

5E LESSON PLAN
EDUC. 329 ELEMENTARY SS METHODS
Natural Resources Relay
Outside (or room 371)

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Date: May 11, 2018

Subject/ Grade Level: 5th & 6th Grade

Materials:

- Baskets
- Pictures of goods
- Carrots and celery to represent natural goods cake mix or candy to represent processed goods [engagement]
- Space for the relay race to occur
- Slips of paper for “From wheat to bread” activity
- Bucket of processed goods made from wheat
 - Flour
 - ketchup/ mustard/ mayo
 - Cereal
 - Shampoo
 - Makeup
 - Stir fry sauce
 - Gum
 - Cookies/ Candy
- Anchor chart for vocabulary
- Anchor chart for Norman Borlaug (?)
- Tape/ scissors

Iowa Core SS Standards:

SS.5.13. Describe how goods and services are produced and distributed domestically and globally.

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Lesson Objectives:

- Students will identify natural resources that are used to make products that we use everyday
- Students will differentiate between a natural resources and an “intermediate good” or processed good.
- Students will articulate why natural resources are important to our economy and the role that Norman Borlaug played in the processed goods that we have.

Background Information:

- Students’ prior knowledge should include knowing how certain things are processed to get from “farm” to “table.” Students should have a general understanding of what it means for something to be processed, or produced in a factory versus something that grows or comes naturally.

Differentiation strategies to meet diverse learner needs:

ADHD: For students with ADHD, we are keeping the lesson as active as possible. When students are waiting in line, we will pass out the pictures before the relay race, which will give them something to fidget with.

Autism: If there is a student with Autism in our group, we will have one of the three teachers stay with that particular student to reiterate the lesson.

Allergies: For students with food allergies, they will be kept away from the food items and the teacher who is holding them. We recognize that there are also some students who have outdoor allergies (such as grass). If they are unable to sit in it, they will be allowed to stand in the back of the group while the rest of the students are sitting in the grass.

Vision Impairment: Pair student up with a classmate. Have the classmate read him the relay cards and have the impaired student tell his partner which bucket to place it in. Have his/her partner run for him/her.

ENGAGEMENT

-Describe how the teacher will capture the students' interest.

Students will come into the classroom/our area outside and sit down in front of the teacher. One teacher will be holding couple examples of a natural resources (carrots and celery). Another teacher will be holding a few processed goods (cake mix and candy). The teacher who is not holding any of the goods will begin by saying:

1. "Good morning friends! What is different about these two products? [Allow students the chance to offer some ideas.]
2. "Where could you buy these things?"
3. Could you grow these things?"
4. What do we call something that is grown and taken right from the ground?"
5. What about something that has to go through a factory before someone can buy it? "

-refer to anchor chart

-discuss vocab

"Today, we're going to talk about the differences between natural resources and processed goods and how Norman Borlaug capitalized on natural resources to end hunger."

-explain relay race activity and safety issues.

SAFETY

- Running in close proximity to each other can lead to collisions and accidents, therefore we have the following conditions.
 - The gym space will be partitioned by a line. The students must stay on his or her respective side of the line until approaching the buckets
 - students cannot begin running until the previous person has gotten all the way back.
- Food/ wheat product handling
 - Although exploration of food products will be part of the lesson, the students will be reminded that they are not to eat these materials at any time.

EXPLORATION

-Describe the hands-on/minds-on activities the students will be doing.

-List the "big idea" conceptual questions the teacher will use to encourage and/or focus students' exploration

1. Number students off by 2's.
2. Explain relay race

They will take an image from the pile at the start of the line, then they will walk/race to the baskets (Earth, Store, Factory, Farm) and decide which basket to put it into. They will place the picture in the basket and proceed to walk/race back to their line and send the next person. This will repeat for an even number of turns for each group. The students will have to look at the card and make a rather quick decision of where they should place their good. This will stimulate their minds and get them thinking about the true source of these everyday goods.

-How will you decide where to place your picture?

-What factors may lead you to think it may be a natural resource?

EXPLANATION

-Student explanations should precede introduction of terms or explanations by teacher.

- How will the teacher help student connect their exploration to the concept under examination?

- List higher order thinking questions the teacher will use to solicit student explanations and help them to justify their explanations.

1. Discuss placement of each picture and why a certain picture may be placed in each basket.

- How can you tell this is made from a natural resource?

- Where do you think this came from?

- Which products do we have the most of?

- Which natural resources do you think is more valuable?

1. Split group into 2
2. Discuss who Norman Borlaug was.

- "Who was Norman Borlaug? (He saved billions of people from starving to death through his knowledge of cross-breeding wheat which led to an increase in wheat production.)

What did he do? What product did he focus on? (wheat) Why was wheat such a good option for ending starvation? What do we use wheat for today?

3. Number students off by 2's

Order the process of world to table:

Students will have a set of processes to get from natural world to their everyday lives.

From wheat to flour activity:

1. **Wheat is grown on the farm.**
2. **Wheat is harvested and sent to the mill.**
3. **Wheat arrives in the mill.**
4. **Wheat goes through a cleaning process to remove impurities.**

5. Wheat is separated and stored based on quality.
6. Wheat is cleaned a second time and separated by the size of each grain.
7. The wheat is put into conditioning bins where it is moistened to prevent breakage.
8. The cleaned, conditioned batches of wheat are mixed together and ground to the consistency of flour.
9. Flour is shipped from the mill to the store.
10. The consumer buys the flour to bake with.

ELABORATION » Baker without natural resources

- Describe how students will develop a more sophisticated understanding of concepts.

To elaborate on how natural resources are necessary to produce processed goods, the students will explore a box of wheat products and determine what the similarity between the products is. Have students sit in a circle and pass the products around. Tell students to think about what they have in common (all produced goods and all contain wheat). The co-teachers will again discuss Norman Borlaug's contribution to agriculture and how without wheat, we would not have any of these products.

- What vocabulary will be introduced and how will it connect to students' observations?

Natural resources & processed goods » these two terms will be introduced and woven throughout the lesson. Initially, the students will identify them based off of what they recognize about both kinds of goods. The terms will then be established verbally and on an anchor chart before the relay race. Throughout the remainder of the lesson, they will be encouraged to interact with these two particular types of goods, which will help them further connect and apply their knowledge of both.

- How is this knowledge applied in our daily lives?

Throughout the entirety of the lesson (whether it is the examples of natural resources and processed goods at the beginning of the lesson, the picture cards that the students will analyze during the relay race, the items/products of the sorting activity or even the bakery scenario), the students will be exposed to natural resources that are visible and crucial in our everyday lives. [Some examples might be the sun (in order for plants to grow); plants (because they give us both food and some medicinal relief); air; wind (wind energy); water (something to drink, hydroelectricity)]

EVALUATION » Looking at the pictures again and identifying where they belong - activity?

At the end of the lesson, the students will participate in a "think, pair, share" with the prompt of "If Norman Borlaug had never shared his discoveries, what would your life be like today?"

Sentence Strips:

From wheat to flour activity

Wheat is grown on the farm.

Wheat is harvested and sent to the mill.

Wheat arrives in the mill.

Wheat goes through a cleaning process to remove impurities.

Wheat is separated and stored based on quality.

Wheat is cleaned a second time and separated by the size of each grain.

The wheat is put into conditioning

bins where it is moistened to prevent breakage.

The cleaned, conditioned batches of wheat are mixed together and ground to the consistency of flour.

Flour is shipped from the mill to the store.

The consumer buys the flour to bake with.

Labels for Buckets:

Natural Resource

Processed Good

Relay Race Cards:











