Examples of Units with Product Choices

**What Is The Topic Or Unit Of Study?**

**Fertilization and pollination of plants**

# Articulate Learning Goals For The Topic, Unit, Or Lesson

**What should students know?** (facts, events, dates)

* Distinctions between two main plant groups.
* Names of the parts of plants that are involved in pollination.
* Identification of kinds of seeds.
* How fertilization and pollination take place

What big ideas should they understand? (Big ideas or principals central to the topic)

* There is a balance of nature in the world contributing to a species survival.
* Interdependence between plant and animal species helps the survival of the species.
* The physical characteristics of plants and animals complement each other as part of the balance of nature.

**What should they be able to do? (skills)**

* Label parts of plants.
* Classify plants into groups according to fertilization patterns.
* Invent a plant species and show how it complements its pollinator partner.

**Opening Doorways To Understanding:**

Develop and plan learning experiences that address the learning goals using Gardner’s Entry Point approach.

**Entry Point**

1. Slide show about plants that will show how plants are designed to be fertilized and pollinated in certain ways. This will be an interactive discussion using a naturalistic and aesthetic entry point.

Class discussion showing how plants are designed to complement features of animals to assure pollination and fertilization

**Assessing students’ developing understandings and identify** **misconceptions using exit or assessment activities.**

##### Assessment opportunities and exit points

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Exit points or points for assessing understanding

(Differentiation points by interest: type of pollination and fertilization process: bird, insect, and features of nature like air)

Overall assignment: Invent a plant that will attract or be appropriate to the pollinator. The group will draw, build or dramatize a new species of plant and show how it will be pollinated and fertilized.

#### OPTIONS

**Builders**: Create a 3 dimensional model of a plant you invent. You must label the parts and show how it is adapted to its pollinator. (goals

**Film makers**: You are planning a movie called “We need each other”. You will invent a fictitious plant and show how fertilization takes place with the bird, insect, or nature. We will give you the characteristics of your pollinator and you will need to make sure the plant you invent will attract its pollinator.

**Performing artists.** Become 2 plants and act out how they are pollinated and fertilized. One of you will be the species attracted to your plant. Show how the species fits the plant. Also label the parts of the plants that are important to reproduction for your plant. Remember in your play the plants and animals can talk.

##### pe03704_Resources: Access to content that use different ways of knowing: (text, primary sources, technology, interviewing, web quests)

1. Text

2. Teacher

3.slide show

4.

5.

**Follow-up writing activity**

Pretend you are a humming bird. Tell about your adventures with the flowers and how you help them to produce fertilized seeds.

Assessment criteria:

pe03704_Understanding Organizer

**What Is The Topic Or Unit Of Study?**

**Middle Colonies: A mixture of many cultures**

# Articulate Learning Goals For The Topic, Unit, Or Lesson

**What should students know?** (facts, events, dates)

Who colonized New York, New Jersey, Delaware, and Pennsylvania

Why did these groups come?

When did they arrive?

Who were the leaders?

What big ideas should they understand? (Big ideas or principals central to the topic)

* A society is made up of diverse groups or cultures.
* Each group makes unique contributions to society.
* Cultural groups can be assimilated and remain unique simultaneously.
* Society can be enriched or divided by cultural influences.

**What should they be able to do? (skills)**

* Develop graphic organizers to show reasons for colonization
* Compare and contrast cultures comprising colonies.
* Develop a timeline chronicling the arrival of cultural groups.
* Defend the statement that the colonies were a salad not a sauce.
* Use the internet and or family interesting o find history of their anscestors and how they came to Garrett County.
* Develop graphs to compare and contrast the cultures represented in Garrett County

**Opening Doorways To Understanding:**

Develop and plan learning experiences that address the learning goals using Gardner’s Entry Point approach.

**Entry Point**

1. What makes an ice cream Sunday? Using an analogy to understand the learning goals (Students will see that an ice cream sundae is like a society made up of distinct parts that are good in an of themselves but together they each contribute a unique flavor that enriches the experience.

2. Class discusses the sundae in relation to the learning goals as a review of information already learned about the cultures colonizing Middle Colonies.

* A society is made up of diverse groups or cultures.
* Each group makes unique contributions to society.
* .Society can be **enriched** or divided by cultural influences.

Assessing students’ developing understandings and identify misconceptions using exit or assessment activities.

##### **Assessment opportunities and exit points**

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Exit points or points for assessing understanding

(Differentiation points by talents: building, drawing: performing arts

Overall assignment: Identify 3 separate groups that colonized the middle colonies. For each of the groups you must tell who the group is, where it settled in the colonies: why the group came to the colonies, and describe at least one contribution that group made to the society.

#### OPTIONS

**Builders:** You must build a model of the Middle World Colonial settlement formed by three different cultural groups. Include the town and the farmlands that may lie on the outskirts of the town. Remember the different groups of colonists settled in your colony for different reasons. We should be able to recognize these reasons by looking at the structures in your model. Be prepared to tell us what contribution the settlers made to the colony.

**Artists:** You will create a story board for a new movie called “Welcome to the Middle World” You movie will have three acts; one for each of three different groups. Each act will depict three scenes: the first will show where the group started and why. The second scene will show the group happily settled in the colony living according to their dream. The final scene will show at least one contribution the group made to the colony.

**Colonial performers:** You will conduct a town meeting that was called to record the history of the Middle World Colony. The governor of the colony is interviewing colonists from three different groups. He needs find out where they came from and why, and when they settled in? The governor is particularly interested in finding out how each group is contributing to the success of the colony