

Forest Grove School District  
Project GLAD  
**Plants**

**Unit Planning Pages**

**I. FOCUSING/ MOTIVATION**

- Inquiry charts
- Picture file Observation charts
- Preview/Review
- Direct experiences: nature walks
- Plant Realia
- Read aloud – variety of languages
- Signal words
- Botanist Awards
- Picture file cards
- Guest speakers: from Audubon Society or a nursery
- Big Book-Legacy of Leaves

**II. INPUT**

- Pictorial input charts-plant parts and plant life cycle
- 10/2 lecture with primary language groups
- Graphic organizers-products that come from plants and their geographical area
- Read aloud/Shared book experiences
- Realia
- Demonstrations/explorations: plant a seed and follow its chart its growth
- Narrative input-plant facts
- Comparative input charts: different plants and their parts

**III. GUIDED ORAL PRACTICE**

- T-Graph for social skills
- Cooperative learning for cross-cultural respect, decision making, and language acquisition
- Picture file cards
- Poetry/chanting
- Sentence Patterning (Farmer-in-the-Dell) chart
- Process Grid-evergreens, deciduous, algae, moss, and ferns
- Personal Interaction for bonding/respect
- Variety of discussion/exploration groups, primary language and heterogeneous
- On-going oral processing of charts-retell of narrative input chart
- Exploration report- watch a plant go through the cycle
- Home-school connections

- Expert group sharing- become an expert on a specific plant's characteristics and report orally to the whole group

#### **IV. READING/Writing ACTIVITIES**

##### **A. Total Class Modeling**

- Total class modeling of reading and writing. Done in primary language/English
  1. Highlighting and sketching on chants
  2. Writers workshop
  3. Comparative input chart on different plants
- Used as reading/writing practice - all genres

##### **B. Small group – Cooperative Tasks –Variety of Groupings: Flexible, Heterogeneous, and Need and Choice**

- Focused reading
- Shared, guided and flexible-group reading
- Interactive reading
- Poetry booklets
- Strip paragraphs
- Expert groups
- Oral book sharing – in primary language and heterogeneous groups
- Flip chants
- Ear-to-ear reading
- Mind-mapping
- Big Books
- Group frame
- Poetry frame
- Reading the walls
- Process grid

##### **C. Individual Practice and Choice:**

##### **Reading/ Writing Using Student's Own Language**

- Silent Sustained Reading
- Reading/Writing to all genres, domains
- Journals, Logs, Mind-mapping
- International Library
  - fiction and non-fiction
  - variety of languages
- Read aloud by teacher and students of a variety of literature, including students' work
- Make an advertisement for a nursery
- Write a response to school on what plants to plant on school grounds or plan a landscape
- Survey on type of plants owned
- Create a poster on protecting plants using paint and word programs

D. Writer's Workshop

- Choice
- Metacognition
  - mini-lesson
  - conferencing
- Author's Chair
- Peer Editing

V. **EXTENDED ACTIVITIES FOR INTEGRATION**

- Role-playing /drama
- Guided Imagery
- Cooking
- Science Explorations
- Music/movement
- Poetry
- Art
- Field trips

VI. **CLOSURE/EVALUATION**

- Personal exploration of plant parts, plant life cycle
- Team exploration: field trip to visit a nursery, high school greenhouse, local wetlands, and/or a walk through the neighborhood
- Action plans
- Process charts and learning logs
- On-going assessment
- Alternative assessment strategies
  - Videos
  - Plays, presentations, demonstrations
  - Build projects
  - Big Books
  - Portfolios
- Teaching of study skills and test-taking skills

**Project G.L.A.D.  
Forest Grove School District  
Plants**

**Idea Pages**

**I. UNIT THEME:**

- Identify different plants based on a variety of characteristics
- Demonstrate uses of plants for humans
- Introduce some basic geography locations regarding plants and humans

**II. FOCUS/MOTIVATION**

- Inquiry charts
- Picture file Observation charts
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- Direct experiences: nature walks
- Plant Realia
- Read aloud – variety of languages
- Signal words
- Botanist Awards
- Picture file cards
- Guest speakers: from Audubon Society or a nursery
- Big Book-Legacy of Leaves

**III. CLOSURE**

- Field trip to: visit a nursery, high school greenhouse, visit the local wetlands, walk through the neighborhood
- Class big book
- Classify pictures of plants
- Collage of plant concepts

**IV. CONCEPTS/UNDERSTANDINGS/CRITICAL LEARNINGS:**

- Plant parts
- Plant life cycle
- Plant characteristics
- Uses of plants by humans
- Geographical locations of common plants

## **V. VOCABULARY**

Algae	Energy	Perennial	Pigment
Annual	Evergreen	Cycle	Oxygen
Bark	Flowering	Deciduous	Water
Branches	Forest	Desert	Sugars
Breathing	Foliage	Leaves	Trunk
Carbon dioxide	Root	Leaf	Habitat
Cell	Needle	Plant	Nutrients
Change	Seed	Photosynthesis	Soil
Chlorophyll	Tuber	Spores	Organism
Cones	Stem	Tannin	Sunlight
Precipitation	Species	Nutritious	Ocean
Grassland	Rainforest		

## **VI. ORAL LANGUAGE/READING/WRITING SKILLS**

### **Reading**

- Recognize, pronounce, and know the meaning of words related to plants.
- Demonstrate literal, inferential, and evaluative comprehension in reading about plants from books and the internet.
- Connect reading selections to other texts, internet, and personal experiences.

