



Plant Propagation Project

Name:



Plant Propagation Project

Student Guidelines

Introduction:

In this project, you will be finding out about vegetative propagation in plants. Whenever plants reproduce asexually by any means, either naturally or artificially, the term vegetative propagation is used. It means that vegetative plant tissues (or parts of the plant that are not used in sexual reproduction) are used to produce new plants.

To complete your project, you will do the following tasks:

- Do independent research and give examples of plants that reproduce naturally by vegetative methods;
- Select a method of vegetative propagation and write a brief procedure explaining how it works. Some methods include: rooting stem or cuttings, and growing new plants from plantlets, offsets and divisions;
- Start a new plant by any means of vegetative propagation and keep a laboratory journal describing the new plant's progress;
- List three specific reasons why vegetative propagation might be desirable.

Procedure:

- 1) Do some independent reading about vegetative plant propagation. You may find research materials at home, in the school, or local libraries. Make sure to look at gardening books because they often contain detailed information about plant propagation. A list of websites that you can use is also included in this packet. Record your research on the **Plant Journal—Vegetative Propagation Research** page.
- 2) Based on your research, select a healthy plant to be propagated. The plant may be a houseplant, a landscape plant, or a wild plant. Now that you have chosen your plant, learn more about it and record your findings on the **Plant Journal—Characteristics** page.
- 3) Once you have selected a method of propagation, conduct the propagation. Remember to write a step-by-step description of the propagation procedure on the **Plant Journal—Propagation** page.
- 4) As the plant is growing, you will need to keep records about the treatment, and the success (or failure) of your plant. Use the **Plant Journal—Weekly Log** pages to record information about how you care for the plant and how it is progressing. This will include regular observations (at least twice a week), after which you record such things as the amount of water you gave the plant, the numbers of roots that appear, how and when you planted it in soil, the type of soil and pot you used, and so on.
- 5) Use the **Plant Journal—Drawings/Descriptions** page to give a visual picture and detailed description of your plant. This page should be done once a week. Photographs can be used in place of sketches.

- 6) While your plant is growing, continue to do research on vegetative propagation. Find at least three examples of how vegetative propagation is used in agriculture or horticulture.
- 7) You will be growing and caring for your plant at home, but remember, it is your job to care for it, not your parents'. Care for your plants according to the information you found in your research.

I will be checking your journal and your progress throughout the project. If your plant dies or does not propagate correctly, please see me.

Project Report:

On the due date listed below, students should come to class with the following:

- Plant in a container labeled with student name and plant name
- Completed Journal Packet
- Written analysis of the experience with vegetative propagation, including the following:
 - A description of the plant and its normal method of reproduction. Include a physical description of the plant as well as information on its climate zone, light requirements, soil types, best time to plant, what the plant is typically used for, etc.
 - A list of all possible methods of propagation for your plant, as well as a summary of the specific technique that you used.
 - An analysis of your results. Discuss the success or failure of the propagation and explain why it was a success or failure.
 - An explanation of why vegetative propagation might be better than growing plants from seeds in some circumstances. List at least three examples from your research.

Note: Spelling, grammar, punctuation, and sentence structure will be considered in grading your paper.



Due Date: Your plant, journal and analysis must be in by _____.

Website Resource Page:

Natural Vegetative Propagation

http://plantphys.info/Plants_Human/vegprop/vegpropn.html

Artificial Vegetative Propagation

http://plantphys.info/Plants_Human/vegprop/vegpropa.html

Vegetative Propagation

<http://www.discoveredmonton.com/devonian/getgro103.html>

Vegetative Reproduction and New Crops

<http://heg-school.awl.com/bc/companion/cmr2e/activity/VR/VR01a.htm>

Propagating House Plants

<http://www.ianr.unl.edu/pubs/Horticulture/g337.htm>

Horticulture Information Leaflets

<http://www.ces.ncsu.edu/depts/hort/hil/hpropagate.html>

Plant Journal

Vegetative Propagation Research

How is vegetative propagation used:

Types of propagation:

Leaf Cut-

Root Cut -

Stem Cut -

Others –

Plants that can reproduce through vegetative propagation:

Other Notes:

Plant Journal

Characteristics

Name of Plant: _____

Physical description:

Climate zone:

Lighting:

Soil types:

Watering:

Best time to plant:

How to propagate (i.e. leaf cutting, root cutting, etc.):

Plant Journal

Propagation

Name of Plant: _____

Propagation:

Materials Used:

Procedure for propagation:

Plant Journal

Weekly Log

Date:	What was done to the plant:	Observations:

Plant Journal

Drawings/Descriptions

Date: _____

Illustration:

Description:

Plant Propagation Scoresheet

Plant Journal

Research Notes/10

Characteristics/10

Propagation Procedure/10

Weekly Logs/15
(at least 2 entries a week)

Drawings/Descriptions/10
(at least 1 a week)

Plant Journal Total...../55

Final Analysis...../25

Plant (dead or alive)...../10

Mechanics...../10

Plant Propagation Project Total/100



From the desk of:

Dear Parent/Guardian,

We are currently starting a class project called “Plant Propagation” in which students will attempt to reproduce a plant using a stem or root cutting. Students will research a plant, investigate possible methods of propagating that plant, and then carry out the propagation.

I would like to request your assistance in providing any information, guidance and/or materials your child may need to complete this project; the actual care of the plant is solely his/her responsibility. He/She must check on the plant, water it when needed, and complete a journal entry at least twice weekly. Your child's grade does not depend on the survival of the plant, but rather on the quality of his/her effort, record keeping, and report. The due date for this project is currently set for _____, but is subject to change if more time is required.

Please sign below to indicate that you have received this letter, and that you agree to help by making your child responsible for the care of the plant. If you have any questions or concerns, please feel free to contact me.

Thanks,

Parent/Guardian Signature: _____

Date: _____