PLANTS

A Unit

Three Week Term

by

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Grades 6-8
MATERIALS NEEDED

1. Technological Equipment (VCR/DVD player, TV, Computer etc..)
2. Videos
3. Paper
4. Pencils
5. Books
6. Activity Sheets
7. Study Guides
8. Scissors
9. Glue
10. Containers
11. Plastic Bags
12. Permission Slips
13. 2 Bamboo/Cane Poles
14. Sticks
15. Grass Blades

INTRODUCTION

For the next two weeks we are going to be studying the world of plant life. We will be using the text, go on a field trip, do fun activities, look
at illustrations, and play fun games. By the end of the unit, you should have a broader idea of the role that plants play in our world.

**UNIT GOALS**

To enrich students with knowledge to academically incline to a higher critical thinking level that enables them to acquire, retain, and understand the science of plant life in our world.

**UNIT OBJECTIVES**

1. List plant traits
2. Classify plants
3. Demonstrate knowledge of plant reproduction
4. Explain plant process
5. Define unit vocabulary on plants
6. Recognize/appreciate plant use
7. Read/write culturally diverse plant stories/poetry
8. Participate in planned activities dealing with plants
9. Complete activity sheets, study guides, and other forms assigned
10. Take part in class discussion
11. Compare and contrast various aspects of plant processes
12. Observe videos and other technology-based illustrations
13. Take necessary notes during lecture
14. Use listening skills
15. Work in cooperative groups
16. Relate class study to real life
17. ENJOY THE UNIT

STRATEGIES

1. Activity sheets for critical thinking
2. Study guides
3. Technology
4. Field trips
5. Games
6. Stories
7. Poetry
8. Projects
9. Magazines
10. Books

VOCABULARY

1. cuticle 3. palisade layer
2. epidermis 4. phloem
5. stomata
6. xylem
7. root
8. stem
9. leaves
10. transpiration
11. photosynthesis
12. tap root
13. root hairs
14. angiosperm
15. nonvascular plant
16. vascular plant
17. pollinate
18. chlorophyll
19. spores
20. stamen
21. anther
22. gymnosperm
23. respiration
24. sepal
25. pistil
26. petal
27. stigma
28. style
29. filament
30. ovary
31. monocot
32. dicot
33. cotyledon
34. embryo
35. germinate
36. asexual
37. active transport
Lesson Title: What is a Plant?

Goal(s): To enrich students' thinking level to attain knowledge of plants

Materials/Media: Text, activity sheets, study guide, pencil, paper

Instructional Objective(s): The student will:

1. Be able to list the traits of plants

2. Describe structure and function of roots, stems, and leaves

3. Complete activity sheets

4. Complete study guide and use for test review

Set: Without looking at your text, who can tell me what a plant is?

Instructions/Procedures: Students will be instructed to:

1. Follow along in text as classmates read aloud

2. Ask questions and share what is already known
3. Complete activity sheets

4. Complete study guide

5. Skim over/pre-read next section for upcoming discussion

Key Questions:

1. What makes a plant a plant?

2. Are all roots, stems, and leaves alike?

3. What is the function of the xylem and phloem?

Closure: We found out today in class exactly what a plant is. Activity sheets have been assigned for homework to be taken up tomorrow. Study guides need to also be completed in order to use them for review.

Independent Practice:

1. Complete activity sheets

2. Read ahead into next section
Evaluation/Assessment: The study guide and activity sheets will be assessed for a homework grade.

Reflection/Modification:
LESSON PLAN

Lesson Title: Classifying Plants

Goal(s): Students will be guided to understanding classifications of plant life.

Materials/Media: Paper, pencil, text, magazines, scissors, and glue

Instructional Objective(s): The student will:

1. Be able to classify plants
2. Participate in class discussion
3. Successfully complete activities at home for homework
4. Finish the study guide to use for test review
5. Compare and contrast vascular and nonvascular plants
6. Compare and contrast plants that produce seed in cones and those that produce seeds in fruits

Set: Previously we studied about what a plant is. Today let's find out what the different classifications are in which they belong.