### **Writing**

- Use the six analytical traits of the writing process to create poems, creative writing, and reports.
- Use writing conventions to write group paragraphs as well as individual paragraphs.

### **Speaking and listening**

- Convey a main idea and supporting details in a speeches based on plants
- Effective use of eye contact, fluency, speaking rate, volume, etc.

### **Literature**

- Read from a variety of books about plants.
- Point out the different cultures represented in working in different environments with plants.

## **VII. MATH/SCIENCE/SOCIAL STUDIES**

### **Science**

- Drawing conclusions
- Predictions/inferences/conclusion
- Classify plants
- Data collection
- Understanding cycle, change, population, structure, and function or organisms
- Interpreting data
- Use of graphic organizers
- Compare and contrast different types of plants
- Understanding the relationships humans have with plants

- Know plant parts
- Research a plant

### **Social Studies**

- Location of land formations
- Use of maps
- Knowledge of geographical locations in regards to plants
- Study of people and cultures connected to the plant industry

### **Technology**

- Use of internet for research on plants
- Use of bookmarks to collect data on plants
- Email scientists online to ask questions about plants

## **VIII. RESOURCES AND MATERIALS**

### **Internet web sites**

- [www.ajkids.com](http://www.ajkids.com)

### **Children's books-nonfiction**

- Marian B. Jacobs, Ph.D., *The library of why do leaves change color*, The Rosen Publishing Groups Power Kids Press, New York
- Elizabeth Marcus, *The question and answer book: Amazing world of Plants*, Troll Associates.
- John Stidworthy, *Flowers, Trees, and other plants*, Random house, New York
- Ken Robbins, *Autumn Leaves*, Scholastic Press, New York
- Chiara Chevallier, *The secret life of trees*, DK Publishing
- Ruth Heller, *Plants that never ever bloom*, Grosset and Dunlap, New York
- Betsy Maestro, *Why do leaves change color*, Harper Collings Publishing
- Nature Company Discoveries, *Incredible plants*, Time Life books
- *Migrant Worker: A Boy from the Rio Grande Valley*, Diane Hoyt-Goldsmith, Holiday House, 1996
- *The Red Poppy*, Irmgard Lucht, Hyperion Books, 1995
- *Spring Turns to Summer*, David Drew, Celebration Press, 1997
- *Some Plants Have No Flowers*, David Drew, Celebration Press, 1998
- *Buried Treasure: Roots and Tubers*, Meredith Sayles Hughes and Tom Hughes, Lerner Publications, 1998
- *I Wonder Why Trees Have Leaves*, Andrew Charman, Kingfisher, 1997
- *What Is a Plant?*, Bobbie Kalman, Crabtree Publishing, 2000
- *Plants*, Ontario Science Centre, Kids Can Press, 1998
- *The Reason for a Flower*, Ruth Heller, Penguin Putnam, 1983
- *It Could Still Be a Tree*, Allan Fowler, Children's Press, 1990
- *Flowers, Trees and Other Plants*, John Stidworthy, Kingfisher Books, 1991
- *Our Plant Diary*, David Drew, Celebration Press, 1998
- *Wacky Plant Cycles*, Valerie Wyatt, Mondo Publishing, 2000
- *Life Cycle of an Apple*, Angela Royston, Heinemann, 1998
- *How Plants Grow*, Angela Royston, Heinemann, 1999
- *The Life and Times of the Peanut*, Charles Micucci, Houghton Mifflin, 1997

- *Fairy Dusters and Blazing Stars*, Suzanne M. Samson, Roberts Rinehart Publishers, 1994
- *Desert Giant*, Barbara Bash, Little, Brown and Co., 1989
- *Cactus Hotel*, Brenda Z. Guiberson, Henry Holt, 1991
- *Grape*, Mario Scalet, Silver Burdett, 1998
- *Do People Eat Flowers?*, David Drew, Celebration Press, 1998
- *How Do apples Grow?*, Betsy Maestro, HarperCollins, 1992
- *Eating the Alphabet*, Lois Ehlert, Harcourt Brace, 1989
- *Picturepedia:Plants*, Dr. Richard Walker, Dorling Kindersley, 1993
- *What's Inside Plants?*, Angela Royston, Dorling Kindersley, 1992

#### **Children's books-fiction**

- *Radio Man*, Arthur Dorros, HarperCollins, 1993
- *The Dandelion Seed*, Joseph Anthony, Dawn Publications, 1997
- *The Seed Song*, Judy Saksie, Creative Teaching Press, 1994
- *One Bean*, Anne Rockwell, Walker and co., 1998
- *A Tree is Nice*, Janice May Udry, Harper and Row, 1956

#### **Teacher resources**

- AIMS-primary plants
- FOSS-new plants

## Legacy of Leaves

By Susan Harms

Leaves!

Most plants have leaves.

**All leaves have one thing in common. They change sunlight into energy through photosynthesis.**

Leaves are a variety of colors; you can see leaves that are red, green, orange, brown, yellow, and purple. Often you will see leaves with more than one color.

