

# Story of Thulani and Planting Sunflowers

**Time Frame:** 3 sessions 45 minutes each

## **Learning Standards:**

### *Life Science*

- Recognize that animals (including humans) and plants are living things that grow, reproduce, and need food, air, and water.
- Recognize that plants and animals have life cycles, and that life cycles vary for different living things.
- Recognize changes in appearance that animals and plants go through as the seasons change.

## **Skills of Inquiry:**

- Ask questions about objects, organisms, and events in the environment.
- Tell about *why and what would happen if?*
- Make predictions based on observed patterns.
- Name and use simple equipment and tools (e.g., rulers, meter sticks, thermometers, hand lenses, and balances) to gather data and extend the senses.
- Record observations and data with pictures, numbers, or written statements.
- Discuss observations with others.

## Lesson #1: Story of Thulani

### Student will be able to:

- Understand what makes a farm sustainable
- Understand the advantages of having a sustainable farm

### Materials:

- Paper
- crayons and/or markers
- Book Gift of the Sun

**Vocabulary:** sustainable, organic

### Anticipatory set:

Ask the students if they know what a sustainable farm is. Read the book Gift of the Sun and go over how Thulani's farm is a sustainable one. Inform the students that they will be drawing their own sustainable farms.

### Activity:

1. At each table there should be paper markers and crayons.
2. The students should draw their own sustainable farms. The farms should have at least four different aspects to it and the students should draw the connection between the different parts. For example: the animals provide manure, which provides fertilizer for the plants, which in turn provide food for the animals. All of these things provide food for the farmer.
3. The students should draw arrows to show how the farm is connected. They should also label the different parts of the farm.

**Closure:** Meet back on the rug as a group and everyone should share their pictures. Go over some of the ways that farms can be sustainable, did anyone come up with any new ways?

**Assessment:** Participation in activities and class discussion.

## Lesson #2: Planting Sunflowers

### Materials:

- Peat pots for each students
- Dirt
- Sunflower seeds
- Water

### Student will be able to:

- Plant their sunflowers.

### Vocabulary: seeds, germination

### Anticipatory set:

Talk about some of the things that plants need to grow. Plants need sun for energy and water for nutrients. They also need protection from predators—what are some predators of sunflowers?

### Activity:

1. At each seat there should be little peat pots for the students to plant their sunflower seeds. There should also plates with dirt in which the seeds will be planted.
2. The students should sit down at their tables and begin the process of planting their sunflowers.
3. The students should first put some dirt into the pots.
4. Then they should plant their seeds and cover with dirt.
5. To ensure that the sunflowers grow the students should give the plants a little bit of water and then put the sunflowers by the window so they can get lots of sunlight.

**Closure:** Tell the students that once the sunflowers grow big enough then the students can replant them in the garden. When the sunflowers are really small they are especially vulnerable to predators and thus they will have a better chance at survival if they are allowed to grow inside: away from insects.

**Assessment:** Participation in activities and class discussion.

### **Lesson #3: Moving Sunflowers to Garden**

**Materials:**

- Rulers
- Sunflowers from last lesson
- Spades to dig holes for sunflowers
- Watering pot
- Water

**Students will be able to:**

- Transfer their sunflower seeds to the garden.

**Anticipatory set:**

Inform the students that their sunflowers are big enough to be transferred outside. In fact, the plants need more room to grow so they can't stay in the little pots anymore.

**Activity:**

1. In the garden, there should be rows marked out with string (it's probably best to have four or five rows marked out). The children will plant their sunflowers in these rows.
2. Using a ruler the students should measure the height of their pots; they should use this length for the depth of the hole they dig for their plant. In each row the students should start to plant their sunflower seeds. Starting from one side and working to the other side of the row the students should use a ruler to plant their sunflowers exactly three inches apart.
3. Once all the sunflowers are planted the students should water all the plants.

**Closure:** Go over how the students witnessed the growth of the sunflower from seed to plant and that someday the plant will produce more seeds, which will grow into more plants.

