Lesson 4:
Making Magic

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Standards and Benchmarks (see page 4.14)

Lesson Description

Students read a story about how a boy and girl appear to use magic to solve a problem their village has. But all is not as it seems as their magic is revealed to be nothing more than good economics. Word games and a simple math exercise illustrate the benefits of trade.

Grade Level

6-8

Concepts

Goods

Production

Resources

Trade

Objectives

Students will be able to

- define goods, production, resources, and trade;
- explain how goods can be produced in different ways;
- describe trade as an alternative way to produce goods; and
- explain how trade allows a country to get more goods from its resources.

Compelling Question

When is trade a better way to produce a good?

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Time Required

45-60 minutes

Materials Required

- Visual 4-1, one copy for the teacher to display
- Handouts 4-1, 4-2, 4-3, and 4-4, one copy of each for each student

Procedure

1. Begin by introducing or reviewing the following: **Goods** are objects that satisfy people's wants (e.g., pizzas, cars, toys, chairs). **Resources** are things that are used to produce goods and services. Resources include people (human resources), tools and machines (capital resources), and raw materials (natural resources). Tell the students that they will read a story about some goods and the resources used to produce them in a faraway land.

2. Distribute a copy of *Handout 4-1: "The Magical Drink"* to each student. Have selected students read parts of the story aloud in class. (Optional: Have the students read the story as homework.) After reading the story, discuss the following:
   - What happened when it rained more than usual in Conn? (*The lakes became bigger; it became more difficult to gather swakkerberries; the villagers couldn't produce as much rade; and people drank less rade.*)
   - What good thing happened because of the rain? (*With larger lakes, fishermen could catch cort more easily because there were more cort than ever.*)
   - How did Cheeper and Special Eyes explain the rade they had? (*They explained that they made the rade from the extra cort their father caught.*)
   - Why did the elders want to speak with Cheeper and Special Eyes? (*They thought the children were using forbidden magic to make the rade.*)

3. Explain that students will identify the secret of how to make rade out of cort. Distribute a copy of *Handout 4-2: Trading Letters* to each student. Have students complete it working in pairs. Review the answers as follows:
   - Task #1: *CORT, CART, CARE, RARE, RATE, RADE (NOTE: One could go straight from rare to rade, but tell students that they need to find an extra word from the story that "fits" between RARE and RADE.)*
   - Task #2: *TRADE*

4. Explain that trade is another way of producing a good. **Trade** is the exchange of resources, goods or services for other goods or services, or for money. Trade involves using resources to produce one good that is exchanged for another good.

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5. Display *Visual 4-1: Making Rade and Cort* and work through the following:
    - Explain the process of producing rade…
        - Villagers pick swakkerberries from the bushes around the lake.
        - They squeeze the juice out of the berries into jugs.
        - It takes two hours for a villager to find and pick enough swakkerberries for one jug of rade.
        - It takes two hours for a villager to squeeze enough juice out of the swakkerberries for one jug of rade.
    - Explain the process of producing cort…
        - Villagers catch the cort in the lake.
        - They prepare a cort by cutting off parts, such as the tail and head, that they don't want to eat and washing the cort in clean water.
        - It takes one hour for a villager to catch a cort.
        - It takes one hour for a villager to prepare a cort.

6. Distribute a copy of *Handout 4-3: Making Swakkerade* to each student. Tell the students to complete the handout on their own or in groups of two or three. Review the answers as follows:
    - Task #1: *a1. 4; a2. 2; b. option 2; c. cheaper (Cheeper)*
    - Task #2: *Table values – 0, 0.5, 1, 1.5, 2; a. four cort; b. two jugs of rade; c. Special Eyes*
    - Task #3: *Table values – 0, 1, 2, 3, 4; a. one more jug of rade; b. two more jugs of rade; c. Ganes*

    Debrief the activity by discussing the following:
    - What is the greatest amount of cort that Cheeper's father could produce in one 8-hour day? (*It takes two hours for each prepared cort, so he could produce up to four cort.*)
    - If Cheeper's father produced three prepared cort, how many jugs of rade would he be able to make? (*Three cort would take six hours to produce. This would leave two hours to produce rade. It takes four hours to produce a jug of rade, so he would only be able to produce one-half of a jug in the two hours.*)
    - How much does an extra jug of rade cost Cheeper's father? (*An extra jug of rade requires four hours of his time. In four hours, he could produce two cort. Therefore, the extra jug of rade costs him two cort.*)
    - **Production** is the process of using resources and intermediate goods to make goods and provide services. If Cheeper's father specializes in cort production, he can produce four cort in a work day. If he does this and then trades two cort for two jugs of rade, how much cort and rade will he have to eat and drink? (*Two cort and two jugs of rade*)