**But all leaves have one thing in common. They change sunlight into energy through photosynthesis.**

Leaves that change color in the autumn are called deciduous. But all leaves have one thing in common. They change sunlight into energy through photosynthesis.

When the days get shorter there is less light for the trees to use and cold ground makes it harder for the roots to get water. Photosynthesis slows down and then stops. The chlorophyll disappears when there is no sunlight. When the chlorophyll disappears so does the green and the other colors show through. This is what causes leaves on deciduous trees to change color.

**But all leaves have one thing in common. They change sunlight into energy through photosynthesis.**

Leaves are green because of chlorophyll; the yellow in leaves comes from xanthophyll. Orange is carotene. The reds and purples are anthocyanin. A natural coloring is called a pigment.

**But all leaves have one thing in common. They change sunlight into energy through photosynthesis.**



When the leaves are changing color, cells in the stem of the leaves harden. This keeps food and water from the leaves and causes them to die and fall. Now, enough food and energy are left for the tree to survive the winter.

**But all leaves have one thing in common. They change sunlight into energy through photosynthesis.**

When the leaves fall and rot they enrich the soil with minerals, so other plants can keep growing.

**But all leaves have one thing in common. They change sunlight into energy through photosynthesis.**

Some leaves are gigantic. Some leaves are miniature. They can have smooth, wavy, toothed, or jagged edges. They can be shiny, dull, rough, or hairy.

**But all leaves have one thing in common. They change sunlight into energy through photosynthesis.**

Leaves are important to plants. They make a kind of sugar that is the plant's food.

**All leaves have one thing in common. They change sunlight into energy through photosynthesis.**

Some leaves have veins. The veins are like water pipes. They bring water up from the roots, through the stems, and to the leaf while taking food made by the leaf to the rest of the plant.

**But all leaves have one thing in common. They change sunlight into energy through photosynthesis.**

Photosynthesis! Cells of green coloring called chlorophyll help absorb energy from the sunlight. The leaves use this energy to mix carbon dioxide gas from the air with water from the soil. The mixture creates the food the

plant needs to live. As the leaves go through the steps of photosynthesis, they give off oxygen into the air.

**All leaves have one thing in common. They change sunlight into energy through photosynthesis.**

Evergreen is the name given to trees that do not lose their leaves all at once in the fall. Because of their needle shape the leaves do not freeze.

**But all leaves have one thing in common. They change sunlight into energy through photosynthesis.**

Evergreens do not lose their leaves all at once. Since they lose them a little bit at a time they are able to have leaves year-round, to photosynthesize year-round.

**But all leaves have one thing in common. They change sunlight into energy through photosynthesis.**

**All leaves have one thing in common. They change sunlight into energy through photosynthesis.**

What leaves do you see around you every day?

## MRS. SMITH AND HER STUDENTS FOLLOW PLANTS THROUGH THE SEASONS

By Susan Harms and Laura Curry

Juan, Heather and Maria are talking excitedly one October morning as they take out the bags of leaves they collected as homework. "Many of you have brought in quite a few different colors of leaves," says Mrs. Smith. "Remember that even if they are brown, orange, red or yellow now, they used to be green, because of the chlorophyll in them." Mrs. Smith points to a chart on the wall, and reminds students of what they learned about chlorophyll: that it helps change the sun's energy and carbon dioxide from the air into food for the plant, and oxygen which goes back into the air, in a process called photosynthesis.

"Today we are going to be botanists, observing leaves and making rubbings of their veins. In the spring and summer, the veins carry water and nutrients through the leaves, but in the autumn the veins harden, and nothing can flow through them. That's why they are all falling from the trees now."

As the students make chalk and crayon rubbings of the leaves, Heather asks, "Why do we have to learn about plants?"

"Because they are important to our lives in a lot of ways," says Mrs. Smith. They provide humans with food, clothing, furniture, homes..."

"My dad told me some plants are used for medicine, like the Ginkgo leaf which is used to treat Alzheimer's," says Heather.

"And my aunt uses aloe vera gel for sunburns," adds Juan.

"My sister says plants are used in soap."

"My grandma knows how to make dye for yarn from onion skins and walnut hulls," says Maria.

"My mom read that aspirin comes from the bark of a tree."

"And we will all feel a lot better when we get these rubbings done and see how pretty they look, hanging in the window with the light showing through them."

One afternoon in December, as soon as Juan gets home from school, his family goes to pick out a Christmas tree. As they walk between the rows of fragrant fir and pine and spruce, Juan remembers Mrs. Smith explaining that these kinds of trees are called "evergreens", because their green needles do not change color or fall off in cold weather. Since ancient times people have enjoyed bringing evergreen branches or whole trees indoors for winter holidays, to remind them of the life that will return, when everything else appears so dead and bare around them. Looking for a tree with just the right shape, Juan's mother wonders if Uncle Fernando might have pruned this hillside of trees, since that is one of the several different seasonal agricultural jobs he does every year. When they find a tree they all agree is the best, Juan's father saws through the trunk, then uses some clippers to remove some lower, scraggly, drooping branches. They put the tree in the back of their truck and drive home to decorate it.

It is 6 a.m. on a morning in March, as Maria and her family get started on their day. For the next few months they will be working at a nursery, and Maria will work with them every Saturday. Winter is over and the plants are beginning their cycle again. There is so much to do, and everyone has a different job.

