



ELA Common Core Content Standards:

Speaking and Listening Standards 1, 3, 4
Language Standards 1, 2, 5, 6

*Estimated time:
One 2 hour session*

Goal: Students will learn to differentiate between foods that should be included in their diet regularly and those that should be eaten less often in order to maintain good health, using examples from both traditional Native and contemporary food systems. They will also learn how food and beverage intake, as well as how physical activity is connected to human and environmental health.

Teacher Background: The prevalence of obesity and diet-related chronic disease is increasing in the United States, and the Native American population shows the most devastating rates of all ethnic groups. While the public's health is further threatened by rising antibiotic resistance; chemicals and pathogens contaminating our food, air, soil and water, the depletion of natural resources and climate change is negatively affecting the environmental health of our homelands. According to the American Public Health Association, "These threats have enormous human, social, and economic costs that are growing, cumulative, and unequally distributed. These issues are all related to food—what we eat and how it is produced."¹

In many parts of the United States, the industrial food system provides abundant, relatively inexpensive food. This is not the case in most areas that are highly populated by Native Americans. At the same time, much of the food commercially available is unhealthy, and the industrial food system is currently unsustainable. On the other hand, the traditional Native foods are replete with economic and environmentally sustainable healthy foods. Why, then, are Native peoples one of the poorest and most unhealthy ethnic populations in the country?

¹ See <https://www.apha.org/policies-and-advocacy/public-health-policy-statements/policy-database/2014/07/29/12/34/toward-a-healthy-sustainable-food-system>, retrieved 7/19/2016.

There are manifold reasons to explain the current situation: Our People's intimate and deep relationship to the landscape has been violently disrupted due to colonization and globalization. Land appropriation, the ban on traditional land management practices – especially on cultural burning, and forced assimilation into Western culture has driven many Native people from their traditional homelands. Even those who remain have limited access to traditional foods and medicines. Additionally, the marginalization of Native cultures and the damage to traditional education through the Indian Boarding School Era have led to what is widely known as intergenerational trauma. And finally, the current threats posed by increasing frequency and scale of wildfire, continued drought conditions, pest and disease infestation have highly and negatively impacted access to Native foods, fibers and medicinal plants.

For the Karuk and other Native Americans, hunting, fishing and gathering food activities not only contribute to the perpetuation of indigenous culture, but also are subsistence living measures with arguable economic and environmental benefits. In addition, the many strenuous activities required to maintain food security also ensured the physical fitness of Native peoples. Students will learn about how one can make food choices that are also excellent for both their health and the health of the environment – within both Native and conventional food systems.

One of the results of ascribing to the current industrial food system, on the other hand, is the mentioned an increasing rate of diet-related diseases. Native Americans also have physiological and lifestyle risk factors that increase even these rates of type 2 diabetes. Across the board, Americans have tripled the number of diabetes patients in the last 30 years. Both obesity and Type 2 diabetes is steadily increasing in children. Diabetes and other diseases will continue and grow in our communities unless our children are challenged on a daily basis to make healthy choices with their diet and physical activity. And while we may not have access to all of our traditional foods, we can supplement them with new foods that have similar nutritional value.

The lesson text features the Native American cult figure, Coyote. As noted in Lesson 4 in this grade level, there is a Native literary genre that contains hundreds of stories, sometimes called “Trickster tales” because Coyote often tries to play a trick or two. These stories are very popular, because Coyote is a very interesting character: while he is one of the Spirit People who understands the rules and ways of the Native People, he often decides not to follow these traditional ways and has to suffer the consequences. Most of these stories are humorous, but some are very serious. The lesson text is a modern fictional story that teaches about healthy food and activity choices, and the “tricky” bit that is also embedded in our hunger versus appetite dilemmas and commercial marketing strategies could make for great discussion topics.

- Theme/Big Ideas:** Food Choices Affect our Health and Environment
- Big Question:** How do decisions about what to eat and how to spend free time relate to personal health and the health of the environment?
- Vocabulary:** natural resources; logistics; requirements; diabetes; disease

Materials:

- Food Matrix Template** (included)
- Tricky Treats** (included in curriculum packet)

Preparation: Review lesson and instructions for activities. For an optional independent activity, make copies of the **Food Matrix Template** for each student.