Instructions/Procedures: Students will be instructed to:

1. Follow along in the text as fellow classmates read aloud
2. View the corresponding illustrations

3. Complete the study guide for test review

4. Complete activity sheets given

5. Work in a cooperative group determine answers to the Mindjogger Videoquiz for test review

Key Questions:

1. What are nonvascular plants?

2. What are vascular plants?

3. Do plant vascular systems work like human vascular systems?

Closure: Now we know how to classify plants after viewing the illustrations, playing the Mindjogger Videoquiz, reading the section, and participating in class discussion.

Independent Practice: Students will work on the study guides and activity sheets at his/her own desk.
Evaluation/Assessment: The study guide will be the assessment/homework grade. The activity sheets will also be graded.

Reflection/Modification:

LESSON PLAN

Lesson Title: Plant Reproduction

Goal(s): Students will acquire the understanding of plant reproduction.

Materials/Media: Text, paper, pencil, activity sheets, and study guide

Instructional Objective(s): The student will:

1. Demonstrate understanding of plant reproduction through information sharing

2. Complete the study guide for test review

3. Research the reproduction process of their favorite plant and share findings with the class

4. Read along in the text about plant reproduction
5. Describe the function and structure of a flower

Set: In this lesson you will learn the aspects of plant reproduction. I would like for everyone to think of your favorite plant. Now, plan to research the reproduction process of this plant.

Instruction/Procedures: The student will be instructed to:

1. Read the text aloud when called upon while the class follows along silently

2. Complete and turn in study guides to be graded and returned for test review

3. Complete activity sheets and turn in for a grade

4. Document research findings and share with class

Key Questions:

1. When plants reproduce sexually, are the offspring identical to the parent?
2. Why do plant clones exactly resemble the plant from which they are developed?

Closure: Today in class we learned how plants reproduce. You were asked to research your favorite plant’s reproduction process and share your findings with the rest of the class. Does anyone have any questions?

Independent Practice: Students will do research projects individually.

Evaluation/Assessment: Students will present research information to class for a presentation grade.

Reflection/Modification:
Lesson Title: Plant Processes

Goal(s): Students will be enlightened to the basic processing characteristics of plant life.

Materials/Media: Paper, pencil, text, activity sheets, and study guide

Instructional Objective(s): The student will:

1. Be able to explain the process of plants.

2. Compare photosynthesis and respiration

3. Recognize cause and effect of plant processes

4. Appreciate the need for a solution toward saving the rainforest

5. Learn about plant transpiration

Set: What does the term “greenhouse effect” mean to you? Raise your hand please if you are familiar with it’s meaning.

Instructions/Procedures: Students will be instructed to:
1. Take turns reading aloud as rest of class read along silently

2. Participate in classroom discussion

3. Think critically about the role that plants play in the ecosystem

4. Complete the study guide to use for test review and for a grade

5. Take activity sheets to do for homework for a grade

Key Questions:

1. Does sunlight have any effect on leaf color?

2. Why have fossil fuels contributed so greatly to shrinking our rainforests?

Closure: Today’s lesson was about the process of plants. We also took into consideration the damage that our ecosystem suffers upon not being able to successfully process. This has been an extra important section. Please bring completed worksheets to turn in for a grade along with your finished study guides, so you can use them for review for the upcoming test.
Independent Practice: Students will do independent reading at his/her desk.

Evaluation/Assessment: The study guide will be assessed and used as test review.

Reflection/Modification:
LESSON PLAN

Lesson Title: RAMPS

Goal(s): To enable students to acquire knowledge of a not-so-well known vegetable that grows in the mid-northeaster region of Appalachia that is celebrated annually and locally in Cosby, Tennessee.

Materials/Media: Articles, video of The Cosby Ramp Festival and Heartland Series, books, paper, pencil, and internet resources

Instructional Objective(s): The student will:

1. Research and define ramps.

2. Discuss differences between a ramp and an onion.

3. Specify geographic location in which ramps grow.

4. Verbally share research found with classmates.

Set: How many of you have ever eaten a ramp? Raise your hands please.

