

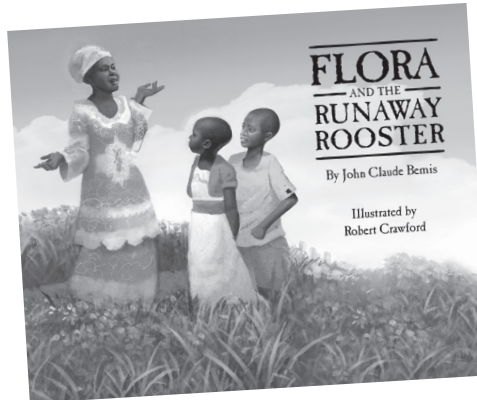
Understanding The Story Of Flora and the Runaway Rooster

LESSON 1

Objectives

The students will:

- Identify elements of setting using text and illustrations.
- Compare and contrast the setting of the story with the physical characteristics of their own community.



Materials

- *Flora and the Runaway Rooster*
- Art supplies
- Butcher paper or whiteboard

Procedure

1. **Introduce and read *Flora and the Runaway Rooster*.** Instruct the students to look for clues found in the illustrations about Flora's home and community. Ask them to look for ways in which Flora's lifestyle and village are similar or different from the students' daily life in their community.
2. **Identify physical characteristics of Flora's community.** Take a "picture walk" through *Flora and the Runaway Rooster*. Ask students to point out observations they make about the appearance and characteristics of Flora's village. Make a list together of characteristics that are similar and different to the characteristics of the land, climate, terrain, etc. in your community. You may choose to create a Venn diagram or simply create 3 columns: Flora's Village; Both Places; Your Students' community
3. **Discuss human characteristics of a place.** The human characteristics of a place have to do with ways in which people react to their environment. For example, if a story takes place in winter or in the North Pole, the characters might wear coats. Ask the students what the illustrations or words from the story tell us about the human characteristics of Flora's village. Are these characteristics the same or different from the place where they live?
4. **Create a travel poster or brochure.** Using the lists the class has generated, students should create a travel poster for people who might want to visit Flora's community. What parts of the setting might people really enjoy? What aspects of her village should people see? More advanced students can create travel brochures

National Standards Addressed

COMMON CORE LANGUAGE ARTS

Literature

RL.1.7 Use illustrations and details in a story to describe its characters, setting, or events.

OR

RL.2.7 Use information gained from the illustrations and words in a print or digital text to demonstrate understanding of its characters, setting, or plot.

RL.1.10 With prompting and support, read prose and poetry of appropriate complexity for grade 1/2.

Foundational Skills

RF.1.4 Read with sufficient accuracy and fluency to support comprehension.

C3 SOCIAL STUDIES

D2.Civ.10.K-2. Compare their own point of view with others' perspectives.

D2.Geo.6.K-2. Identify some cultural and environmental characteristics of specific places.



that combine the setting information from the story with information from reference books and websites with information such as capital city, latitude/longitude, languages spoken, area, and population.

Extension Activities

- Have students imagine what kinds of chores Flora and Gideon may do throughout the day. Make chore charts for Flora and for Gideon.
- Dramatize the story of Flora and Kubika through a puppet show or student-written and performed play.
- Have the children paint a scene of the village and the surrounding areas using acrylic or watercolors. They could also draw pictures of the characters on separate paper, cut them out and glue them onto their scene. Students can use poster adhesive to place their characters on the scene that can be taken off and moved around if they want to recreate the story or even make a new story of their own.

Links To Heifer International

Heifer has worked in Rwanda since 2000, in diverse projects that integrate agricultural and livestock production with access to markets and business opportunities. To read more about Heifer's work in Rwanda and a brief history of the country, visit:
www.heifer.org/whencowsfly/projects/rwanda.html



Your Connection To The Community

LESSON 2

Objectives

The students will:

- Define community.
- Describe types of communities (local to global).
- Illustrate how community members cooperate with one another to help others.



Materials

- *Flora and the Runaway Rooster*
- Whiteboard/butcher paper for brainstorming
- Computers with PowerPoint or other visual presentation program (optional)
- Art supplies (optional)

Procedure

- 1. Introduce the term community.** A community is a group of people living in the same area OR a group of people with characteristics in common, like shared interests or goals.
- 2. Point out the first illustration and mention of Gideon.** In *Flora and the Runaway Rooster*, Gideon is shown with a milk container on the back of his bike (page 12). He works to collect milk in order to earn money for school. Gideon can serve as a good example for membership in multiple communities. Discuss with the students the following information about Gideon and the communities of which he is a part:
 - a. We don't see Gideon's family, but Gideon is a member of his family. He contributes to his family's well-being by working to earn money.
 - b. Gideon's family is a member of a community group. (Point out the women's meeting on pages 10-11). Heifer always works with community groups, never just with individuals or single families. These community groups help one another as they learn how to care for animals, prepare the proper shelters, and grow fodder for the animals. The groups have rules for the members which help families save money each month. Group dues then help create a source of loans in case families have an emergency or want to expand their farms with new equipment, seeds, animals, or land.

National Standards Addressed

COMMON CORE LANGUAGE ARTS

Speaking and Listening

SL.1.1./SL.2.1 Participate in collaborative conversations with diverse partners about grade level topics and texts with peers and adults in small and larger groups.

Writing

W.1.6 / W.2.6 With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers.

C3 SOCIAL STUDIES

D2.Civ.2.K-2. Explain how all people, not just official leaders, play important roles in a community.

D2.Civ.6.K-2. Describe how communities work to accomplish common tasks, establish responsibilities, and fulfill roles of authority.

D4.7.K-2. Identify ways to take action to help address local, regional, and global problems.



Procedure (continued)

- c. The local milk cooperatives are made up of community groups. The milk cooperatives provide equipment for processing and cooling the milk that is collected by their members. There are specific guidelines for how to collect milk and make sure sanitary and food safety standards are met.
- d. A large dairy company, based in Kigali (the capital of Rwanda) then buys the milk that has been collected at the milk cooperative's facility. The dairy company processes and packages the milk to be delivered and distributed throughout the country.
- e. This is just one example of how Heifer families are able to increase their income through membership in community groups. They are able to help their country meet its dairy needs while earning income to help keep their families healthy, make improvements to their homes and farms, and send their children to schools, just like Flora's family!