Discussion: Ask student what kinds of snacks they like to bring to school, take on a trip or to the river. Write these up on the board, and then ask students if they think these are good choices, and why and/or why not. Bring the class to the understanding that the adjective “good” needs more definition, and that they will need to collaborate to develop a classroom-wide approved definition. Make sure that they include words like healthy, tasty, and affordable. Other ideas might be that they should be easy to carry, aren’t messy, and – good for the environment. Now the question will be to decide what is meant by “good for the environment:” does that mean that there is not a lot of packaging, the packaging is recyclable, that they don’t require a lot of resources to produce, e.g. fuels, refrigeration, and that they are produced locally?

Have students decide on three to five typical snacks, then erase the board and draw the following Food Matrix on the board for classroom work, or print out the Food Matrix Template for an independent activity. Write the snacks up on the board as column headings and the requirements for producing them as row headings. See example below and clarify terms:

- natural resources refers to *things such as minerals, wood, coal, etc. that exist naturally in a place and can be used by people*
- logistics means *the way of transporting goods to customers*
- requirements are things that are needed or necessary
- to produce is a fancy way of saying *to make*

Example Snack Matrix:

Snack	store-bought muffin	beef jerky	garden carrot sticks
Natural Resources needed to produce	-water -grain seeds -soil -energy for factory (lights, heating, electrical equipment) and for baking and packaging	-water -grain for feed -land -sewage -energy for stall (lights, electrical equipment) and for drying and packaging	-water -soil -carrot seeds -land -packaging
Logistics	-ingredients to factory -truck to distribution center -truck to store -drive from store to home	-meat to factory -truck to distribution center -truck to store -drive from store to home	-seeds from store
Personal physical requirements	-walk to store and car	-walk to store and car	-gardening -cutting
Personal financial requirements	\$\$ for food, car, and garbage disposal	\$\$\$ for food, car, and garbage disposal	\$ for water and seeds

Ask them what kinds of natural resources are needed to produce this snack food. Where they think these snack foods are from and how they get from their original source to you. For each snacks listed, have students brainstorm for the steps they think these foods are taken from source to table. Then ask them, what kind of physical activity do they, or their food provider, need to expend to get these foods (Answer may be: My mom drives to the store and back). Then ask them what else is needed to get this food. Try to help them come to the financial needs for acquiring these foods. You may choose to add this step to the physical requirements needed to acquire these foods. (Example: Work to earn money needed to purchase foods).

If a Native food hasn't already been listed as an example snack, ask them if they have ever gone to the forest or river to get food, and what kind of food they got that could be eaten as a snack. Ask them if they would be willing to tell the class what you learned about harvesting Native foods. Who taught them? What physical activities did you have to do to harvest the food?

Ask students what lessons they might learn when acquiring contemporary versus Native foods (Answers might be that they need to get a job to earn money to buy food, car and gas, or that they might learn from others about which kinds of food and how to gather, hunt, and fish). Ask

them which types of food require more physical activity if this hasn't already been discussed. Then, ask them to decide which snacks might be healthier for them, and which ones are better for the environment. Are there any links between the two "good" types of snack foods?

Preparing for Reading: If your students have not already learned from the G3L7 Native Food lesson, tell students that the picture book they will be reading is one in a series of four developed by the Indian Health Service, or IHS for short. The IHS is a United States health care agency for Native Americans and Alaska Natives. Explain to students that IHS publishes this series out of a concern for particular health issues that affect both Native and non-Native Americans. Ask them if they can guess what that might be.

If they haven't already guessed, tell students that this book series talks about diabetes and diabetes prevention. Ask them if they know what diabetes is, or if they know someone with this disease (*If students have had Nanu'avaha Kindergarten, First, or Second Grade Lesson 10; or Third Grade Lesson 7, ask them if they can remember what diabetes means. Suggested answer: it is a serious disease in which the body cannot properly control the amount of sugar in your blood*). You may need to explain that a disease is an illness that affects people, animals or plants. Tell or remind them that while some people are born with one type of diabetes, the second type is preventable. Today, however, 1 out of 3 American children born will develop diabetes over their lifetime. Furthermore, American Indians and Alaska Natives are 2.6 times more likely than that to get this Type 2 diabetes.