Let’s find out about ramps by viewing the videos together.
Instructions/Procedures: The student will be instructed to:

1. Observe/view videos of The Cosby Ramp Festival and Heartland Series

2. Take necessary notes pertaining to the videos

3. Participate in class discussion following the videos

4. Write a one page research paper for homework and present to class

Key Questions:

1. What plant classification do ramps belong?

2. Why are ramps not found in the grocery store?

3. Why do ramps only grow in the mid-northeastern region of the United States?

4. Why is the ramp plant celebrated?

5. Why do ramps smell so bad?
Closure: Today in class we watched a couple of videos and discovered what ramps are. We also discovered that some people celebrated its harvest. The homework assigned is to further inform you about ramps. Be sure and try to get enough research material to write at least one page. This will give you adequate material for your oral presentations. Remember to do a good job because you will be graded on your performance.

Independent Practice: Students will make a list of resources to be used for research.

Evaluation/Assessment: Students will be assessed on content quality, legibility of research paper, and assessed on overall performance of presentation.

Reflection/Modification:
Lesson Title: Plants & Culture

Goal(s): Students will be introduced to various stories of plants in order to appreciate cultural diversity.

Materials/Media: Paper and pencil

Instructional Objective(s): The student will:

1. Use listening skills as stories are read aloud to them

2. Expand to higher level of thinking, pertaining to diverse cultures to be discussed with classmates

3. Recognize the use of plants for medicine

4. Appreciate custom of ceremonial plant usage of plants

5. Complete activity sheets

6. Keep a 5-day log of roots they eat
Set: Today we are going to enjoy some stories of cultural diversity about plants. Please put everything away except for your listening skills.

Instructions/Procedures: The student will be instructed to:

1. Clear their desks
2. Listen to stories
3. Discuss the stories with the class
4. Complete activity sheets given
5. Do the activity of keeping the 5-day log of roots eaten and turn it in for a grade

Key Questions:

1. What benefits are plants to us?
2. Could plants help to make the future better?
3. Where are the plants mostly found that are used for various types of medicine?
Closure: Today we looked at plants in a different way than we have previously been studying. I hope you enjoyed the diversion away from the textbook. Maybe now you can appreciate the quality of plant life.

Independent Practice: Students will work individually on the activity sheets.

Evaluation/Assessment: Students will complete and turn in the activity sheets to be assessed for a grade.

Reflection/Modification:

**LESSON PLAN**

Lesson Title: Eat Plants

Goal(s): Students will become conscious of the vitamin benefits of a vegetarian planned diet.

Materials/Media: Textbook, paper, and pencil

Instructional Objective(s): The student will:
1. Participate in class discussion of being a vegetarian

2. Research what vegetables have certain values

3. Plan an individualized vegetarian diet they would use

4. Share and compare their diet plans with classmates

Set: Today we are going to talk about the benefits of being a vegetarian. We will research further during class time, the vitamin value of vegetables. Later, we will discuss our findings and plan a diet.

Instructions/Procedures: Students will be instructed to:

1. Independently research benefits of being a vegetarian

2. Research the vitamin benefits of vegetables

3. Plan a vegetarian diet for themselves

4. Complete the activity sheets for a grade

Key Questions:

1. Why should we cut down on or take fat out of our diets?
2. What religious groups are vegetarian? Why?

3. What foods are highest in fat content?

Closure: Today’s lesson pertained to recognizing the benefits of vegetables. We researched to find information on vegetable benefits. We had a class discussion of our findings. Your assignment was to plan your own vegetarian diet. You may bring those back tomorrow for class sharing with the class. You will receive a grade. Also, you must complete the activity sheets for a grade. After you plan your diet, try it for a day just for fun.

Independent Practice: Students will make a list of their favorite vegetables to put on the diet assignment.

Evaluation/Assessment: Students will be assessed on sharing and comparing their diet plans. Student will assess whether or not they liked following the diet.

Reflection/Modification:
Lesson Title: KUDZU

Goal(s): To inform students of the Kudzu plant, it’s origin, and usages.

Materials/Media: Pencil, paper, articles, video, text, and Kudzu poem

Instructional Objective(s): The student will:

1. Be able to identify the Kudzu plant

2. Read a fiction story about a plant that grows out of control (The Escape-of the Giant Hogstalk)

3. Listen to a poem about the Kudzu plant

4. Write a short story or poem about Kudzu

Set: Have you ever seen Kudzu? If so, raise your hand. What is it?