"What will I be doing, Mom?" asks Maria.

"You will be transplanting some annuals, like marigolds and petunias, from the seed flats in the greenhouse to the bigger pots they will be sold in. Annuals are the flowers that only live one year, so every spring the nurseries sell a lot of them."

"Your dad and I will be digging up some of the perennial plants from the field and loading them onto trucks. Landscapers buy them to plant where new houses and offices are being built, because perennials live for many years."

"What about Aunt Delia?"

"Oh, she has a very special job. She's one of the people who get the plants started, either from seeds or bulbs. She has to mix the right type of soil for each plant, then make sure the soil gets just the right amount of water for the seeds to germinate or the bulbs to sprout, and then give them certain nutrients to keep them healthy."

"I guess the world is a lot more beautiful because of the jobs we do, huh Mom?"

Mrs. Smith is enjoying the summer off by working in her vegetable garden. Heather lives right down the street, so Mrs. Smith invites her to come over one day and take a tour. She shows her the tomato and melon seedlings that she bought from the nursery where Maria's family works, which she is getting ready to transplant into the ground. She shows her the bean plants which are now flowering, and which will have beans ready to eat on them in a couple weeks. She explains how she started them by planting dried beans she saved from last year's crop. When she asks Heather to pull up some carrots so they can have a snack, Heather looks all around, but can't find them.

"Mrs. Smith, I don't see anything orange anywhere!"

"That's because their roots are the part we eat, and they are under the ground."

She shows Heather how to loosen the carrot roots by wiggling the feathery green tops back and forth a little, and then how to pull them straight up out of the ground. After rinsing the dirt off, they munch them as Mrs. Smith shows Heather the one thing in the garden that can't be eaten, but which she puts there every year - a scarecrow to keep the birds from eating too much of the garden for themselves!

## Expert Groups

Name\_\_\_\_\_

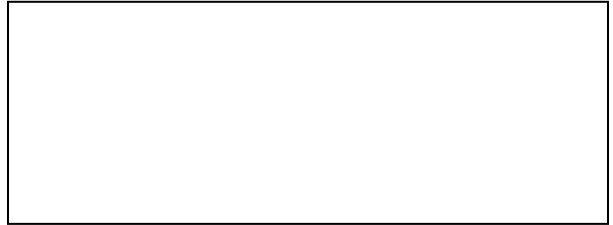
Expert Groups

Date\_\_\_\_\_

# Evergreen Trees

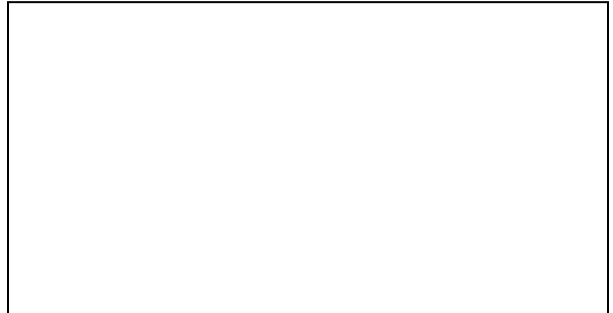
## Habitat

Evergreens grow anywhere that there is water. You can find many evergreens in the forest. People plant them in their yards. They grow on mountain sides.



## Characteristics

Evergreens belong to the plant group. They belong to a group of plants that keeps their green leaves all year long. Most people think of evergreens as trees on the mountains covered with snow. Most evergreens are trees. Others are low growing shrubs that fit into residential yards.



## Life Cycle

The name evergreen actually refers to two groups. One type of evergreen has cones instead of flowers. The other group has berries instead of flowers. Evergreens reproduce from seeds that come from inside the cone or berry.



## Examples

Some examples of evergreens that reproduce with cones are: pines, spruces, firs, and yews. An example of berry evergreens would include junipers. Evergreens include the largest living plant, the coastal redwood, which may grow over 400 feet high.



Name\_\_\_\_\_


Expert Groups

Date\_\_\_\_\_

## Deciduous Trees

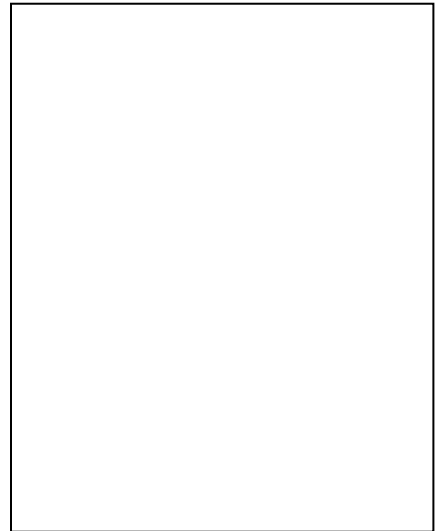
### Habitat

Deciduous plants are everywhere that there is enough water. Some regions are known for their varieties and many colors. People often plant them in their yards.



### Characteristics

They belong to a group of plants that have leaves that change colors, and eventually lose their leaves every autumn season with the coming of cold, and shorter days. When autumn comes the green leaves on deciduous trees turn red, yellow, brown, purple and orange. Leaves are green because of chlorophyll but other colors are underneath. The chlorophyll disappears when there is no sunlight. As summer passes, a ring of cells begin to turn to cork where the stems of the leaves join the twigs. By fall the cork covers and blocks all food and water from getting to the leaves. Without food and water the leaves die and fall off the tree.