3. Brainstorm communities in which students are members. Your students and their families do not have to be members of a dairy cooperative to be a member of a community! Your students might be members of an after-school club or a sports team or a service organization. Remind students that communities can be small and large. Use the students' discussions to remind them of membership in larger communities. Make a list with the students. Examples might include:

- Family
- Classroom
- School
- After-School Club
- Sports Team
- City
- State
- Country
- Global Community

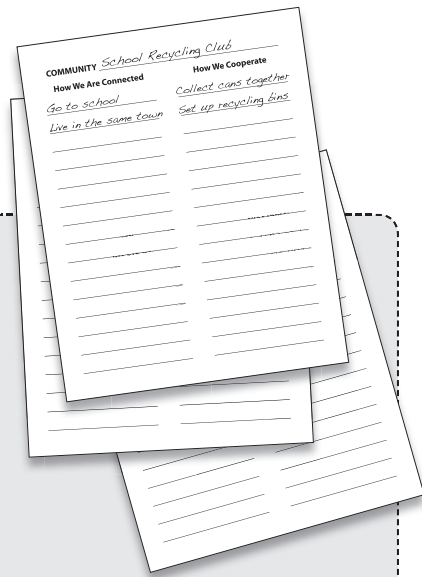


4. Investigate how people within communities cooperate. Using the list of communities in procedure three, choose several types of communities to discuss. Make sure to focus on communities that students can understand easily and concretely, such as a family, an after-school club, or a sports team. Under each community name, make two columns.

Label the left column "How We Are Connected" and the right column "How We Cooperate." Brainstorm ways in which members of each community are linked, e.g., schoolmates share a building, or people on earth share the oceans. Write these ideas in the left column. Next, brainstorm ways in which community members can cooperate or help one another, e.g., fifth graders can be 'reading buddies' for first graders, or people in one city can send food to help

victims of a flood or earthquake in another city.

Write these ideas in the right column. Post the lists so students can see them while completing procedure five.



If you are planning for your students to participate in the reading incentive fundraiser of Read to Feed, this lesson is a great way to introduce it to your students. They are members of a community: your classroom. They can work together by seeking sponsors for their reading and by reading as much as they can. Their collaborations will allow them to help members of other communities around the world.

Be sure to visit www.readtofeed.org to request resources to help with your fundraising or to set up a classroom fundraising web page. The students' sponsors can visit your customized page to make a donation and help your students reach their fundraising goals!

5. **Group students so they can collaborate to create graphical representations of community connections and cooperation, using a program like PowerPoint or a computer-based drawing programs.** There are many program options—talk with your school's technology specialist for ideas. Tell each group of students to choose one community that the class discussed in procedure three, and create images showing how the community members cooperate. Students should also collaborate to write a short description of the ways in which



their chosen community can work together. Have students present their projects and the ideas they represent to the class. The finished products should show an array of cooperating communities, and this visual display will help young students understand their communities and their connections.

If your students do not have access to PowerPoint, students can compose their writing with a word processing program. Then students can collaborate to create collages from magazines and newspapers.

Extension activity

Create a song or an acrostic poem about communities.

Links To Heifer International

Promoting Strong Communities

Heifer International's model of development depends on close cooperation among members of project partner groups like the groups that make up a dairy cooperative. To help deepen that cooperation, Heifer works with local community groups to ensure the well-being of donated livestock animals. Groups that receive dairy cows from Heifer participate in training on how to care for dairy cattle, how to collect the milk in clean containers for transportation, and how to test the milk to make sure it is healthy. It is very important that those who receive cows take good care of the animals so that they can pass on offspring to another member of the community. It is also very important that the milk collected is of good quality so they will be able to distribute it throughout Rwanda. See www.heifer.org for more information on various ways Heifer International projects promote strong communities. Students can compare this type of cooperation with ways in which they cooperate as members of their own communities. Emphasize that, regardless of the type of group, community members must cooperate.



Doing Your Part: Accomplishing Group Goals

LESSON 3

Objectives

The students will:

- Identify connections among living things.
- Explore consequences of severing links between living things.
- Describe ways in which they are connected to other people worldwide.



Materials

- *Flora and the Runaway Rooster* book
- Whiteboard or chart paper
- Art supplies for nametags (For best flow, teacher may choose to create several blank nametags before the lesson.)
- Large ball(s) of yarn (For best results do not use in skein form. Instead, teacher should roll skein into ball before the session.)

Procedure

1. Identify some living things that make up an environment.

Read aloud *Flora and the Runaway Rooster*. Ask students to be looking for examples of living things in the story while you are reading. After each page is read, have students name aloud the living things they noticed in the story. It may be from information in the text or things they identify from the illustrations. Write a list of the students' ideas on the board or on chart paper.

Examples: Flora, rooster, Gideon, Mother Yasenta, hens, eagle, children, trees, grass, sorghum plants, beans, cows

2. Identify links between living things in an environment.

Explain that living things are connected to one another in countless ways. You don't always think about the connections, or see them, but they exist. Tell the students that you will now create a visual web (like a giant spider web) that shows connections among living things mentioned in the story of Flora and her rooster.

- Creating your own picture or word nametags based on the living things in *Flora and the Runaway Rooster*, make a nametag for each student. You may need to break into two groups, or give some students more than one nametag.

National Standards Addressed



NEXT GENERATION SCIENCE STANDARDS

ESS2.E Biogeology
Plants and animals can change their local environment.

ESS3.A Natural resources
Living things need water, air, and resources from the land, and they live in places that have the things they need. Humans use natural resources for everything they do.

LS1.C Organization for matter and energy flow in organisms
Animals obtain food they need from plants or other animals. Plants need water and light.

LS4.C Adaptation
Living things can survive only where their needs are met. If some places are too hot or too cold or have too little water or food, plants and animals may not be able to live there.