Instructional/Procedures: Students will be instructed to:

1. Research the origin of the Kudzu plant
2. Come up with a solution that would keep Kudzu from continuing to spread

3. Come up with a recipe that includes Kudzu

Key Questions:

1. What plant classification does Kudzu belong to?

2. Does Kudzu have any beneficial uses?

3. Where does Kudzu come from?

4. Can Kudzu growth be stopped?

5. Could Kudzu solve world hunger?

Closure: Today in class we discussed Kudzu. Also, we silently read a fiction story about a plant that grew out-of-control that resembles Kudzu. I read a poem to you about the Kudzu plant. Using what we learned in class, I would like for you to choose either a short story or a poem to write about Kudzu. It needs to be one full page in length and I
will take them up tomorrow. You can further research the subject if you wish.

Independent Practice: Students will read *Escape of the Giant Hogstalk* silently at their desk.

Evaluation/Assessment: Students will be assessed on creativity, originality, punctuation and spelling, and structured content of the short story/poem assigned.

Reflection/Modification:
Lesson Title: Field Trip Cades Cove

Goal(s): To provide students with an opportunity to experience, appreciate, and understand the actual world of plant life better.

Materials/Media: Collection containers (bags, boxes, etc...), bag lunch, permission-slips from parents, lists of items to collect, pencil, and paper.

Instructional Objectives: The student will:

1. Participate in planned activities for the field trip to Cades Cove.

2. Enjoy a picnic lunch in natural surroundings

3. Display items collected from field trip upon return back to school

4. Share in discussion the items collected

5. Write a brief overview describing how they feel about the overall field trip experience.
Set: Today we are going on a field trip and the theme of the trip will be “Nature Hike Treasure Hunt”. What we are going to do is basically participate in a scavenger hunt for our class; collecting specific items on a list that I will give each of you. I hope you are as excited as I am.

Instructional/Procedures: The students will be instructed to:

1. Stay with assigned partners

2. NOT to collect any item that in its absence would disrupt the ecological balance of the natural environment

3. Practice safety and stay within assigned areas

4. Display treasures from field trip in classroom.

5. Come up with ideas for a bulletin board that portrays the field trip collection

Key Questions:

1. Was this field trip beneficial for you in the study of plant life?
2. What can we do to help keep the environment of the plant world protected?

3. Why would we want plant life to be protected?

Closure: Today we went on a field trip. We hunted for specific plant items. We basically went on a scavenger hunt. Also, we returned to class and displayed and shared our findings. We also had a very nice picnic in natural surroundings.

Independent Practice: Students will brainstorm to come up with a list of their own ideas for the bulletin board that will display the treasures from the trip.

Evaluation/Assessment: Students will evaluate the whole field trip experience in a summation and get a grade for it.

Reflection/Modification:
Lesson Title: FUN PLANTS

Goal(s): Students will broaden their thinking levels of plant life being used for fun.

Materials/Media: 2 Bamboo/Cane poles, sticks, and grass blades

Instructional Objective(s): The student will:

1. Participate in various chosen games in which plants are used
2. Become aware of how to use a plant as a toy
3. Appreciate the concept of plant-oriented games

Set: Today, believe it or not, we are not going to have regular class. Instead, we are all going to learn to play.

Instructions/Procedures: Students will be instructed to:

1. Draw pictures in the dirt by using a stick or a twig
2. Play a Hawaiian jumping game
3. Make a whistle by using a blade of grass

4. Draw a hopscotch game by using a stick or twig

Key Questions:

1. Do you know a recreational plant activity?

2. What do you think the toys were like when your grandparents were little boys and girls?

3. If there were no such thing as electricity, what would you do for recreation?

Closure: Today we had a chance to experience a different type of recreation. These are just some of the ways to recreationally occupy your time. Maybe these are some of the ways that your grandparents might have played when they were little.

Independent Practice: Students will make their own grass whistles and play.
Evaluation/Assessment: Students will be assessed on overall class participation.

Reflection/Modification: