

**PROJECT: DISCOVERY**

**CAREER EXPLORATION  
CURRICULUM**

**SAMPLES**



**education: associates**  
**Job Ready. Life Ready.®**

**EXCERPTS PROVIDED:**

- 1. Pre-Post Test**
- 2. Work Performance Benchmarks**
- 3. First Look at Greenhouse Work**
- 4. Student Instructions**
- 5. Student Instructions: Activity**
- 6. Parent Involvement Brochure**
- 7. Certificate of Accomplishment**

**GREENHOUSE WORK – PRE/POST TEST**

ITEM # 1704

**Directions:** Read each item and decide which choice best completes the statement or answers the question.

1. Germination tests are performed to determine the:
  - A. amount of sun required.
  - B. number plants needed.
  - C. sprouting ability of seeds planted.
  - D. depth for planting seeds.
2. What item is needed to perform a germination test?
  - A. Soil.
  - B. Filter paper.
  - C. Bacteria.
  - D. Fertilizer.
3. Which of the following measures of soil, peat moss, and vermiculite (perlite) would result in a good soil mixture?
  - A. More soil.
  - B. Equal parts of each.
  - C. More peat moss.
  - D. Less peat moss.
4. Which tool should be used to combine the soil mixture?
  - A. Dibble.
  - B. Trowel.
  - C. Wire strainer.
  - D. Spade.
5. The depth and amount of soil required to plant a seed depends on:
  - A. pot size.
  - B. number of seeds.
  - C. seed size.
  - D. soil mixture
6. Why are seedlings transplanted?
  - A. To transport the plant.
  - B. To provide fresh nutrients and encourage root growth.
  - C. To increase the growth rate.
  - D. To provide fresh nutrients for grafting.
7. What is necessary to transplant a seedling?
  - A. Grafting.
  - B. Loosely covering roots.
  - C. Larger pot.
  - D. New soil mixture.
8. "Propagate" means to \_\_\_\_\_ new plants.
  - A. support
  - B. separate
  - C. transplant
  - D. grow
9. "Graftage" means placing part of one plant:
  - A. in a soil mixture.
  - B. on another plant.
  - C. in a greenhouse.
  - D. on another vein.
10. What is used to hold together plant parts that are being grafted?
  - A. Wire.
  - B. Sap.
  - C. A rubber band.
  - D. toothpicks.
11. How much do you know about working with plants in a Greenhouse?
  - A. Nothing.
  - B. Very little.
  - C. Some.
  - D. A lot.
12. How prepared are you to make a decision about a career in working with plants in a Greenhouse?
  - A. Not prepared.
  - B. Prepared very little.
  - C. Somewhat prepared.
  - D. Very prepared.

# GREENHOUSE WORK - WORK PERFORMANCE BENCHMARKS

Client's Name: \_\_\_\_\_ Date: \_\_\_\_\_

**ITEM # 1710**

Trial Number    1    2    3    4    5    6    7    8    9    10

Overall Rating: 1 2 3 4

Performance Scale

## Activity 1 - Testing Seed for Germination

- (a) Placed filter paper in bottom of petri dish.
- (b) Dampened filter paper with a small amount of water.
- (c) Placed 10 seeds on filter, and put lid on dish.
- (d) Placed dish in sun and kept damp.
- (e) Calculated germination percentage after five days.

1.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
	Yes		No	
(a)				
(b)				
(c)				
(d)				
(e)				

## Activity 2 - Mixing Potting Soil

- (a) Measured one cup of soil, one cup of peat moss, and one cup of vermiculite into mixing pan.
- (b) Mixed ingredients well with trowel
- (c) Covered pan with plastic film wrap.

2.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
	Yes		No	
(a)				
(b)				
(c)				

## Activity 3 - Growing Plants from Seed

- (a) Placed 4 1/2" pot in mixing pan, filled pot using the trowel, tapped pot lightly on a table, and used the bottom of the 2 1/2 pot to press the soil down.
- (b) Sprinkled some seeds on the soil, spacing them; shook soil, using a strainer, to provide a cover twice as deep as the size of the seed.
- (c) Watered soil until moisture showed on the surface, covered pot with plastic, and placed in light.

1.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
	Yes		No	
(a)				
(b)				
(c)				

## Activity 4 Transplanting

- (a) Mixed equal parts of peat moss, soil, and vermiculite in the mixing pan.
- (b) Filled five 2 1/2" pots and placed them in the draining pan.
- (c) Manipulated the wooden pot label to lift the seedling from the pot.
- (d) Held seedling in one hand, made a hole in the soil of 2 1/2" pot.
- (e) Placed the seedling in the hole up to the leaves, pressed soil firmly around the seedling with thumb and forefingers.
- (f) Transplanted four more seedlings following procedures.
- (g) Watered plants.