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- If he doesn't specialize and produces two cort, how many jugs of rade can he produce? (*One*)
- Is he better off to specialize and trade or produce both cort and rade? (*He's better off to specialize and trade because he'll have the same amount of cort and more rade.*)
- Why is rade cheaper when Cheeper's father specializes and trades? (*It's cheaper because he is using the same amount of resources and getting more goods. Or, he will use fewer resources to get the same amount.*)

Closure

7. Discuss the following to emphasize the major points of the lesson:
   - What are goods? (*Objects that satisfy people's wants*)
   - Name the two main goods in the story. (*Rade, a drink; and cort, a fish*)
   - What are resources? (*Things that are used to produce goods and services*)
   - What resources were used to produce rade? (*Human resources: villagers' time spent gathering and squeezing; Capital resources: baskets and jugs; Natural resources: swakkerberries*)
   - What resources were used to produce cort? (*Human resources: villagers' time spent fishing and preparing; Capital resources: fishing equipment and cutting knives; Natural resources: cort*)
   - Describe how trade is another way to produce a good. (*It takes resources to produce a good. Then, that good is traded for another good.*)
   - When is trading a better way to produce a good? (*It is better when it is cheaper; that is, when it takes fewer resources to produce a good than it takes to produce the good for which it will be traded.*)

Assessment

8. Distribute a copy of *Handout 4-4: Assessment* to each student. Allow time for the students to work and then review the answers as follows:

Multiple Choice

1. Americans trade corn for Japanese cars. What U.S. resources are used to get those cars?
   a. Steel, auto workers, and car factories
   b. Dollars
   c. *Farmland, tractors, and farmers' time*
   d. None, that's why trading is so good.

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2. John specializes when he
   a. decides to trade with other people.
   b. uses all his time making or doing one thing.
   c. does all those things that he does best.
   d. uses resources to produce goods.

3. Trading for a good is a good idea
   a. when it takes less resources to trade than it does to produce the good.
   b. when it takes more resources to trade than it does to produce the good.
   c. only when it takes no resources to produce the good.
   d. only when you can't produce the good yourself.

Short Answer

4. You want to eat a delicious lunch at school. Describe at least three ways that you could achieve this.

   Answers will vary but may include the following:

   1. Make a lunch that you really like at home and bring it to school.
   2. Make a lunch at home and then trade items from it with your friends for items you like better.
   3. Bring money from home and trade it with the school cafeteria for a lunch.
   4. Bring money and exchange it for a friend's lunch.

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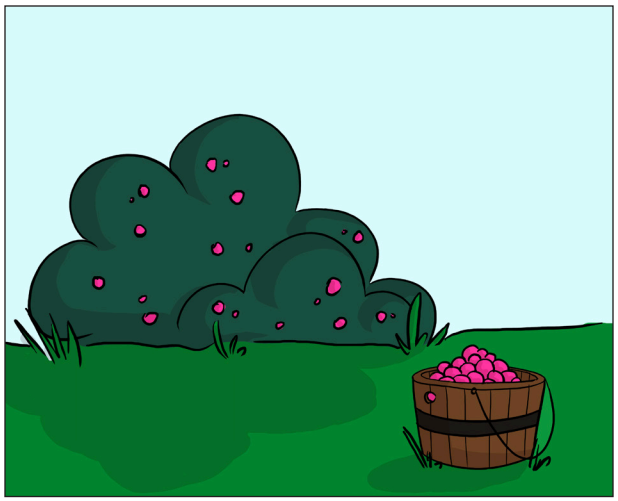
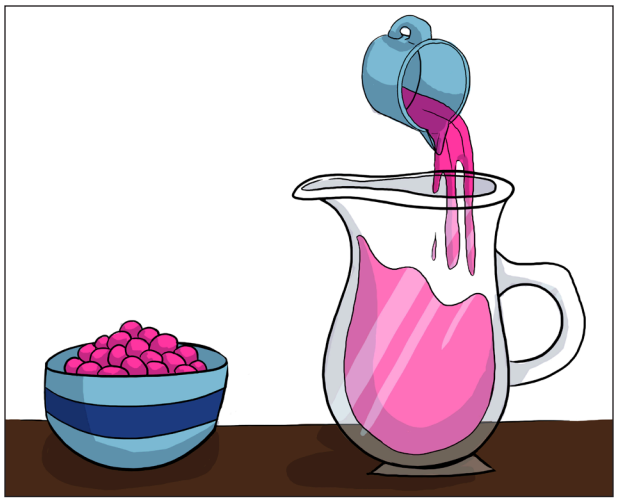
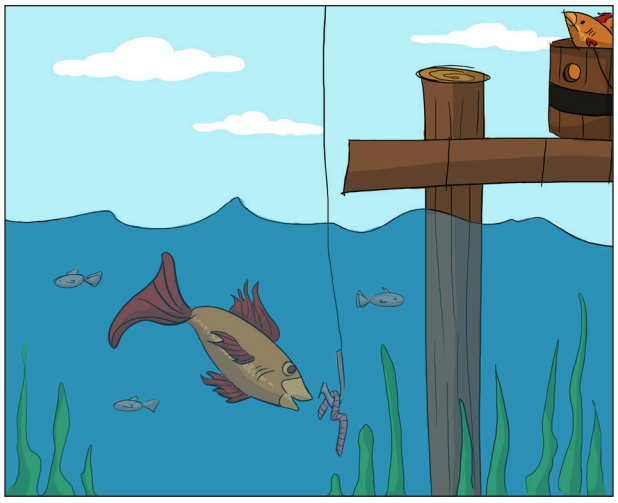
Visual 4-1: Making Rade and Cort



