

Changing With The Seasons

A Silver River Museum Hands-on Lesson



- ◇ View the Silver River Museum video *Changing With The Seasons* found at <https://youtu.be/Rpx7YSzXdfU>
- ◇ Complete the hands-on activity along with the video
- ◇ While watching the video, fill out the sheet below.
- ◇ You may need to pause the video or watch parts of it more than once

Learning Goal- By the end of this lesson, I will be able to describe how pine trees respond to changing seasons.

1. Pine trees reproduce with
 - a. flowers.
 - b. spores.
 - c. cones.
 - d. rhizomes.

2. Fill out the data table below with the measurements from the video and with your measurements from home.

Pine Cone Measurements in Centimeters		
	Before Placing in Water	After 1 Hour in Water
Erin's Pine Cone	30 ½	18
My Pine Cone	answers will vary	answers will vary

3. How did the pine cone change after being in the water?

The pine cone scales closed up, causing it to get smaller around.

4. What do you think would happen if you let the pine cone dry out? Why?

Answers will vary, however if students actually do this they will notice the scales will open back up.

Use the chart below to answer questions 5-6

Average Rainfall and Temperature for Ocala, Florida			
Season	Rainfall in inches	Average High Temperature °F	Average Low Temperature °F
Winter	3.01	73	46
Spring	3.29	84	57
Summer	6.87	93	71
Fall	3.74	85	60

5. During which season do you think pine cones will be closed? Explain your answer.

During the summer because the average rainfall is 6.87 inches, much higher than every other season.

6. The seeds of a pine tree are fertilized and begin to grow in the spring, during this time they are not ready to fall from the cone. They will be released when the high temperature is no higher than 85° and the low temperature is no lower than 50°. Which season will they be released in? Explain your answer.

During the fall because the average high is 85 and the average low is 60.

7. Describe how pine trees respond to each season by labeling the correct season for the pictures below.



Pollen is released from pollen cones to fertilize the seed cones.

Spring Season



Seeds drop from the seed cones to the ground, where they will begin to germinate.

Fall Season



Seed Cones remain closed due to wet weather. Seeds cannot be released at this time.

Summer Season