4.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
	Yes		No	
(a)				
(b)				
(c)				
(d)				
(e)				
(f)				
(g)				

## Activity 5 - Stem Cutting

- (a) Placed one stem cutting in a jar or glass filled with water.
- (b) Filled 2 1/2" pot with sand and poured water in.
- (c) Manipulated wooden pot label to make a hole in the center of the sand, put cutting into the hole and pressed sand firmly around it, and placed the pot in a plastic bag.
- (d) Filled 2 1/2" pot with perlite or vermiculite to the top and wet the material
- (e) Manipulated the wooden pot label to make a hole, placed the cutting into the hole and pressed the vermiculite firmly around the stem.
- (f) Compared roots after several weeks.

5.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
	Yes		No	
(a)				
(b)				
(c)				
(d)				
(e)				
(f)				

## Activity 6 - Other Plant Propagation Methods

### *Rex Begonia*

- (a) Placed peat moss or sand in 4 1/2" pot, wet the medium.
- (b) Manipulated a knife to cut a large, healthy leaf from the parent begonia plant leaving about 3/4" of the leaf stalk.
- (c) Manipulated a knife to cut the largest vein completely through.
- (d) Placed leaf top side up on the wet medium in the pot, stuck the leaf stalk into the medium; used hair pin to hold leaf in place.
- (e) Covered the pot with plastic wrap and placed the pot out of bright light.

1.	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
	Yes		No	
(a)				
(b)				
(c)				
(d)				
(e)				

# FIRST LOOK AT GREENHOUSE WORK



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1

A **greenhouse worker** grows plants. A **greenhouse worker** can also be called a gardener.

A **greenhouse worker** works in a **greenhouse**.



2

# GREENHOUSE WORKER STUDENT INSTRUCTIONS

Greenhouse workers spend all day working with plants!

Greenhouse workers:

- Plant, grow, harvest and transplant trees, shrubs or plants
- Spray, weed, fertilize and water plants and shrubs, using hand and gardening tools
- Dig, cut, and transplant seedlings, cuttings, trees and shrubs
- Haul and spread topsoil, fertilizer, peat moss, and other materials to condition the soil

Greenhouse workers work in greenhouse facilities, sometimes called nurseries. They can also work at a customer's home or building location.

In this kit, you will learn to:

- Test seeds for germination
- Mix potting soil
- Grow plants from seed
- Transplant plants
- Root stem cuttings
- Grow plants using propagation methods
- Graft one plant to another
- Build a small greenhouse



# ACTIVITY 1: TESTING SEEDS FOR GERMINATION

Germination is the sprouting ability of seed. Most seeds sold today have been tested and their germination is known. However, if the sprouting ability is not known, germination is a good way to see if seeds can still be used to grow new plants.

## In this activity, you will learn to:

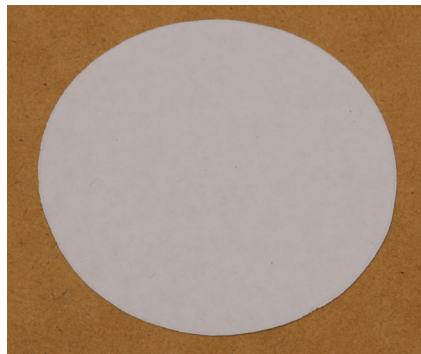
- Define germination
- Test seeds for germination
- Figure germination percentage



## Materials needed from the kit:



Seed packages



1 piece of filter paper



1 petri dish

## Materials you need to get:

- Additional seeds (optional - from a vegetable such as a bean)
- Water
- Sunlight

## A MESSAGE TO PARENTS

To help establish a clear channel for communications from home-to-school and school-to-home, we have created the **Parent Involvement Brochure**.

Education Associates knows that maintaining a positive relationship with your child's school improves your child's experience in the classroom. Throughout the year, when your child's class begins a new module, you will have the opportunity to review the skills and knowledge they will gain by performing the activities in each kit. As your child performs each activity, they will explore their own strengths, preferences and interests.



## ACTIVITIES

- Activity 1 - Testing Seed for Germination
- Activity 2 - Mixing Potting Soil
- Activity 3 - Growing Plants from Seed
- Activity 4 - Transplanting
- Activity 5 - Stem Cuttings
- Activity 6 - Other Plant Propagation Methods
- Activity 7 - Graftage
- Activity 8 - Building a Small Greenhouse (Optional)



# PARENT INVOLVEMENT BROCHURE

## "Greenhouse Work"



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project: discovery  
**Job Ready.**



Approved & Validated

# Certificate of Accomplishment

This certifies that

\_\_\_\_\_

has successfully completed the necessary requirements for the

Project Discovery kit entitled "Greenhouse Work"

and in recognition thereof is presented this certificate,

this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

\_\_\_\_\_  
Instructor

\_\_\_\_\_  
Director

