

(SIM Lesson Plan)

Teacher: Domonique Ragni

Date: November 20, 2007

Grade: 3

Lesson Title: Roots of Plants

Time Allotted:

50 minutes

Lesson Overview:

In this lesson of the rainforest unit, the students will work in cooperative groups of 3. The students will learn about the plants that grow in the rainforest and learn about the roots of plants and how they grow. The students will keep a journal that contains their observations and thoughts during the process, and share with each other their findings. The students will be socially interacting with each other on to why they thought their observations might be correct.

Goal:

The students will learn how plants survive in different kinds of weather conditions.

Objectives:

Given materials below to grow their plant, students will record their observations of their experiment in their journals.

Given instructions of their specific roles, each group member will have the responsibility of carrying out their duties in the group.

Standards:

New York State Standards –

Standard 4 – Science

Students will understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science.

The Living Environment

1. Living things are both similar to and different from

each other and nonliving things.

Students:

• **describe the characteristics of and variations between living and nonliving things.**

• **describe the life processes common to all living things.**

This is evident, for example, when students:

- grow a plant or observe a pet, investigating what it requires to stay alive, including evaluating the relative importance and necessity of each item.

National Standards:

NS.K-4.3 LIFE SCIENCE

As a result of activities in grades K-4, all students should develop understanding of

- The characteristics of organisms
- Life cycles of organisms
- Organisms and environments

Materials:

Bulbs (flowers – daffodil, tulip...)

Shoe box

Sections of potatoes with eyes

Onion

Cutting of plants (such as begonias, or geraniums)

Stem of an iris

Sugar cane or bamboo (cut with a joint near the end)

Beet, radish, or carrot tops with a little of the root still attached

(Resources:)

http://www.rainbird.com/pdf/rainforest/rainbird_3-4.pdf

Group Size:

The class will be divided into 6 groups. There will be four students in each group.

Roles:

Leader – Makes sure everyone is on task and doing their assigned job.

Materials Manager – Makes sure all the materials are together and follow the procedure in order.

Encourager – Gives support to their team, letting them know they are doing a good job and to help where ever it is needed.

Introduction:***Task and Cooperative Goal Structure –***

Plants are very important in the environmental world. Not only are plants a mean of food for animals and humans, but some plants also provide oxygen in the world and are homes to some of the animals. During this lesson, the students will be completing an experiment in groups. This is help students learn to work together and compare their thoughts/ideas to what actually happened. Each group member will be assigned a role and it is their responsibility to carry out those duties of their assigned role. They will learn to work as a team and share all materials being given to them.

Development SIM/ Cooperative learning –

I will instruct the group members to pick their assigned roles for the group. The will then be given the materials needed to complete the experiment. They will follow the following steps,

1. Line the box first with plastic wrap or aluminum foil, next place sand into the box to a depth of 7-8 cm.
2. Moisten the sand well with water, and plant a variety of specimens.

3. Keep the experimental box out of direct sunlight.
4. Check on the specimens over a period of one week.

Over the course of one week, the students will share their observations with each other, discussing their thoughts and ideas of what they think will happen. They will record these predictions in their journals as well as new predictions they might have after discussing their own ideas with their group members.

Guided Practice/ Monitoring and Intervening –

I as the teacher will monitor and observe the groups working together, making sure that they are carrying out their roles for the group and answering any questions that they might be confused about. In addition to recording their predictions they will also have to answer the following questions in their journals as well as discussing and sharing them with their team. The questions are that follows:

1. Which specimen had the least root growth?
2. Count the number of roots of each specimen. What specimen had the most root growth?
3. How is ability to sprout roots from different parts of the plant a survival advantage?
4. Use a hand lens if available and closely examine the roots of each specimen and sketch what u see. Write down similarities and differences.
5. Sketch the root development of each of your specimens. Make sure to label each specimen in each sketch.

Closure/ Assessing and Processing –

The teacher will monitor the groups for both academic and social performance. Each student must have participated and carried out their roles during the assignment. They must have recorded their observations and predictions in their journals as well as

discussed them with their group members. They will be graded according to a social skills rubric and will be graded academically based on their writing skills in their journals.

Critique of Lesson –

Was I clear in explaining the purpose of this lesson to the students?

Did the students enjoy and work cooperatively during the group assignment?

What did the students benefit from this lesson?

Was I able to assess the students in a group as well as individually on academic and social goals?