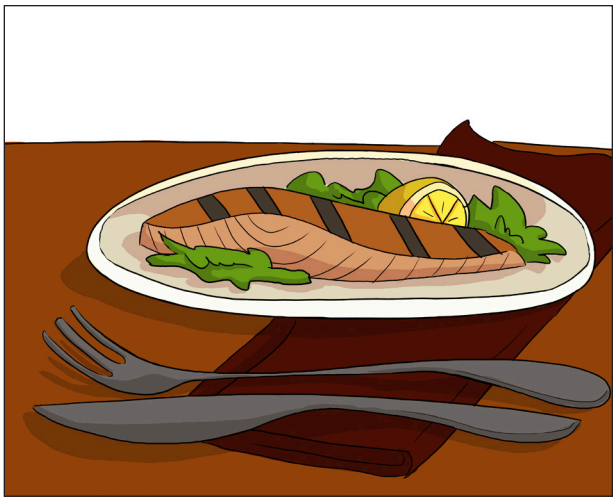
2 hours



2 hours



1 hour



1 hour

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Handout 4-1: "The Magical Drink" (page 1 of 3)

This story takes place in a vast land of fine forests and lovely lakes. There are several villages spread throughout the land. Each village has its own way of doing things. In Cali, they eat breakfast in the evening and dinner in the morning. In Colo, they sleep during the day and work at night. In Conn, they greet each other by waving their feet. And, in Caro, they use numbers instead of words to talk. The elders of these villages often do not allow the people of their villages to go to any other villages because things are so different. They believe that their village does things in the best way.

Cheeper and Special Eyes live in the village of Conn. They are both over 70 years old, but they are considered children in their village. Cheeper got his name from the bird-like peeps and chirps he made as a baby. Special Eyes got her name from the beautiful color of her eyes—one as green as the ferns in the forest and the other as blue as the water in the lakes. Both children go to school in the morning. In the afternoon, they help their father, a fisherman, clean and prepare the cort fish he has caught. In the evening, the family meets with families from the rest of the village for a marvelous feast of cort, forest greens, bread, and a drink made from the swakkerberries that grow along the banks of nearby lakes. In the old days, the villagers called the drink swakkerade, but nowadays they just call it rade. Everyone shares what they have caught, grown, or made. There is always lots of eating, drinking, music, dancing, games, and storytelling. Everyone has a good time in Conn.

One spring, things started to change. It was very rainy in some parts of the forest, while almost no rain fell in other parts. Conn was in a rainy part. The lakes around it began to get bigger and bigger as the rain kept falling. Soon, most of the swakkerberry bushes around the lakes were under water. Villagers were not able to gather as many swakkerberries as before. The people of Conn who gathered the berries had to walk further and further from the village to find enough to make the rade that everyone enjoyed so much. Many times, they simply could not find enough. Everyone drank less rade. The cort and other food just didn't taste as good any more. There was great sadness in the village.