**Assessment:** Participation in activities and class discussion.

# Sustainable Pizza

**Time Frame:** 1 session 45 minutes

**Materials:**

- Pre-made pizza dough
- Tomato sauce
- Cheese (from Cricket Creek)
- Pizza stones or cooking sheets
- Paper plates
- Pizza cutter or knife
- Worksheet
- Measuring cups
- Pencils
- *More ingredients if you want*

**Learning Standards:**

*Life Science*

- Recognize that people and other animals interact with the environment through their senses of sight, hearing, touch, smell, and taste.
- Identify the ways in which an organism's habitat provides for its basic needs (plants require air, water, nutrients, and light; animals require food, water, air, and shelter).

**Skills of Inquiry:**

- Ask questions about objects, organisms, and events in the environment.
- Name and use simple equipment and tools (e.g., rulers, meter sticks, thermometers, hand lenses, and balances) to gather data and extend the senses.
- Record observations and data with pictures, numbers, or written statements.
- Discuss observations with others.

**Student will be able to:**

- Understand the connection between their pizza and the cheese they made during the field trip to Cricket Creek.
- Apply knowledge of fractions.
- Make their own pizzas

**Vocabulary:** sustainable

**Anticipatory set:**

Discuss the field trip to Cricket Creek, how did the students make cheese. What type of foods can cheese be used for? Today the students will be making pizza!

**Recommended Reading:**

- Bread is for eating by David and Phillis Gershator ISBN 0-8050-3173-1

**Activity:**

1. Split the class into groups of four and each group can share a pizza. Have pre made dough ready.
2. At each table there should be pre-made pizza dough, tomato sauce and cheese (kids can shred the cheese if you want). (you can also put more toppings on the pizza like chopped basil, pepper, ect...)
3. The students should roll out the pizza dough and put the toppings on the pizza. Have the students measure out the amount of tomato sauce so that they get practice using the measuring cups.
4. When the students have finished, put the pizza in the oven for 10-15 minutes.
5. While the students are waiting for the pizza have them fill out the attached worksheet.
6. Once the pizza is done the students should divide the pizza and enjoy! They should know what fraction of the pizza each of them gets.

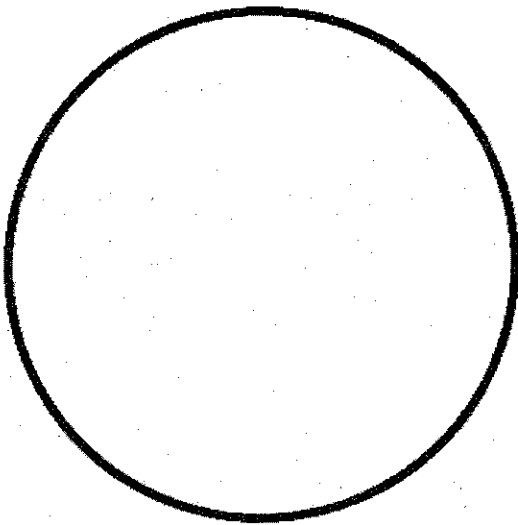
**Closure:** remind the students that they made the cheese on top of their pizza. Emphasize that a lot of work goes into making each individual ingredient. Read a book while the students are eating their pizza.

**Assessment:** Participation in activities, worksheet and class discussion.

1. I am sharing my pizza with \_\_\_\_\_  
(how many people)

2. If each person is getting one piece of pizza how many slices  
of pizza do you need to cut? \_\_\_\_\_

3. Draw how you will cut the pizza?



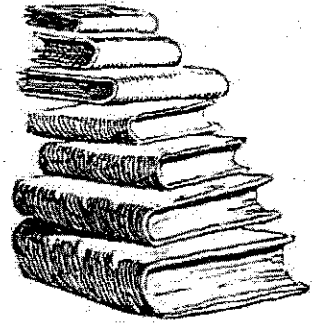
4. What fraction of the pizza will you get if you have two  
slices? \_\_\_\_\_

5. If one person in your group gives you their piece of pizza,  
what fraction of the pizza will you have? \_\_\_\_\_

6. How do you write this using a math equation?

\_\_\_\_\_

# Garden Reading!



## List of suggested books for the Garden Unit:

- Bread is for eating by David and Phillis Gershator ISBN 0-8050-3173-1