Procedure (continued)

- Have each group sit in a circle. Take a ball of yarn and give it to the student wearing the rooster nametag.
 - Instruct the students that whoever has the ball of yarn must look for someone else in the circle who is wearing a nametag to which he or she is connected. The student should explain the connection between the two living things. Then, she should hold on to part of the yarn and pass the ball to the other person. Thus, as the students pass the ball of yarn to each other, a web of yarn is created to highlight the links between each living thing.
 - It is fine for one living thing to be named multiple times; life is connected to life in multiple ways.
 - When each student has been included in the web (some may be included in several links), ask the children to close their eyes. The person wearing the rooster nametag should tug on the parts of yarn that he or she is holding. Ask others in the circle who could feel the tug to raise their hands. Then ask those whose hands are raised to tug their pieces of yarn, and ask anyone who felt that tug to also raise his or her hand. Ask the students to open their eyes and see how many hands are raised. This creates a strong visual representation of all who are connected to the rooster directly or by another living thing.
 - Repeat the above step beginning with a different nametag. Repeat using as many nametags as you like.
- 3. Show consequences of breaking links between living things.** Choose one living thing and have that student drop all parts of the yarn web he or she is holding. Ask anyone who felt the yarn slackening to raise his or her hand. These students now represent the living beings that will be directly affected if one thing is taken away. Have those students drop their connections to the yarn to see who else is affected. Count how many steps it takes until all the living things are affected. Explain that the dropping of the yarn shows how living things can be negatively impacted when interconnections among them are broken.
- 4. Discuss our connections to the web.** Tell the children to think about how they could be connected to children in Rwanda or other countries. The “strings” of our web are even longer, if we think about it. We share sunlight, water and air. We might go to our grocery store and buy foods that are grown in those countries. This might be a new concept for some children. Other examples of ways we share our world include: clouds carry water, wind carries air, the same sun shines, and ocean fish, birds, and butterflies migrate between far places.

Standards (continued)

LS4.D Biodiversity and humans. A range of different organisms lives in different places.

COMMON CORE LANGUAGE ARTS

Speaking and Listening

SL.1.1. Participate in collaborative conversations with diverse partners about grade level topics and texts with peers and adults in small and larger groups.

C3 SOCIAL STUDIES

D2.Civ.9.K-2. Follow agreed-upon rules for discussions while responding attentively to others when addressing ideas and making decisions as a group.

D2.Civ.10.K-2. Compare their own point of view with others' perspectives.

D2.Civ.10.K-2. Compare their own point of view with others' perspectives.

D2.Geo.6.K-2. Identify some cultural and environmental characteristics of specific places.

D2.Geo.8.K-2. Compare how people in different types of communities use local and distant environments to meet their daily needs.



Extensions

Take it further with grocery mapping. We are connected to people in other countries by the foods we purchase and eat. Choose several common grocery items (or invite children to bring in grocery items) to display in the classroom. With your students, read the labels to identify where the item was grown or made. Find that country on a map. Write the item on a small sticky note or piece of painter's tape and mark the country of origin. Then, using yarn, connect that item to your location. Your students may be surprised to discover how internationally they eat!

Links To Heifer International

Sharing & Caring

Heifer International believes that global problems can be solved if all people are committed to sharing what they have and caring about others. Part of this sharing and caring depends on younger generations learning that those who, at first, appear to be quite different actually share similar needs, wants, and experiences. Only after we've discovered we are connected to each other and the earth, can we truly work together for a better world. To find out more about "Sharing and Caring" and other Heifer Cornerstones, visit www.heifer.org/cornerstones.



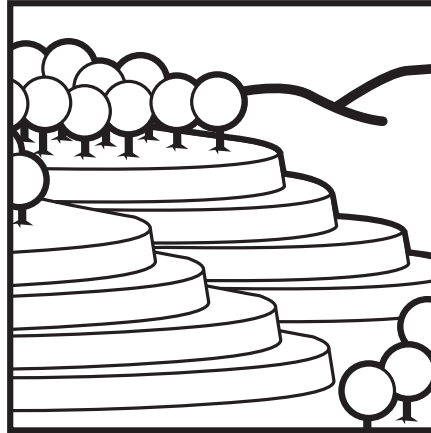
Seeing the Forest for the Trees

LESSON 4

Objectives

The students will:

- Experience the challenges inherent in managing a common good.
- Examine the impact of human actions on a hypothetical environment.



Materials

- Play money (use existing game money, or even green slips of paper)
- 25 paper circles, game chips, or other small tokens to represent trees
- 5 x 5 grid on a table, the floor or other flat surface easily accessible from multiple sides, or on a document project, overhead projector, or SMARTboard on which to place tree tokens
- Gorilla Forest Rules (below)

Procedure

- 1. Create your “forest”.** Set 25 tokens (or slips of paper) in a 5x5 grid on a table, the floor, or other flat surface easily accessible from multiple sides. If you have a document projector, overhead projector, or SMARTboard, you can also use that to display such a grid for the students. Explain to students that this represents a lush, thriving forest in which gorillas live.
- 2. Introduce the students to their imaginary home.** Tell students to imagine that they are citizens of one of the villages living around a forest. The forest provides many things—fruit to eat, wood to burn for fire and with which to build houses, medicinal plants, and habitat for many wild species of plants and animals, including the gorillas.
- 3. Explain the rules of Gorilla Forest (see below).** Write them on the board or project them if possible.
- 4. Brainstorm reasons for harvesting trees.** Ask students to think of reasons that their village will take trees out of the forest (to make a new home for someone, to cook food for a celebration, to have a fire to keep warm, etc.). You may want to write a list of these reasons.
- 5. Begin the first “month” in the village.** Tell students that for the first month, they’ll need to use three trees and that they can sell any additionally harvested trees for \$1 each. Remind them that after the first month, they won’t know how many trees they’ll need until after they harvest for that month.

National Standards Addressed

C3 SOCIAL STUDIES

D2.Eco.2.K-2. Identify the benefits and costs of making various personal decisions.

D2.Eco.1.K-2. Explain how scarcity necessitates decision making.

D1.1.K-2. Explain why the compelling question is important to the student.

D2.Civ.2.K-2. Explain how all people, not just official leaders, play important roles in a community.

D2.Civ.6.K-2. Describe how communities work to accomplish common tasks, establish responsibilities, and fulfill roles of authority.

D2.Civ.10.K-2. Compare their own point of view with others’ perspectives.

Procedure (continued)

6. **Give students time to make a plan.** Then allow students to vote on the number of trees (tokens) that they wish to harvest.
7. **Harvest the trees.** Once the class decides on the number of trees to harvest, remove that number of tokens from the grid. Tell them that the first month is over. Pay the class \$1 for each tree they harvested beyond the 3 they needed for month 1. (You may want to designate three students to play the roles of a tree buyer, a banker and a tree harvester.)
8. **Replenish the forest.** It regrows one new tree for every four remaining, but it cannot grow beyond its original 25.
9. **Give students time to plan for their second month.** Remind them once again that they won't know how many trees they need until after they've harvested, so they'll have to guess how many they'll need. They can use the information they have from the first month (needing three trees) to guide their guesses.
10. **Determine how many trees to harvest this month.** Conduct a class vote, then harvest the desired number of trees by removing that number of tokens from the grid. Then, inform the groups that this month, they needed to use 4 trees. You (or the tree buyer) collect the tokens, paying out \$1 for every tree beyond 4. If a group did not harvest 4 trees, they can buy trees for \$1 each. If they don't have enough money to do this, the game is over. Replenish the forest, by adding 1 tree for each 4 trees still remaining.
11. **Repeat this sequence for all 12 months (see chart below), or until the forest is depleted.** If the trees drop below 12, collect \$1 extra per turn. If the trees drop below 5, tell the students that the gorillas have gone extinct.

Turn	Trees used per month
1	3
2	4
3	3
4	5
5	2
6	6
7	3
8	4
9	3
10	3
11	5
12	3

Standards (continued)

D2.Civ.14.K-2. Describe how people have tried to improve their communities over time.

D2.Geo.5.K-2. Describe how human activities affect the cultural and environmental characteristics of places or regions.

D2.Geo.6.K-2. Identify some cultural and environmental characteristics of specific places.

D2.Geo.8.K-2. Compare how people in different types of communities use local and distant environments to meet their daily needs.

D2.Geo.9.K-2. Describe the connections between the physical environment of a place and the economic activities found there.

D4.1.K-2. Construct an argument with reasons.

D4.3.K-2. Present a summary of an argument using print, oral, and digital technologies.

D4.2.K-2. Construct explanations using correct sequence and relevant information.



Procedure (continued)

12. Discuss the results of the game. Questions:

- What made this game challenging?
- What was the effect of taking too many trees?
- How did your needs affect the environment (the forest and the gorillas)?
- What would you do differently if you were to play it again?
- Did you think it was important to protect the gorillas? Why or why not?

13. Make connections to reality. Explain to students that this is a simple version of a real situation that has happened in Rwanda for many decades. Because people have been using the same forest as the mountain gorillas, taking food, fuel, and other things from it, and clearing it for farmland, the number of mountain gorillas has fallen. There are now fewer than 800 mountain gorillas left in Rwanda. However, that number is actually higher than it was ten years ago.

14. Watch video or read article about how conservation happened in Rwanda. Here's a link to a news report, "Conservation Efforts Pay off for African Mountain Gorillas" by NTDTV:
www.youtube.com/watch?v=NcZ5XnueeCw

Standards (continued)

D4.6.K-2. Identify and explain a range of local, regional, and global problems, and some ways in which people are trying to address these problems.

D4.7.K-2. Identify ways to take action to help address local, regional, and global problems.

D4.8.K-2. Use listening, consensus-building, and voting procedures to decide on and take action in their classrooms.



NEXT GENERATION SCIENCE STANDARDS

2-LS4-1 Make observations of plants and animals to compare the diversity of life in different habitats.

Gorilla Forest Rules

- Each turn will represent a month. Each month, you can take as much wood out of the forest as you like. After each turn, you'll find out how much you used up that month (the first month, you'll need three trees - that's the only one you'll know in advance). Some months will be colder, and you'll need more fuel, and some will be warmer, and you'll need less.
- If you have harvested more trees than you need, you can sell your extras for money. If you harvested fewer trees than you need, you can buy some with the money you have saved.
- If you don't have enough trees or money to buy enough trees at the end of a month, the game is over.
- The forest will regrow based on how many trees are left. Each month, one new tree grows for every 4 left in the forest.
- If there are fewer than 12 trees, the gorillas will come out of the forest and start eating crops. You'll need to pay \$1 per turn to buy extra food for your village until the population of trees recovers.
- If there are fewer than 5 trees, the gorillas will go extinct.
- Play for either the full year (12 months/rounds) or until there are not enough trees for your village to survive.



Links To Heifer International

A Heifer project in Uganda has had a positive impact in lessening deforestation in Uganda's chimpanzee habitats. Heifer partnered with conservation organizations to encourage farmers to plant trees along the riverbanks, rebuilding the chimpanzees' habitat. Farmers that agreed to reforest part of their farm lands received a high quality pig or goat, as well as training in sustainable methods to improve the yields of their crops and support the growth of chimpanzee habitats. To learn more about this story visit: www.heifer.org/join-the-conversation/blog/2014/July/heifer-project-in-uganda-has-happy-side-effect.html



Conservation at Home



LESSON 5

Objectives

The students will:

- Identify conservation needs in their communities.
- Construct and present arguments in favor of conservation of identified areas.

Materials

- Flip chart or white board/markers
- Camera with video recording capabilities

Procedure

NOTE: This lesson can be divided over a number of days to allow students time to prepare and complete all activities.

- 1. Remind students of their experience “in the gorilla forest” from lesson 4.** If needed, watch the gorilla news video again.
- 2. Ask: How did the people of Rwanda protect the gorillas?**
Answers may include giving people jobs protecting them, inviting people to safely visit the gorillas, teaching their community about the importance of the gorilla habitat.
- 3. Define conservation.** Tell the students that when something is shared by many people or important to many people, and they protect and care for it, this is called conservation. You can conserve many things—water, plants and animals, historical sites, or even languages and human culture. Practicing conservation doesn’t have to happen with things as big and challenging as gorillas and their habitat. Some communities have small parks or forest preserves that they conserve. Some discover habitats of endangered species and take care of them.
- 4. Ask: What are some things in our community that we might want to conserve?** Some possibilities include a lake or reservoir, a wooded area which provides bird habitat, or an urban park. You and your students may want to consider opportunities in your school yard—for example, planting a butterfly garden or building bat houses. Ask students to choose one that needs to be protected and cared for better than it is now.

National Standards Addressed



C3 SOCIAL STUDIES

- D2.Civ.6.K-2.** Describe how communities work to accomplish common tasks, establish responsibilities, and fulfill roles of authority.
- D4.1.K-2.** Construct an argument with reasons.
- D4.3.K-2.** Present a summary of an argument using print, oral, and digital technologies.
- D4.7.K-2.** Identify ways to take action to help address local, regional, and global problems.
- D4.8.K-2.** Use listening, consensus-building, and voting procedures to decide on and take action in their classrooms.



COMMON CORE LANGUAGE ARTS

- CCSS.ELA-LITERACY.W.1/2.1**
Write opinion pieces in which they introduce the topic or name the book they are writing about, state an opinion, supply a reason for the opinion, and provide some sense of closure.



Procedure (continued)

- 5. Generate a list of reasons that protecting this area is important.** Student responses may include: it is beautiful/peaceful; it provides a home for wildlife; it gives us water/wood/energy that we need; trees keep the air clean.
- 6. Next, make a list of ways that this area could be protected.** Examples include: clean up the trash regularly, only allow people to swim instead of boating, replant trees that have been cut down. If you've selected a conservation activity for your campus, list ways others could support or become involved.
- 7. Divide children into groups.** Encourage them to discuss the items on both lists. Each group should choose 2 reasons that protecting the area in question is important, and 2 actions that people could do to help the conservation efforts.
- 8. Create a pitch.** With these 2 reasons and 2 actions, each group should write a script for a video "pitch" to their community, encouraging conservation of the targeted area. Give students time to rehearse their video pitches. This will give the teacher an opportunity to move between groups, giving specific feedback on presentation strategies (e.g. clear and audible speech, looking into the camera, appropriate expression) to meet children's specific needs. If time permits, allow students to do multiple takes, so they can watch their early versions and look for ways to improve.
- 9. Share with parents and your school community.** With parental permission, upload videos to a video sharing site (YouTube, Vimeo, the school website or Facebook page).

Standards (continued)

Writing

W.1/2.6 With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers.

W.1/2.8 With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.

Scoring Rubric for Conservation Pitch Videos

	3 points	2 points	1 point
Conservation Goal	The desired conservation area and goal is clearly described.	The conservation area is mentioned, but the goal is not clear.	The area in question is not mentioned or described.
Reasons	Two valid reasons for conservation of the intended area are clearly stated.	One valid reason is clearly stated, and the other is unclear.	Only one reason for conservation given, or neither reason is clearly stated.
Actions	Two concrete actions for conservationists to take are clearly stated.	One concrete action is clearly stated, and the other is unclear.	Only one action is given, or neither action is clearly stated.
Speech/Presentation	Presenter looks at the camera, speaks audibly and comprehensibly, and shows appropriate verbal expression.	Speech is mostly audible, clear, and expressive, but is inconsistent.	Most speech is inaudible, incomprehensible, and lacks expression.



Xaverine's Big Idea

LESSON 6

Objectives

The students will:

- Identify characteristics of structures that aid in water collection.
- Design and test a rainwater collection system.
- (advanced) Read a grade-level text and draw conclusions.



Materials

- Photos of Rwandan plants (provided)
- Materials for building model rainwater collection systems:
 - small cardboard boxes (eg. tissue boxes) to represent the school
 - wax paper, aluminum foil, toilet paper/paper towel rolls, toothpicks, straws
 - containers to represent the water collection tank: cleaned baby food jars, applesauce containers, etc.
 - scissors, tape, and glue

Optional:

- Live Plants- Either those mentioned or ones with similar leaves to observe water collection.

Procedure:

- 1. Explain to students that in Rwanda, only 34% (1 in 3) of the schools has tap water.** Depending on your students' experience with percentages, it may be helpful to use a visual representation of this. You might use a 10 x10 grid with 34 squares filled in OR use 3 Unifix cubes or other small items to show that in Rwanda 1 of the 3 schools has running water, as compared to the United States where 3 of the 3 schools would have running water. Ask: How would school be different if we had no tap water?
- 2. Read "Xaverine's Observation" (below).** The passage can be read independently or aloud, depending on the reading abilities of your students.
Discuss:
 - a. What did Xaverine notice about the plants?

National Standards Addressed



K-2-ETS1-1. Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.

K-2-ETS1-2. Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.

K-2-ETS1-3. Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.

1-LS1-1. Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.



Procedure (continued)

- b. What problem did Xaverine want to solve?
 - c. How can her discovery about rainwater on the leaves help solve her problem?
- 3. Examine pictures of Rwandan plants and make observations about their structures.** If water fell on the leaves, what would happen? What about the leaves' shape causes this? How does this help the plant? Discuss: How can you use these ideas from plants to help Xaverine collect rainwater for her school?
- 4. Divide students into groups of 2-4. Explain to them that they** will be designing rainwater collection systems for Xaverine's school, which will be represented by a small box (eg. a tissue box). Show them the materials available from which to build their systems, and explain that they'll need to collect water and direct it to a water collection tank. Each team will have a predetermined amount of time to build a system, and then they will test it by pouring $\frac{1}{4}$ cup or 50 mL of water over it, to simulate rain. They'll watch how the water flows and measure how much water is collected in the tank, then try to improve the system before testing a second time.
- 5. Give students materials and time to build their first models.**
- 6. Have them test and record their results, then adjust their models for a second trial.** (NOTE: You might want to encourage advanced students to look at water collections systems online before adjusting for the second test.) Record the results of the second trial.
- 7. Discuss:**
 - a. Which of your models was better at collecting water? How do you know?
 - b. How was your water collection system similar to a plant's leaves?
 - c. How do you think life might change for Xaverine and her classmates if they built your water collection system at school?

Standards (continued)



COMMON CORE LANGUAGE ARTS

1st Grade:

Literature

RL.1.1 Ask and answer questions about key details in a text.

RL.1.3 Describe characters, settings, and major events in a story, using key details.

2nd Grade:

Foundational Skills

RF.2.4 Read with sufficient accuracy and fluency to support comprehension.

RF.2.4.a Read grade-level text with purpose and understanding.

Literature

RL.2.1 Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text.

RL.2.3 Describe how characters in a story respond to major **events and challenges**.

RL.2.7 Use information gained from the illustrations and words in a print or digital text to demonstrate understanding of its characters, setting, or plot.



Xaverine's Observation

Flora's sister, Xaverine (*say ZA-vur-een*), loved to invent things. When Flora was a baby, Xaverine built toys for her and thought of ways to keep her from crawling into dangerous places. Before Xaverine went to the fine school in the city she attended Flora's school in the village. Her school had no running water, so the students took turns walking to the river to collect drinking water in jugs. One day, when Xaverine was taking her turn walking to the river, she began to think about how her school could have a water supply of its very own. Some of her neighbors collected rainwater for their homes, and she wondered if her school could do the same.



"We'd need a big tank for storing the water," she thought to herself. "But how would the water get into the tank?"

It was a tough problem, and all along her long walk, Xaverine thought and thought. She thought as she filled up the water jug, and she thought as she began to walk back toward the school. As she walked and thought, she passed by a field of tea leaves. Xaverine loved tea, and she stopped a moment to look at the bright green plants with their folded leaves. She had been so lost in her thoughts that she hadn't noticed the sky darkening, and now a warm rain began to fall. Xaverine watched the raindrops land all over the leaves, but no matter where they landed, they would slide toward the leaf's middle, then run down the leaf's vein toward the plant's thick stem. Suddenly, she leapt up. She knew how to collect water for her school! Off Xaverine ran toward school, her water jug sloshing all the way.

Scoring Rubric for Water Collection Systems

Check all that apply. Each check mark is worth 1 point, for a total of up to 10 points.

The system has a box representing the school.	
The system has a water collection tank.	
Structures exist to direct water to the collection tank.	
The student can describe how the structures s/he created reflect the shapes of the plants' leaves.	
The student measured and recorded data from trial 1 accurately.	
The student measured and recorded data from trial 2 accurately.	
The student can describe the changes made to the system between trials 1 and 2 and the rationale for them.	
The student can accurately determine whether the changes improved the system, using the data.	
The system works to direct water to the water containment tank.	
The student collaborated effectively with his/her group.	



FOREST AND KIM STARR

Eucalyptus



AVIJIT PATRA

Tea



MARTIN P.

Bamboo



SWATHI SRIDHARAN

Sorghum

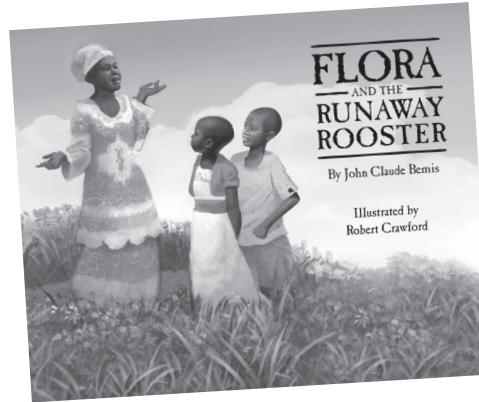
One More Time, With Feeling



Objectives

The students will:

- Identify and describe the emotions of fictional characters.
- Read grade-level text with proper expression.



Materials

- *Flora and the Runaway Rooster*
- Copies of text excerpts for student pairs/groups

Procedure

1. **Tell students:** When we read a story, an important part of what makes it fun is that we can tell how the characters are feeling. Sometimes, we can even feel as if we're there with the characters, feeling what they're feeling! There are lots of clues that an author can use to show us how a character is feeling. Give some examples:
 - Characters' actions can tell us how they feel. If a character screams, how is he feeling?
 - Characters' words can tell us how they feel. If a character says, "Are we there yet?" how is she feeling?
 - An author may describe a character as feeling a certain way, too. The book might say "Flora was nervous" or "Gideon felt silly."
2. **Begin reading *Flora and the Runaway Rooster* aloud.** Stop after reading "More than anything, she wanted to go with her older brother and sister to their fine school in the city." Ask students, "How is Flora feeling right now? (She wants to go to the school; she's excited; she's hopeful). Can you imagine what that would feel like? Think about a time when you really wanted something. That's how Flora feels right now, and because the author described it to us, we can understand what it's like to be Flora."
3. **Explain that when you're reading aloud,** you can use your voice to show that you can tell what a character is feeling. Read the sentence about Flora (in step 2) twice again, first with a flat affect, then with proper expression. Ask students to identify which conveys how Flora is feeling.
4. **Continue reading, stopping at the following examples:**
 - a. "I can't wait to play soccer on the team at your school!"
 - b. "Just like you, Flora," her sister laughed.

National Standards Addressed

COMMON CORE LANGUAGE ARTS

Foundational Skills

RF.1.4 Read with sufficient accuracy and fluency to support comprehension.

RF.1.4.a Read grade-level text with purpose and understanding.

RF.1.4.b Read grade-level text orally with accuracy, appropriate rate, and expression on successive readings.

Speaking and Listening

SL.1.4 Describe people, places, things, and events with relevant details, expressing ideas and feelings clearly.

Literature

RL.1.4 Identify words and phrases in stories or poems that suggest feelings or appeal to the senses.



Procedure (continued)

Discuss how these examples show how the characters are feeling; model correct and incorrect verbal expression.

- 5. Divide students into pairs or small groups**, and give each group one of the attached text samples. Ask them to work together to find and circle examples of words or phrases that show how characters are feeling. Pairs of on-level to advanced readers may do this without support, but beginning or struggling readers may need to work in a larger teacher-supported group.
- 6. When students are finished identifying the “feeling” clues**, ask them to read the excerpts aloud to one another. They should read the texts twice—first, with NO feeling, then using the feeling clues, in a way that shows how the characters are feeling.
- 7. Bring the class back together, and ask, “What were some of the feeling clues you found?”** If using the extension/assessment (below), compile this list on the board. Then, ask some students to read sentences from their excerpts to the whole class, first with NO feeling, and then using their voices to show how the characters feel.

Extension/Assessment

- Brainstorm more “feeling clues” that would help a reader to understand how a character feels. Add these to the list on the board. Then, using those clues and their own ideas, students write their own paragraphs about the characters from Flora and the Runaway Rooster, using at least three feeling clues. Encourage students to read their paragraphs out loud, using the feeling clues to guide their voices to show how characters feel.

Advanced Reader

Flora’s Brother: Flora is very lucky that her friend Gideon was there to help her catch Kubika! How would she have chased the eagle and caught the rooster all alone? It makes me nervous just to think about it!

Flora’s Sister: Oh, don’t be so worried about Flora. You know how brave and clever she is! She would have found a way to save Kubika. Actually, when I think about her chasing that strutting bird, it makes me laugh!

Intermediate Reader

Reader 1: Gideon rode his bicycle home, carrying the rooster and hen. His mother was very surprised to see his new chickens. “Where did those birds come from?” she asked.

Reader 2: “Flora gave them to me,” Gideon said. He was smiling from ear to ear. “I helped to save her rooster today. She wanted to pass on the gift!”

Beginning Reader

Flora’s father: Flora had a big day! She is a wild girl. Do you think we should send her to the new school? I’m not sure if she is ready.

Flora’s mother: She is wild, but she is also brave and caring. She saved the rooster and helped her friend! I am proud of her. I think she will be ready.

Build Your Own Soccer Ball



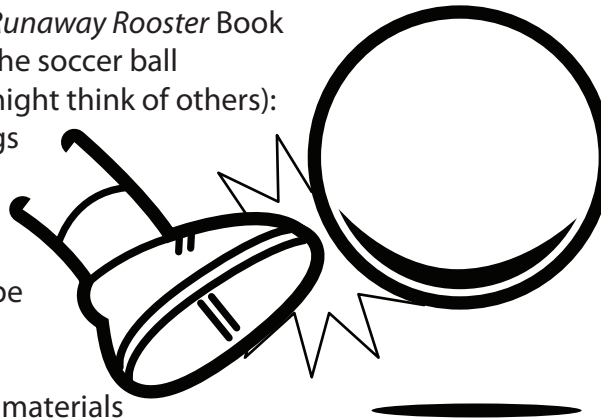
Objectives

The students will:

- Design and build a usable soccer ball
- Test, evaluate, and improve the soccer ball.

Materials

- Copy of *Flora and the Runaway Rooster* Book
- Supplies for building the soccer ball (recommended, you might think of others):
 - Plastic or paper bags
 - Rags/old socks
 - Twine
 - Yarn
 - Duct or packing tape
 - Rubber bands
 - Large leaves
 - Styrofoam packing materials
 - Wood mulch or bark
 - Cardboard boxes of varying sizes



Procedure

1. **In *Flora and the Runaway Rooster*, the main character, Flora, really enjoys playing soccer.** Flip through the book with your students, reviewing the illustrations to see if they can find images of Flora with her soccer ball. Ask the students to look closely at the soccer ball. Does Flora's soccer ball look like the same kind of ball that your students are used to seeing? In many communities where financial resources are scarce and families do not have extra money, purchasing a soccer ball is a luxury. How could children who love soccer, like Flora, find a ball? They make one out of discarded materials they find around their homes.
2. **Design a soccer ball.** Explain to the students that they will have the opportunity to build soccer balls and try them out. Tell the students that before they begin, the class will plan the project. Ask them what characteristics a good ball should have, and what shape and size the soccer balls should be.

Answers may include: Round shape, able to roll, not too heavy or too light, should be durable to withstand lots of kicking,

3. **Build a soccer ball.** Divide students into pairs. Allow students to explore the materials you have collected for them (see Materials for some ideas). Remind students that children in poor communities may not have many materials—so they have to use what they can find. That might be discarded bags, wrappers, or clothing. They

National Standards Addressed



SCIENCE

K-2-ETS1-1 Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.

K-2-ETS1-2 Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.

K-2-ETS1-3 Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.



COMMON CORE LANGUAGE ARTS

Writing

W.2.7 Participate in shared research and writing projects (e.g., read a number of books on a single topic to produce a report; record science observations).



Procedure (continued)

might also use natural materials like leaves, bark or wood mulch. After the students select the materials for their first ball, allow them time to collaborate and construct.

- 4. Test your soccer ball.** Each pair should kick it/pass it a total of 30 times, while observing the performance of the ball. (You may want to suggest students count aloud while kicking.) A soccer ball evaluation rubric is included below. Make copies for the students to use while they are gathering information about the ball. (You may also compose your own rubric or ask students to do so.)
- 5. Redesign and build the soccer ball.** Based on the information the students gather from their evaluation, the students should redesign their soccer ball. For example, if they felt the first prototype was too light, they might decide to fill the ball with heavier materials. If the ball fell apart too easily, they might choose to use a more durable outer layer or more twine to hold it together.
- 6. Test the soccer ball again.** Repeat the activities in procedure 4. After the students complete the soccer ball rubric for the second time, the pair should decide which of their soccer ball designs is the best.

Children and adults in many communities worldwide make their own soccer balls from materials they find around them. You may want to share these images and videos with your students if they need some examples of how to form their soccer ball. Alternatively, you can let the children make theirs first and compare their prototypes to the examples shown.

Heifer International's video: "A Journey to Africa"

The approximately 5 minutes video shows Masai children playing soccer with a ball they built (soccer footage is at the 2:58-3:10 mark). The video also provides information for children about Heifer's work in several African countries.

<http://www.teachertube.com/video/heifer-international-africa-293364>

New York Times video: "Pass It On"

This is an approximately 3 minute-long video showing a Congolese man making a soccer ball for children in his community.

<http://www.nytimes.com/video/opinion/10000002925583/pass-it-on.html>

National Geographic "Joy is Round"

This is a collection of images by photographer Jessica Hilltout. The photos, taken throughout Africa, feature children with their soccer balls.

<http://bit.ly/1vY04jc>

Standards (continued)

W.2.8 Recall information from experiences or gather information from provided sources to answer a question.

Speaking and Listening

SL.2.1 Participate in collaborative conversations with diverse partners about grade 2 topics and texts with peers and adults in small and larger groups.

SL.2.4 Tell a story or recount an experience with appropriate facts and relevant, descriptive details, speaking audibly in coherent sentences.

Language

L.2.1 Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

L.2.3 Use knowledge of language and its conventions when writing, speaking, reading, or listening.

L.2.5 Demonstrate understanding of word relationships and nuances in word meanings.



Procedure (continued)

7. Share the results. Each pair should present their best-designed ball to the remainder of the class. The students should speak about one of the following (you may want to assign the individual students a topic):

- What materials did they use?
- Which design was the best? Why?
- What did they learn in their tests? Were there any surprising results?

Extension activity

- Students can devise other quality tests for their soccer balls and evaluate them with the rubric.
- Students can research store-bought soccer balls, to determine the country in which the soccer balls (or other sporting equipment) are made. They may find that materials come from one country to be assembled in another and then shipped to many more countries! Students can map the different countries that help build the soccer balls.

Teachers: Use this matrix to explain to students how to evaluate their soccer ball using the rubric below.

	3 points	2 points	1 point	
How well did it hold shape?	It's still perfectly round.	Its shape has changed a little, but it still looks pretty good.	It doesn't even look like a ball anymore.	
Did it lose any parts?	Everything stayed together just like we built it.	A few pieces of our materials came out of the ball. OR It's torn or fraying.	A lot of the materials fell apart. It's badly torn.	
How well does it roll?	It rolls straight and far when we kick it.	It doesn't roll very far. OR It doesn't roll in the direction we kick it.	It doesn't roll.	
Is the ball a good weight?	It's just right. Not too heavy or too light.	We need to adjust the weight a little bit. We need to add some heavier materials. OR We need to use some lighter materials.	It is way too heavy. You would need to be really strong and wear protective shoes to kick it! OR It is way too light! The wind could blow it away!	
				Add the points in this column. What is your total? _____

Standards (continued)

COMMON CORE MATHEMATICS

G.A.1 Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.



