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Lesson: Houghton Mifflin Science "Discovery Works" Teaching Guide
Grade 3

A

Lesson: Chapter 2 Investigation 3 Evergreens

A. Standards; objectives / requisite skills / learner outcomes:

Standard(s):

Cognitive objective(s): At the completion of this lesson, learners will be able to identify different evergreens and explain their life cycle.

Affective objective(s): Learners will be completing a worksheet on the lifecycle.

Psychomotor objective(s): The learners will be observing the teacher explain the lesson.

B. Assessment plan:

Formative:

- Evaluation criteria: See worksheet

Summative:

- Evaluation criteria: There will be information dealt, information seen, and information practiced regarding evergreens.

Modifications for learners: Have Johnny sit in the front so he can hear.

C. Multiple intelligences: Select one primary (p) and one secondary (s)

 p verbal linguistic

 musical/rhythmic

 visual/spatial

 intrapersonal

 logical/mathematical

 interpersonal

 bodily/kinesthetic

 s naturalistic

Application in regard to content, process, products: The students will be listening to me talk and learning about evergreens.

E. Materials / equipment needed:

Teacher: Discovery Works textbook

Students: Discovery Works textbook, Worksheet

I. Assumptions: What prior knowledge do students hold and how will prior knowledge be activated? What prerequisite skills have learners mastered?

The students will know the life cycles of plants in general, especially flowering plants from the beginning of this chapter. They should also know what an evergreen looks like.

L. Technology: What, if any, use of instructional tech. are involved during instruction, learning tasks, and/or assessment?

None	
Pacing / Time Allotted	<p><i>Detailed planning: Write plans to a level of depth that would allow another teacher to use the plan to deliver the instruction. Script the learning target(s), transitions, conclusion, and key questions.</i></p> <p>M. Lesson planning of instructional activities & learning tasks:</p> <p>1. Anticipatory Set: (set induction / introduction / focusing event / activating prior knowledge) “Okay class, season are we in right now?” Student: “Fall” Me “That’s right and what happens to the trees during fall?” Student: “They lose their leaves.” Me: “How do you think an evergreen differs from other trees?”</p> <p>Statement of Objective (scripted): “Today we are going to learn what evergreens are unique and how they continue to grow.”</p> <p><i>Transition: Everyone please pull out your science books</i></p> <p>2. Input: Outline of presentation – steps / strategies / modeling (means of instruction, learning tasks, active engagement) <i>Include what teacher will do & what students will do. Script key questions.</i></p> <p>A. “Evergreens don’t have leaves, they have needles. Those needles never fall off like on other trees. Some evergreens reproduce by their cones but not all evergreens have cones. The ones that do are called conifers.” “Evergreens first start off as a pinecone, that pinecone has seeds in it that a put into the ground. That seed turns into a seedling which is a baby tree, that seedling then keeps on growing until it is an evergreen.”</p> <p>B. “There are two different kinds of cones. Ones that release pollen and ones that receive pollen. Cones are made up of scales, like on a fish.”</p> <p>C. “More evergreens are made when the seeds from the cones land in soil and are nurtured by water and sunlight.” “Guess where the best place for a seed to fall would be.” “On a rotting log!” “It sounds silly but rotting logs have everything a seed needs to grow.”</p>

Sometimes seeds fall onto an area where they cannot grow.”

- D. “Are forest fires all bad or can they be good?” “The other difference that evergreens have is that if they get too much water, the seeds in the cones can’t dry out and end up rotting. Dry air allows the seeds to open up. Some pines like the lodgepole and the jack pines need heat as hot a fire just to open up and reproduce.” “So in this case, fire can be good!”

Transition: “Now that we know a little about the lifecycle of evergreens, let’s go through it again.”

3. **Guided Practice:** “On the board, I have the cycle of an evergreen. Together we are going to fill in the words.” Have volunteers come up and fill in the words.

Transition: “I have a worksheet for you to fill out, feel free to use your book.”

4. **Evidence of Learning:** *How will you know when the learners have reached the objectives? What type of feedback is provided? How is assessment aligned with the objectives / skills? Will students be involved in assessment / reflection upon their own learning?*

They fill out the worksheet correctly.

5. **Closure & Independent Practice:** (transfer of learning / assignment) *How does the assignment support mastery of the objectives / skills? How will the assignment be evaluated?*

The students will go home and bring back pinecones for the next day. As a class we will classify them.

Closing Statement (scripted): “I want all of you to bring at least one pinecone to class for tomorrow. Once we are done classifying them, we will string them up for decoration!”

N. Evaluation & reflection of teaching / learning: *Respond with thoughtful, professional insights that go beyond superficial considerations. For example, consider whether and how you know that students reached the learning targets, what strategies might have led to improved instruction, whether assessments provided useful data, and the extent to which the whole class, individuals, and subgroups achieved the objectives. How did I teach? What did I learn about my*

teaching? What specifically do I need to work on for improvement? What missed opportunities for learning can I identify? What is to be taught next? How will data from the assessment guide future instruction?

- 1. As I reflect on the lesson, to what extent were students productively engaged?**
- 2. To what extent did the students learn what I intended? Were instructional objectives met?**
- 3. To what extent did I alter my objectives or instructional plan as I taught the lesson? Why?**
- 4. To what extent did I practice effective classroom management strategies? What issues do I need to address when I teach again?**
- 5. To what extent did I provide closure to the lesson?**
- 6. If I had the opportunity to teach this lesson again to the same group of students, what would I do differently? Why? How would this affect the outcome of this and future instruction?**