the amount of water used by a plant.