Cheeper and Special Eyes saw the sadness in their family, even though their father had found his job of cort fishing easier. With the larger lakes, there was more room for the cort to grow, so there were more cort than ever before! He caught more cort than was necessary and stored them in a special cellar under his house.

"But what good was more cort without rade to go with it? If only rade could be made out of cort!" thought Cheeper and Special Eyes. They thought very hard about that and soon came up with a wonderful idea. But they knew they must keep it a secret.

A few days later at the evening feast, Cheeper and Special Eyes showed up pulling a small cart filled with jugs of rade. Everyone in the village was excited and happy! It was so wonderful having plenty of rade! But then some of the villagers began to ask the children how they were able to make the rade.

"Did you find more swakkerberry bushes? Would you show us where they are?" they asked.

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Handout 4-1: "The Magical Drink" (page 2 of 3)

Cheeper replied, "Well, no, not really. We made this rade from the extra cort that our father caught."

The villagers did not believe them. "That is not possible!" they said.

"But it is the truth!" cried Special Eyes.

"Show us how you do it then," demanded some villagers.

"We can't," replied Special Eyes.

"Why not?" asked the villagers. "Are you using forbidden magic?"

"It's not magic, but it is a secret that we must keep," answered Cheeper.

Other villagers were just happy to have the rade. They didn't care how it was done; they were just glad that the children made it. They convinced the others to stop asking the children so many questions and instead thank them for making such wonderful rade—even if it was made out of cort.

So, for the next few weeks, Cheeper and Special Eyes continued turning cort into rade. As each day passed, however, some village elders wondered more and more about how it was done—especially because none of the elders, the wisest of all, could figure out how to do it.

One afternoon, one of the elders was sent to spy on the children and learn their secret. Hiding behind a tree, he watched the children carry cort from their house, place them in their small cart, and go into the forest. The elder tried to follow them, but they moved very quickly. He soon had to sit down to rest and lost sight of them. He hadn't rested long when suddenly he saw the children returning. In the cart, there were jugs of rade! They were moving more slowly, taking great care to make sure the jugs did not break. The elder hid until they had passed by. Then he went to tell the other elders what he had seen.

"Surely they do use magic," he reported. "There is no other way they could have turned the cort into rade so quickly."

The elders decided that they better get some answers from the children. Cheeper and Special Eyes were called into the Chamber of the Elders—a large, wooden lodge with beautiful wood carvings. The children didn't notice the carvings because they were too nervous about what the elders would do. But they didn't need to worry. The elders were chosen for not only their wisdom, but also their kindness.

And the kindest of them all, Ganes, spoke softly to them, "Please, tell us the secret of your rade that has brought so much happiness back to our village."

Cheeper answered first, "Please understand that all we wished to do was to find a way to make rade out of Conn's resources. With the rains, cort has become very abundant, but swakker-berries have become very rare."

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Handout 4-1: "The Magical Drink" (page 3 of 3)

"So, we loaded our cart with cort and went to villages on the other side of the forest," Special Eyes continued. "We are sorry for going there against the wishes of the elders, but we wanted to help people in our village as well as people in the other villages."

"How is that possible?" asked Ganes.

Cheeper said, "The village of Cali has plenty of healthy swakkerberry bushes but very few cort because their lake is small. They're willing to give us a jug of rade for each cort. That rate of exchange seemed very good to us because it takes twice as long for us to make one jug of rade as it does to catch and prepare one cort."

"For them, things are just the opposite. It takes twice as long to catch and prepare one cort as it takes to make one jug of rade. When we exchange, they're able to get more cort, and we're able to get more rade than we could by producing rade ourselves. Everyone is happy! We meant no harm," said Special Eyes.

The elders whispered to one another and then gathered around Ganes to whisper some more. Soon they returned to their seats, and Ganes rose to speak.

"You have shown yourselves to be wiser than the elders. You have taught us that there is more than one way to make rade. You have discovered a way that uses less of our people's time. What shall we call this new way of producing rade?"

"People in Cali call it *trade*," said Special Eyes.

"This *trade* may not be magic, but it surely does work like magic," said Ganes.

The elders of Conn began allowing their people to travel to the other villages to learn their ways and to trade. Everyone soon learned the magical power of trade, and they learned something else that Cheeper and Special Eyes had already discovered—the people in the other villages really weren't that much different after all!

