**Webquest on Changing of Season**

The seasons are an annual cycle that tell us the time to plant, the time to harvest, the time to go swimming, and the time to go sledding. The amazing changes of color, flying snows, blooming flowers, and hot days are signals of the seasons.

Your job is to investigate the effects of these changes in the seasons on plants and animals. This knowledge will help the class make the decision as to which season of the year would be best for planting in our outdoor classroom to increase our plant and animal population.

Directions:

Our class will be divided into 5 groups of four. Each group will be working together to become experts in a specific area. You will work in your team to answer the research questions presented. You will gather the information and make illustrations using the on-line resources identified for each role. Classroom speakers will address the main topics of the effects of the changing seasons on weather, plants, and animals. You will keep notes on the information provided by the speakers and write a brief summary of each. The information these resources provide must be a part of the final presentation

Once all teams have become experts in their assigned topic, each expert will be assigned to a season group of one expert from each area. As a season group, you will create a multi-media presentation for the class in which the experts will make and defend their decision as to why a particular season would or would not be suited for planting to increase the plant and animal population of our outdoor classroom.

**Team 1: Weather**

Use the web to research items 2 - 6. When you go to each of these websites, read the articles carefully in order to collect your information and data. Each member of the team will need to collect the information and make his/her own charts and illustrations.

Links:

<http://www.learner.org/interactives/weather/watercycle.html>

[http://ww2010.atmos.uiuc.edu/(Gh)/guides/mtr/cld/cldtyp/home.rxml](http://ww2010.atmos.uiuc.edu/%28Gh%29/guides/mtr/cld/cldtyp/home.rxml)

<http://www.wdaftv4.com/wathisyr.html>

<http://www.epa.gov/OGWDW/kids/cycle.html>

1. What months are in each season? Use a calendar to find this information.
2. Make a chart dividing the months of the year into seasons and use to complete the following:

List the average high and low temperatures for each season.

List the average rainfall for each season.

List the average snowfall for each season.

1. Illustrate thermometers showing the average high and low temperatures for each season.
2. Keep a chart showing the high and low temperatures and rainfall for each day for two weeks.
3. What role do the water cycle and clouds play in the weather?
4. Make illustrations of the following:

The water cycle

The three principle kinds of clouds and the weather each indicates.

**Team 2: Plants**

Use the web to research items 1 – 6. When you go to each of these web sites, read the articles carefully in order to collect your information and data. Each member of the team will need to collect the information and make his/her own charts and illustrations.

Links:

<http://www.wildflower.org/collections/collection.php?collection=SC>

<http://www.zoomschool.com/subjects/butterfly/>

1. What is necessary for plant growth?

2. Why are plants necessary for the environment.

3. Flowering plants and shrubs can be categorized as annuals or perennials. Compare and contrast the characteristics of annuals and perennials using a Venn diagram.

4. Make illustrations of the following:

Choose and illustrate three South Carolina flowering plants that could be found in a butterfly garden in an outdoor classroom.

Design a simple butterfly garden which includes both annuals and perennials. Be sure to include the food source necessary for the caterpillar stage of the butterfly.

5. What changes occur to your plants during the different seasons?

6. What would be the best season of the year in which to plant your chosen annuals and perennials? List each and state the seasons.

**Team 3: Birds**

Use the web to research items 2 - 6. When you go to each of these websites, read the articles carefully in order to collect your information and data. Each member of the team will need to collect the information and make his/her own charts and illustrations.

Links:

<http://www.hiltonpond.org/ResearchBirdMain.html>

<http://www.math.sunysb.edu/~tony/birds/>

1. What is necessary for animals to survive?

2. Animals often have predators. What is a predator?

3. Animals are a part of the food chain. What is a food chain?

4. Make illustrations of the following:

Choose and illustrate three South Carolina birds that could be found in an outdoor classroom.

Choose one of the birds and illustrate its life cycle.

Illustrate a food chain in which your chosen bird might be found.

5. During what season or seasons of the year might you observe the birds you chose?

6. What is migration? How do the changing seasons affect migration of birds. If any of your birds migrate, which ones, where to and for how long?

**Team 4: Butterflies**

Use the web to research items 1 - 6. When you go to each of these websites, read the articles carefully in order to collect your information and data. Each member of the team will need to collect the information and make his/her own charts or illustrations.

Links:

<http://www.enchantedlearning.com/subjects/butterfly/allabout/>

<http://butterfliesofamerica.com/list.htm>

1. What is a butterfly? What are its characteristics? Make a small drawing showing the butterfly's anatomy.

2. Butterflies have predators. What is a predator? List several predators of butterflies.

3. Butterflies are a part of the food chain. What is a food chain?

4. Make illustrations of the following:

Illustrate and label the stages in the life cycle of the butterfly and its food source.

Illustrate a food chain in which a butterfly would be a member.

5. During what season or seasons of the year might you observe the butterflies you chose and the monarch butterfly?

6. Name three plants that might be in our outdoor classroom as food source for your butterflies.

**Team 5: Amphibians**

Use the web to research items 1 - 6. The When you go to each of these web sites, read the articles carefully in order to collect your information and data. Each member of the team will need to collect the information and make his/her own charts or illustrations.

Links:

<http://www.dnr.sc.gov/wildlife/herps/frogstoads.html>

<http://animals.howstuffworks.com/amphibians/frog.htm>

<http://www.kidzone.ws/lw/frogs/facts.htm>

1. What is an amphibian and what is necessary for its survival?

2. Amphibians often have predators. What is a predator?

3. Amphibians can be a link in a food chain. What is a food chain?

4. Make illustrations the following:

Illustrate these South Carolina amphibians: the frog and the toad that might be found in a water habitat in an outdoor classroom. Compare their characteristics.

Illustrate and label the stages in the life cycle of the frog.

Illustrate a food chain in which one of the amphibians is a member.

5. How do the changes of the seasons effect frogs and toads?

1. During what season or seasons of the year might you observe the amphibians?

**Multimedia Project**

One expert from each group will join a member from the other five groups and form four new groups, fall, winter, spring and summer. As a group, students will complete a PowerPoint project.

**PowerPoint:**

Introduction slide (must include your season and the names of those in your group)

2-3 slides on weather

2-3 slides on plants

2-3 slides on birds

2-3 slides on butterflies

2-3 slides on amphibians

Conclusion slide (this should tell us whether your season is a good time to plant to increase the population of plants and animals)

**Must Haves:**

Minimum of one picture per slide

Minimum of one video or sound clip per PowerPoint