



Name: _____

Investigating Plants Around Our School

Overview: For this project, you will be investigating plants around our school so that you can learn more about them. To do this you will be going outside, finding, looking at, and analyzing the information that you gather.

Objectives (What you should be able to do by the end of the project):

1. Sketch plants, and their different parts
2. Describe the structure of plants and the functions of seed plants
3. Discover variations in plant structure, and relate these to different ways that plants are adapted to their environment
4. Explain variations in the needs of different plants and their tolerance for different growing conditions

Materials: Pencil, lined paper, blank paper, pencil crayons, something hard to write/draw on

Procedure:

1. **Sketching & Describing Plants and their Location** *(You will have to find at least one plant that normally has flowers, one that has needles, and another one of your choice)*
 - a. You will have to find three different plants to sketch (Please see above to what type of plants you will need to find). They can be anywhere on the school grounds but it is important to find something that you will be able to sketch.
 - b. Once you have found one of the plants sit down and take a good look at it.
 - c. For each plant you will be required to have multiple sketches for it including, but not limited to, the entire plant, roots, stem/trunk, leaves/needles, and flower and seeds if they are there. You may now start sketching but make sure that each sketch takes up at least half of a page because we are looking for detail.
 - d. With each sketch make sure to write down a detailed description of what it looks like so that when we go back into the class you can colour it in properly and add any detail that you may need to. (Include textures, colours, shapes, sizes, etc)
 - e. Also make a quick sketch of where the plant was found because we will be doing something with this later.
 - f. Write down a detailed description of where the plant is found taking into consideration the following: amount of sunlight, amount of water, amount of protection from animals, amount of protection from weather.
 - g. **Take your time because we are looking for quality of work not quantity or speed.**
 - h. Repeat steps b to g until you have sketched all three of your plants (hint: you should have at least 15 sketches (5 for each plant: entire plant, roots, stem/trunk, leaves/needles, and the location)
 - i. **DUE:** _____

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2. Interpreting the Observations

- a. Include detailed labels on each entire plant sketch showing the different parts of each plant.
- b. Examine the root sketches for each plant and make a chart for the things that you noticed were the same and what things were different. Try to figure out and record why the roots look the way they do and the specific reason each plants root grew the way it did.
- c. Examine the stem/trunk sketches for each plant and a make a chart for the things that you noticed were the same and what things were different. Try to figure out and record why the stems look the way they do and the specific reason each plants stem/trunk grew the way it did.
- d. Examine the leaf/needle sketches for reach plant and make a chart for the things that you noticed were the same and what things were different. Try to figure out and record why the leaves/needles look the way they do and the specific reason each plants leaves/needles grew the way it did.
- e. By looking at your sketches and description of where the plants were found and the information you gathered in sections a, b, and c above, determine what you believe is the best growing condition for the plant, what seasons would this plant grow in, and how it was able to survive where it was growing.
- f. **DUE:** _____

Data Check: Check these as you complete them

- ☐ Sketches of 3 plants
- ☐ Each plant has a sketch of the entire plant, roots, stem/trunk, leaves/needles, and where the plant was found (5 for each plant = 15 sketches)
- ☐ Each entire plant sketch includes detailed labels showing the different parts of the plant.
- ☐ Detailed description of each plant and also a detailed description of where each plant was found.
- ☐ Chart explaining the differences and similarities between the roots, stems/trunks, and leaves/needles of each plant.
- ☐ Why you think the roots, stems/trunks, and leaves/needles of each plant looks the way it does and grew the way it did.
- ☐ What you determined to be the best growing condition for each plant, what seasons the plant would grow in, and how it was able to survive where it was growing.

Conclusion: You have now completed an activity that explores botany, the branch of biology that studies plants. If you did a thorough job on the assignment and participated in the discussions then you should have an understanding of the objectives above. I hope you had fun and learned something about the plants around our school and the world of botany.

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Grading Rubric

	Lamborghini	Ferrari	Mazzurati	Honda
Following Instructions	You followed all of the directions which shows in the high quality of your work. You asked few questions	You followed most of the directions which shows in the quality of your work. You asked some questions	You followed some of the directions which shows in the average quality of your work. You asked many questions.	You did not follow the directions which shows in the poor quality of your work. You asked many questions which had to be repeated.
Plant & Location Sketches (Including labels) X 4	You create very detailed and accurate sketches that includes the entire plant, roots, stem/trunk, leaves/needles, and location. It is obvious that the student took their time to sketch accurately. Entire plant sketches include detailed labels.	You create detailed sketches that includes the entire plant, roots, stem/trunk, leaves/needles, and location. You put forth effort to sketch accurately. Entire plant sketches include labels.	You create sketches that includes the entire plant, roots, stem/trunk, leaves/needles, and location. You put forth some effort to sketch accurately. Entire plant sketches include some labels.	You create sketches that includes some of the required elements. You did not put much effort into their sketches. There are no labels on the entire plant sketches.
Description of Plant & Location	Your description for the plants and location are very accurate and very detailed.	Your description for the plants and location are accurate and detailed.	Your description for the plants and location are somewhat accurate and somewhat detailed.	Your description for the plants and location are lacking in accuracy and detail.
Similarity & Difference Chart	Your chart includes obscure observations.	Your chart includes all obvious observations.	Your chart includes most obvious observations.	Your chart includes few observations.
Looks and Growth	The reasoning for why you think the roots, stems/trunks, and leaves/needles of each plant looks the way it does and grew the way it did is very well thought out.	The reasoning for why you think the roots, stems/trunks, and leaves/needles of each plant looks the way it does and grew the way it did includes some thought.	The reasoning for why you think the roots, stems/trunks, and leaves/needles of each plant looks the way it does and grew the way it did is basic.	The reasoning for why you think the roots, stems/trunks, and leaves/needles of each plant looks the way it does and grew the way it did is lacking.
Growing condition seasons the plant would grow in, plant survival	What you determined to be the best growing condition for each plant, what seasons the plant would grow in, and how it was able to survive where it was growing is very well thought out.	What you determined to be the best growing condition for each plant, what seasons the plant would grow in, and how it was able to survive where it was growing includes some thought	What you determined to be the best growing condition for each plant, what seasons the plant would grow in, and how it was able to survive where it was growing is basic.	What you determined to be the best growing condition for each plant, what seasons the plant would grow in, and how it was able to survive where it was growing is lacking.