### Life Cycle

Most deciduous trees reproduce through seeds. The seeds drop into the ground, sprout, and eventually grow into a new tree that repeats the same cycle.



### Examples

Some examples of deciduous trees are maples, and oaks.



Name\_\_\_\_\_

Expert Groups

Date\_\_\_\_\_

## Ferns

### Habitat

Ferns live in moist, cool, shady areas. They are in forests as well as residential areas.



### Characteristics

Ferns are plants with roots, stems, and leaves. Ferns are various colors of green and brown. They do not grow flowers or seeds. Instead of flowers and seeds, ferns have a reproductive cycle that has two stages. Stage one: spores. Second stage: plants sprout.



### Life Cycle

Spores grow in small, round clusters on the underside of fern's leaves. The clusters open and out come the spores. They are light enough to be carried by the wind. Some spores take root and sprout as new plants. The tiny plants that sprout from fern spores are the beginning of the second stage of a fern's reproductive cycle.



### Examples

Some examples are shuttlecock, soft shield, and asparagus ferns.





Name\_\_\_\_\_

Expert Groups

Date\_\_\_\_\_

## Moss

### Habitat

Moss is found in moist places.

Moss covers rocks on the forest floor.

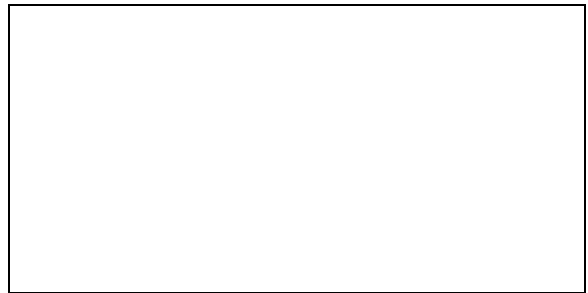
Some types of moss are found in bogs.

Others are found in the alpine and arctic Regions. They are green and grow next to streams.



### Characteristics

Mosses are short little plants. It is soft And covers things like a cushion. Moss does not have the tubes or canals found in higher plants so it never grows very large in size. Moss is helpful. It breaks up rocks, prevents erosion, makes soil richer, and is great at holding water.



### Life Cycle

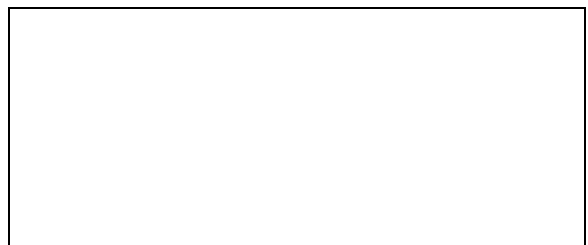
Moss reproduces in two ways. This is called alteration of generations. Spores are made in one generation. Then spores produce female and male plants. They make the eggs and sperms. These get together and grow into sexless plant, a stalk with a capsule of spores at the top of it. This goes on and on in a cycle.



### Examples

Cushion moss covers the rocks on a forest floor. Sphagnum moss is found in bogs.

Granite moss is found in the alpine and arctic regions. Liverworts live next to streams.



Name\_\_\_\_\_

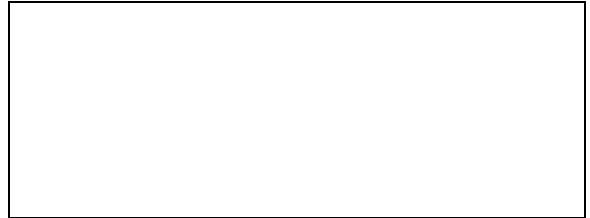
Expert Groups

Date\_\_\_\_\_

## Algae

### Habitat

Most algae live in water. Seaweed lives in salt water, but other kinds of algae live in fresh water.



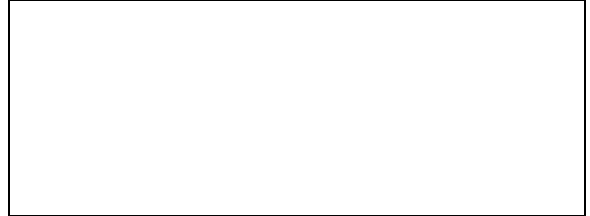
### Characteristics

Algae belong to a group of simple plants. Algae are one of the world's oldest groups of plants. The plants in the ocean make up 90% of the earth's oxygen. Algae contribute to the mass of oxygen. Algae are green, brown, reddish and orangish.



### Life Cycle

Algae reproduce through spores much like the ferns. The spores for algae are called zoospores. They fall to the bottom of the water to settle until fertilized.



### Examples

Types of algae are kelp, seaweed, red algae, and phytoplankton.



Process Grid

	Habitat	Characteristics	Life cycle	Examples
Evergreens				
Deciduous				
Ferns				
Moss				
Algae				

## Chants, raps, and poems

### I CAN SPELL

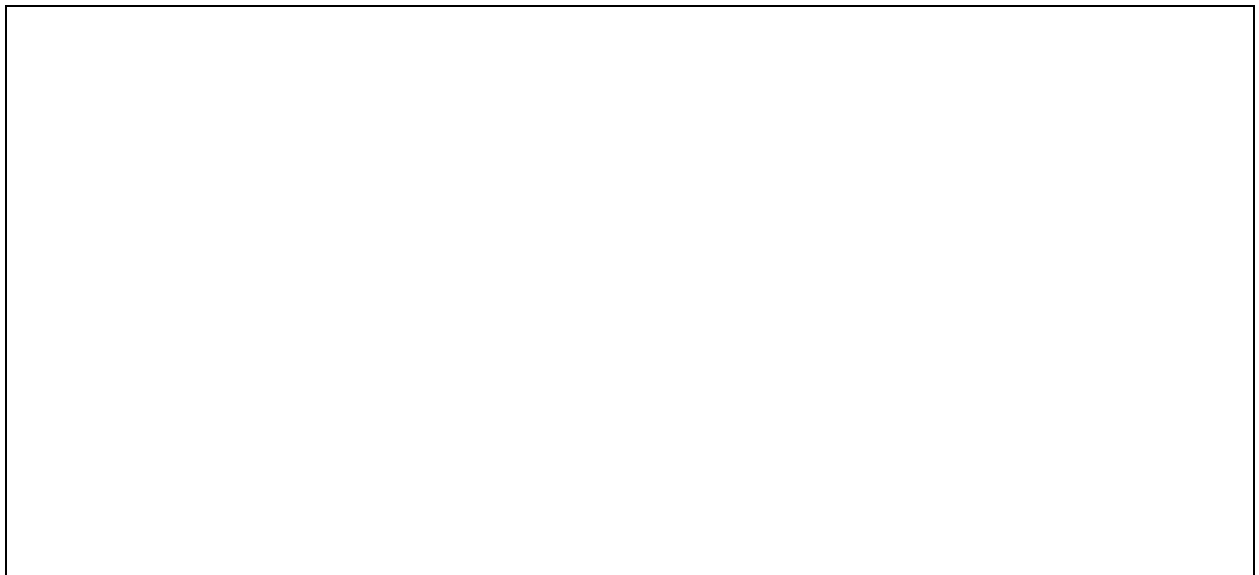
By Laura Curry, Barb Quiñones, Susan Harms

I can spell leaf, l-e-a-f.  
I can spell vine, v-i-n-e.  
I can spell root, r-o-o-t.  
But I can't spell botanical.

I can spell stem, s-t-e-m.  
I can spell seed, s-e-e-d.  
I can spell grow, g-r-o-w.  
But I can't spell botanical.

I can spell flower, f-l-o-w-e-r.  
I can spell sprout, s-p-r-o-u-t.  
I can spell branch, b-r-a-n-c-h.  
But I can't spell botanical.

Yes, I can! Yes, I can!  
B-o-t, a-n-i, c-a-l, BOTANICAL!



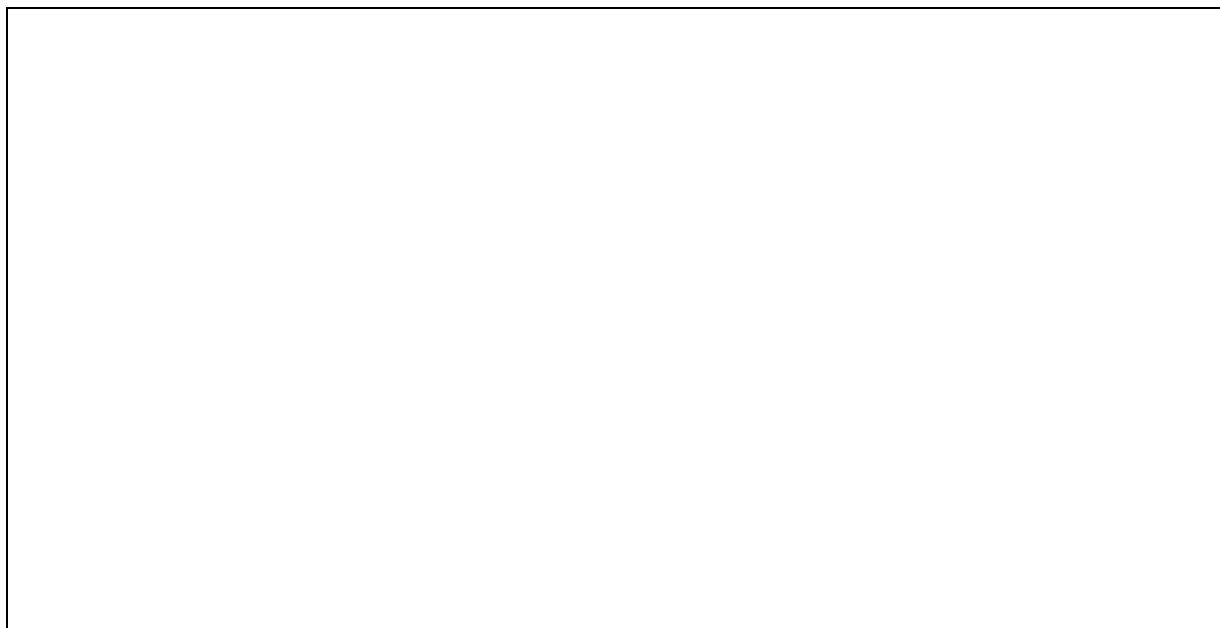
# Photosynthesis Rap

By John Gorman

Plants make their own food, and that's no lie,  
They use light from the sun and water from the sky,  
Nutrients from the soil, and last but not least,  
Carbon dioxide from humans and all beasts!

They give off oxygen from their leaves,  
An important fact 'cause we need it to breathe.  
That's not everything, there's more to tell.  
Plants give us food; they feed us well.

Food and oxygen are what they give,  
Two basic needs in order to live.  
Next time you see a flower or climb a tree,  
Remember how plants help you and me.



# PLANT SPECIALIST BUGALOO

By Barb Quiñones and Laura Curry

I'm a botanist and I'm here to say,  
"I research plants almost every day.  
Sometimes I study pollen, sometimes I study seeds,  
Sometimes I propagate the plants the whole world needs."

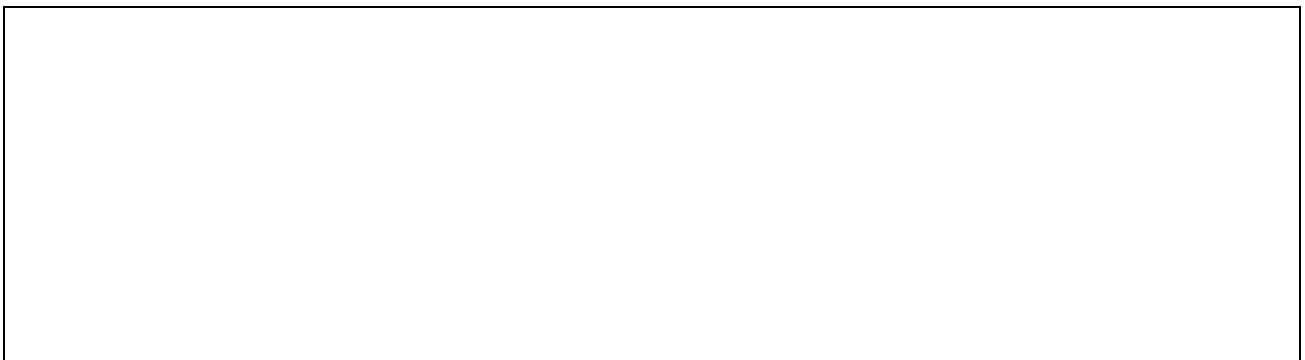
Soil, water, sunlight too,  
Doing the plant specialist bugaloo.

I'm a farmer and I'm here to say,  
"I am out in the fields almost every day.  
I might plow the earth, I might irrigate,  
Or fertilize the plants you will find on your plate."

Soil, water, sunlight too,  
Doing the plant specialist bugaloo.

I'm a nursery worker and I'm here to say,  
"I'm working in the greenhouse every day.  
Sometimes I prune the roses, and I always check for pests.  
I also transplant seedlings so they don't get stressed."

Soil, water, sunlight too,  
Doing the plant specialist bugaloo.



# PLANTS HERE, PLANTS THERE

By Susan Harms, Laura Curry, Barb Quiñones

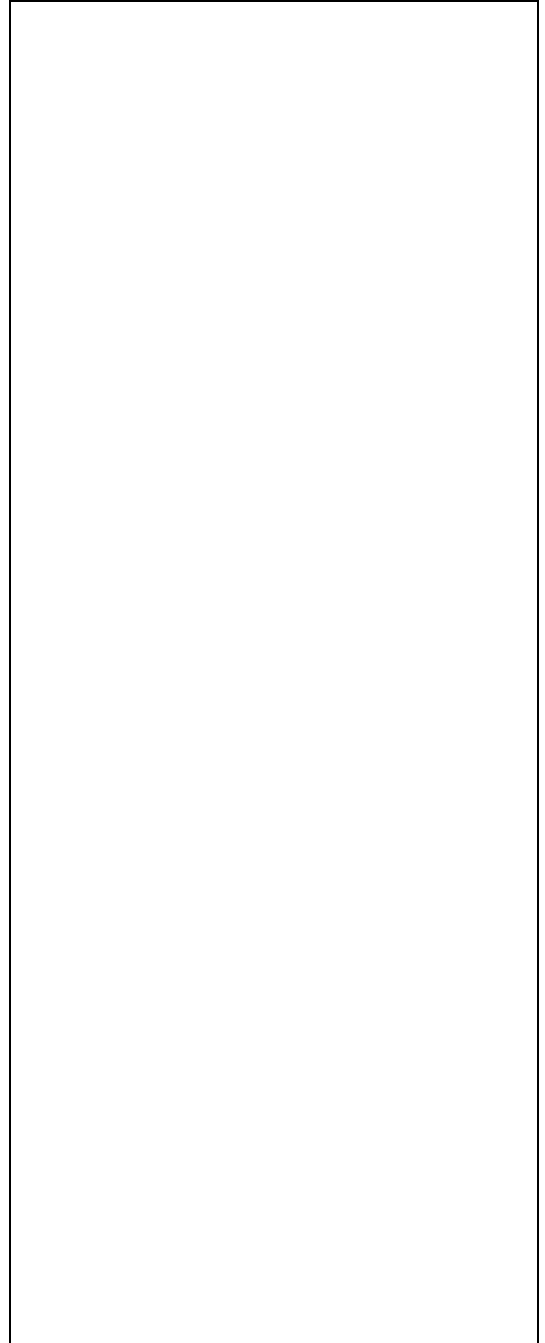
Plants here,  
Plants there,  
Plant plants everywhere!

Deciduous plants losing leaves,  
Coniferous plants staying green.  
Agricultural plants feeding the world,  
And all plants keeping our air clean.

Plants here,  
Plants there,  
Plant plants everywhere!

Plants throughout the forest,  
Plants in a nursery,  
Plants on mountainsides,  
And plants in the garden for me!

Plants here,  
Plants there,  
Plant plants everywhere!  
PLANT GREEN PLANTS!



# PLANT SOUNDOFF

By Barb Quiñones, Susan Harms, Laura Curry

We all know 'cause we've been told,  
Plants are worth their weight in gold.  
They give us food and medicine,  
Clothes and shelter to live in.

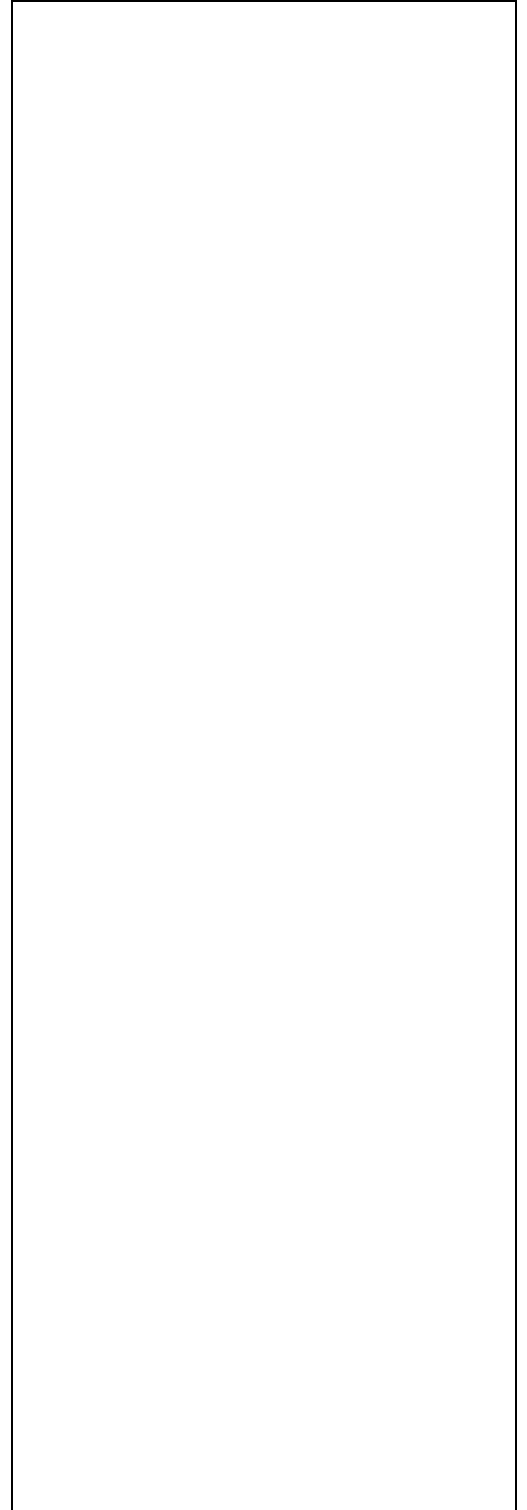
Useful -useful  
Plants- plants  
Useful plants sustain life.

Some are grown in the temperate zone.  
Douglas fir builds many homes.  
Hazelnuts and berries too,  
Oregon-grown for the world and you.

Useful -useful  
Plants- plants  
Useful plants sustain life.

Tropical plants imported on a plane,  
Chocolate, pineapple, sugar cane.  
The rainforest gives us medicinal plants,  
Southern farms grow cotton for underpants.

Useful -useful  
Plants- plants  
Useful plants sustain life.





# PLANTS? YES, MA'AM!

By Susan Harms and Laura Curry

Well, is this a plant?

Yes, ma'am!

Well, is this a plant?

Yes, ma'am!

Well, how do you know?

Its roots absorb water.

How else do you know?

It has a stem and leaves.

How does it reproduce?

Most kinds reseed themselves.

And how does that happen?

A plant grows where a seed fell.

Are there any other ways?

Seeds can float to distant shores.

What about the ferns and mosses?

They reproduce by spreading spores.

What is a plant's habitat?

They live all over the world.

Can you give me an example?

Cacti in the desert.

Can you tell me more than that?

Bamboo in the tropics.

What else can you tell me?

Grass on the prairie.

Well, is this a plant?

Yes, ma'am!

Well, is this a plant?

Yes, ma'am!

What do plants need?

Water, light and CO<sub>2</sub>.

And how do they use them?

They photosynthesize their food.

Why do animals need plants?

They give us oxygen to breathe.

Are there any other reasons?

They give the nourishment we need.

So are plants important?

Yes, ma'am!

To the whole earth?

Yes, ma'am!

And are there many species?

Yes, of course, quite a few!

Are there really 75,000?

Yes, ma'am, we thought you knew!

