



TRACKING VEGETABLE GROWTH RATES

PLAN AHEAD:



Do this activity 4-6 weeks after planting depending on the type of vegetable being measured.

PURPOSE:



Measuring the growth of vegetables in your garden will increase students' observation skills and can be used to develop math fundamentals. The size of a vegetable also changes the taste. Noting the taste compared to size of vegetable will further harvest knowledge.

MATERIALS:



- Flexible measuring tape
- Popsicle sticks or string
- Marker
- Growth Rate Worksheet
- Vegetables Growing:
 - Peas (Spring)
 - Broccoli (Spring/Fall)
 - Cucumbers (Summer)
 - Tomatoes (Summer)
 - Zucchini (Summer)

PROCEDURE:



1. Explain to students that vegetables may grow at different rates throughout the growing season depending on variables in the garden. Keeping track of how they grow is a fun way to practice observation and math skills. When the part of the plant that we eat starts to form, it's time to start measuring!
 2. As a class decide on 1 type of vegetable that you will track. Choose 4 vegetables of that 1 type that you will measure each week.
 3. Number each vegetable by attaching a very loose string and numbered tag to their stems or by placing a numbered Popsicle stick in the ground next to the plant. If necessary, change the ties as the vegetables grow. A tight string could prevent the vegetable from growing properly
 4. Every week, measure the circumference of vegetable # 1, #2, # 3, and # 4 using a flexible tape measure (one used for sewing works best). Measure around the widest part of the vegetable and try to measure the same place each week. Convert any fractions into decimals for recording.
 5. Record the measurements on the worksheet chart each week and complete conversions as instructed.
 6. On week 4, compute the average weekly growth.
- BONUS: Select 4 other vegetables of the same type being measured (different from the 4 being tracked for measurements). Taste test one per week. Week 1 taste vegetable #1, week 2 taste vegetable #2 and so on. Record findings on BONUS worksheet charts.



Tracking Vegetable Growth Rates

- Use this tracking sheet to record the growth of 4 of the same vegetables growing in your garden.
- Write the type of vegetable you will be tracking in the space below.
- Remember to mark each vegetable in your garden (#1, #2, #3, #4), so that you can keep track of which one you are measuring each week.

Type of Vegetable: _____

(# 1)	Circumference		Diameter	
	Date - _____	Inches	Centimeters	Inches
Week 1:				
Week 2:				
Week 3:				
Week 4:				
Total Growth				
Average Per Week				

(# 2)	Circumference		Diameter	
	Date - _____	Inches	Centimeters	Inches
Week 1:				
Week 2:				
Week 3:				
Week 4:				
Total Growth				
Average Per Week				

(# 3)	Circumference		Diameter	
	Date - _____	Inches	Centimeters	Inches
Week 1:				
Week 2:				
Week 3:				
Week 4:				
Total Growth				
Average Per Week				

(# 4)	Circumference		Diameter	
	Date - _____	Inches	Centimeters	Inches
Week 1:				
Week 2:				
Week 3:				
Week 4:				
Total Growth				
Average Per Week				

- To determine the diameter (d), using the circumference (C) use this formula: $d=C/\pi$ *note that $\pi = \text{approx. } 3.14$
- To covert inches to centimeters remember that 1 in = 2.54 cm



BONUS: Tracking Vegetable Growth Rates – Taste Tests

- Select 4 other vegetables of the same type being measured (different from the 4 being tracked for measurements).
- Measure and record circumference and diameter of each and then note if/how size effects taste and/or texture of each vegetable.
- Taste test one per week. Week 1 taste vegetable #1, week 2 taste Vegetable #2 and so on.

(# 1)	Circumference		Diameter		Taste/Texture
	Date - _____	<i>Inches</i>	<i>Centimeters</i>	<i>Inches</i>	<i>Centimeters</i>
Week 1:					

(# 2)	Circumference		Diameter		Taste/Texture
	Date - _____	<i>Inches</i>	<i>Centimeters</i>	<i>Inches</i>	<i>Centimeters</i>
Week 2:					

(# 3)	Circumference		Diameter		Taste/Texture
	Date - _____	<i>Inches</i>	<i>Centimeters</i>	<i>Inches</i>	<i>Centimeters</i>
Week 3:					

(# 4)	Circumference		Diameter		Taste/Texture
	Date - _____	<i>Inches</i>	<i>Centimeters</i>	<i>Inches</i>	<i>Centimeters</i>
Week 4:					