Students: Use this rubric to evaluate your soccer ball! Choose either 3 points, 2 points or 1 point in each row.

	3 points	2 points	1 point	Write the points for each row.
How well did it hold shape?				
Did it lose any parts?				
How well does it roll?				
Is the ball a good weight?				
				Add the points in this column. What is your total? _____

Context Clues: Solving Word Mysteries

LESSON 9

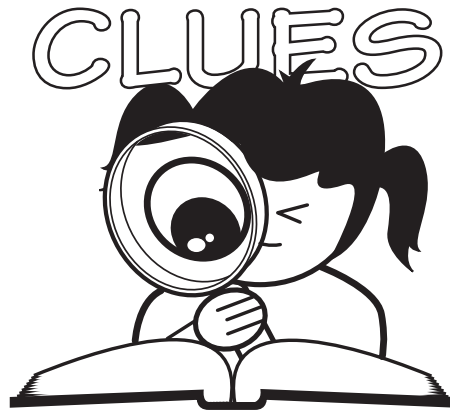
Objective

The students will:

- Use context clues to determine the meaning of unknown words.

Materials

- Whiteboard, projector, SMARTboard, or chart paper
- Copies of the text of *Flora and the Runaway Rooster* or printouts of the PDF



Procedure

- 1. Explain the use of context clues.** Tell students: When you use clues in a story to help you figure out the meaning of a word, you are using CONTEXT clues. When you come to a word in your reading and you don't know what it means, you can find clues in other words near your mystery word or in the illustrations.
- 2. Model the use of context clues.** Display this passage (whiteboard, projector or SMARTboard, depending on your classroom):

Flora knew she had to hurry. She grabbed the handlebars of the igare and climbed on it. She began to pedal, slowly at first then faster and faster.

Point out the word "igare" (ee GAH ray). This is a word from the Kinyarwanda language spoken in Rwanda. Ask your students to look for clues that might tell them what "igare" means. Ask students to make a guess and to tell you what clues they used. (Examples might be handlebars, pedal, that Flora needed to hurry.) Tell them that the word "igare" means bicycle.

Try another example with this passage:

Flora looked up at the eagle anxiously. She knew that eagle might find and catch Kubika before she could! She worried about what her parents would say.

Point out the word "anxiously". Ask the students to make guesses about the meaning and tell you their clues. Or, if they already know the word, ask them how might they guess if they

National Standards Addressed

COMMON CORE LANGUAGE ARTS

Language

L.1/2.4 Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 1/2 reading and content, choosing flexibly from an array of strategies.

Foundational Skills

RF.1/2.4 Read with sufficient accuracy and fluency to support comprehension.

Literature

RL.1/2.10 By the end of the year, read and comprehend literature, including stories and poetry, in the grades 1-2/2-3 text complexity band proficiently, with scaffolding as needed at the high end of the range.

Procedure (continued)

didn't know the word. Ask them to think about the situation. If you were Flora, and you saw an eagle flying overhead that might catch your rooster, what would you do? How would you feel? You might even encourage them to act out the situation, and discuss the facial expressions that they make when they do it. Use these clues to help students come to the conclusion that "anxiously" means to do something with worry or fear about what might happen.

- 3. Prepare students for independent practice.** On the board, write the two strategies for using context clues to find the meaning of a word:
 - a. Look for clues in the words around it or in the illustrations.
 - b. Think about the situation. How would you feel? What would you do?
- 4. Practice in pairs.** Give students copies of *Flora and the Runaway Rooster*, or printouts of the PDF of the book (downloadable at www.readtofeed.org). Ask them to choose at least 4 unfamiliar words and write them on a piece of paper. Then, individually or in pairs, they should select 2 of their unfamiliar words and try to determine their meanings by applying their context clue strategies.
- 5. Share solutions.** When most students seem ready, reconvene the class. Ask a few students to share their findings and describe how they used context clues to figure out the meanings. Be sure to call attention to the words "Muraho" (muh-RAH-ho) and "Murakoze" (muh-rah-KOH-zay)." Like "igare", these are Kinyarwanda words. Muraho means "hello" and murakoze means "thank you."
- 6. Write word mystery challenges.** Divide students into pairs. Give each student in the pair a secret Kinyarwanda word, using the attached cards. Some students within the class may use the same word, but make sure that each pair has two different words (Note: the words increase in difficulty as you move down the page, so you may choose to be selective about the word assignments, based upon children's needs and reading levels). Keeping their word cards secret from their partners, students should write sentences substituting the Kinyarwanda word for its English meaning, just like in the "igare" sentence. You may wish to display that sample sentence for students to use as a model. Remind students to include context clues in their sentences! When the sentences are done, partners trade them, and use context clue strategies to figure out their meanings. Pairs finishing early may trade with other classmates.

Extension

- Have students write out their sentences neatly, underlining the Kinyarwanda words, and illustrate them. On the back, they can write the definitions of their Kinyarwanda words. Then, hang these in the hallway or another shared school space as an interactive and fun display!

Teachers: Divide students into pairs. Give each student in the pair a secret Kinyarwanda word, using these cards. Keeping their word cards secret from their partners, students should write sentences substituting the Kinyarwanda word for its English meaning. Remind students to include context clues in their sentences! When the sentences are done, partners trade them, and use context clue strategies to figure out their meanings.

Ino means toe	Ivi means knee	Meme means pinky finger	Data means father	Pome means apple	Amazi means water
Ihuku means cat	Imbwa means dog	Intare means lion	Ingagi means gorilla	Inyama means meat	Inkeri means strawberry
Rimwe means one	Kabiri means two	Gatatu means three	Enye means four	Eshanu means five	Umutobe means juice
Igitare means white	Ubururu means blue	Umukara means black	Umuhondo means yellow	Umutuku means red	Ikimonyo means ant
Ikiganza means hand	Ikirenge means foot	Umusatsi means hair	Umuwana means child	Impundu means chimpanzee	Mudasobwa means computer