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Handout 4-2: Trading Letters

Task #1

Cheeper and Special Eyes were able to change cort into rade. Your challenge in this task is to do the same. Change the word "cort" into the word "rade" by changing one letter at a time to form a new word. Each new word must be a word from the story. You must use four words from the story.

CORT

_____

_____

_____

_____

RADE

Task #2

Circle the new letter you added at each step in Task #1, from the first new word through the last word, "rade." Each time, old letters were traded away for these new letters! Use the five letters you circled to form a word that describes how Cheeper and Special Eyes were able to change cort into rade. Write that word below.

_____

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Handout 4-3: Making Swakkerade (page 1 of 2)

Task #1

a. How many hours does it take to produce one jug of rade in the following two ways?

   1. Gather swakkerberries and squeeze out their juice: _____ hours

   2. Produce one cort and trade it for one jug of rade: _____ hours

b. Which way takes less time, 1 or 2? _____

c. The way of making rade that takes the least amount of time is the one that costs less. If one way of doing something costs less than another, what word could we use to describe it that sounds like the name of a character in the story? _____

Task #2

Cheeper's father has eight hours a day to make rade or cort or a little of both. In the table below, enter the most rade that he could make each day if he also made the amount of cort shown.

Amount of cort per day	Amount of rade per day
4	
3	
2	
1	
0	

If people use all their time making one thing, they specialize in making that thing. If Cheeper's father uses all his time fishing and preparing cort, he specializes in producing cort.

a. How much cort could he make each day if he specialized in producing cort? _____

b. How much rade could he make each day if he specialized in making rade? _____

c. What character in the story has a name that sounds like specialize? _____

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Handout 4-3: Making Swakkerade (page 2 of 2)

Task #3

Suppose that Cheeper's father specializes and spends eight hours a day catching and preparing cort as he did in the story. Suppose that he, like his children, is able to trade one cort for one jug of rade. Fill in the table below to show the different combinations of cort and rade that he could have after producing cort and then making trades.

Amount of cort he keeps after trading	Amount of rade he could have
4	
3	
2	
1	
0	

Compare this table to the table in Task #2.

a. How much extra rade can he get from specializing and trading if he wants 2 cort? _____

b. How much extra rade can he get from specializing and trading if he wants 0 cort? _____

c. The *extra* amount of goods that traders are able to get from trade is called the "gains" from trade. Which character in the story has a name that sounds like that? _____

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Handout 4-4: Assessment

Multiple Choice

Directions: Choose the correct answer for each of the following questions.

1. Americans trade corn for Japanese cars. What U.S. resources are used to get those cars?
   a. Steel, auto workers, and car factories
   b. Dollars
   c. Farmland, tractors, and farmers' time
   d. None, that's why trading is so good.

2. John specializes when he
   a. decides to trade with other people.
   b. uses all his time making or doing one thing.
   c. does all those things that he does best.
   d. uses resources to produce goods.

3. Trading for a good is a good idea
   a. when it takes less resources to trade than it does to produce the good.
   b. when it takes more resources to trade than it does to produce the good.
   c. only when it takes no resources to produce the good.
   d. only when you can't produce the good yourself.

Short Answer

Directions: Answer the following question using complete sentences.

4. You want to eat a delicious lunch at school. Describe at least three ways that you could achieve this.

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Standards and Benchmarks

National Content Standards in Economics

Standard 1: Scarcity

Productive resources are limited. Therefore, people cannot have all the goods and services they want; as a result, they must choose some things and give up others.

- **Benchmark: Grade 4**

    6. Productive resources are the natural resources, human resources, and capital goods available to make goods and services.

Standard 5: Trade

Voluntary exchange occurs only when all participating parties expect to gain. This is true for trade among individuals or organizations within a nation, and among individuals or organizations in different nations.

- **Benchmarks: Grade 4**

    1. Exchange is trading goods and services with people for other goods and services (called barter) or for money.
    3. People voluntarily exchange goods and services because they expect to be better off after the exchange. This also may include the more information exchanges of favors and courtesies.

Standard 6: Specialization

When individuals, regions, and nations specialize in what they can produce at the lowest cost and then trade with others, both production and consumption increase.

- **Bencharks: Grade 4**

    1. Economic specialization occurs when people concentrate their production on fewer varieties of goods and services than they consume.
    3. Specialization and division of labor usually increase the productivity of workers.
    4. Greater specialization leads to increasing interdependence among producers and consumers.

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