The text they are about to read is a fictional story that features the popular Native American character, Coyote. Ask them if they can describe Coyote's personality. Unless students can describe his conflicting character well, tell students that while he is one of the Spirit People who understands the rules and culture of Native People, he often decides not to follow these traditional ways and has to suffer the consequences. Most of these "Trickster Tales" are humorous, because Coyote is always up to no good and usually gets in some sort of trouble for it. This particular text is not a traditional story, which makes it alright to tell even when it's not winter time.

Reading: Have students take turns reading **Tricky Treats**.

Comprehension: Evaluate listening comprehension by asking the following prompts:

- Why did the children want to meet Eagle? (*Suggested answers: he's their friend; it was the last time they would see him; they wanted to hear what he was going to say, etc.*)
- What did Coyote answer when Eagle asked him why he came? (*Suggested answer: He*

wanted to join in on the conversation about staying healthy.)

- What does Eagle mean by *everyday* snacks and snacks that are to be eaten only *sometimes*? (Suggested answers: *Everyday* snacks are healthy for you. Especially good are those that you can grow in your own garden. “*Sometimes*” snacks are those that have a lot of sugar and/or fat in them. They can be eaten once in a while, just not all the time.)
- How does Coyote try to trick the children? (Suggested answers: he tries to tempt them into eating unhealthy foods and drinks; he offers them food to whom he doesn't know it belongs)
- What do the children do that is especially nice to do with good food? (Suggested answers: share with others; enjoy the taste)

Physical Activity: Mark off an area for the “Animal Race” into four or more stretches or one animal per circle of playground, etc. Have students stand up in a straight line. Direct them that from the first line (or in the first circle) they will “jump like a rabbit”, from the second line they will “crawl like a lizard”, and so on.

Four stretches of the Animal Race:

- 1) Jump like a rabbit,
- 2) crawl like a lizard,
- 3) fly like an eagle,
- 4) run like a deer, etc.

After the students have finished, guide them in a discussion about their experience. Reinforce the idea that doing the exercise in this way shows them that they need to control and use their minds and bodies to be able to move quickly. This is one of the gifts discussed in their lesson text: With a healthy diet that makes their bodies strong, they can play and run on Mother Earth – which will also help them keep their spirits strong.

Preparation for Physical Activity: Tell students that Native Americans learn from listening to their elders and other knowledgeable people, from observing their environment, and watching the way animals get their food and move around. Today, they are going to learn how to take care of their bodies by doing some Animal Stretches! Explain that exercise involves a posture, (whether moving or stationary), breathing and mental focus.

People exercise to maintain or improve health, relax, gain strength and physical skills, and reconnect with their spirit. Exercising can encourage a positive outlook on life and help get rid of bad feelings and behaviors. Students, too, can learn to channel their energy and develop an increased awareness, like a good food provider, or... a Super Hero! Tell them that when we take responsibility for our health, the whole community – or Tribe – benefits.

Physical Activity: Lead students in the following exercises, which mimic the movements of animals. Movements always start with: a) hands by your side; b) feet pointed forward, and; c) knees bent slightly.

Eagle stretches wings: arms at side, move up and down slowly 10 times or more

Rabbit stretches back legs: squat, hold feet, straighten legs, squat, repeat 10 times.

Bear stretches up to look big: up on tip toes, hands like claws, more slowly up in front of you into the air, hold for 10 seconds, repeat.

Egret stretch: put all your weight on right leg, point left toe slightly bent, stretch right wings upward and left wing downward, squat a little. Repeat on reverse side.

Quail stretch: lunge with right foot forward, left hand above head as a top feather, right hand on side to balance. Stand up with left foot bent in air. Repeat.

Frog stretch: lunge with right foot forward, hands in front of you open like a giant frog mouth catching flies. Switch to left side, repeat.

Lion stretch: get down on all fours, left leg points backwards and right arm points forward, hold for 10 seconds. Go to all fours again, other side, right leg points backwards and left arm forward, hold for 10 seconds, repeat.

Goose stretch: legs 3 feet apart, squat, arms outstretched to sides into the air, stand up and back down again with arms in front of you, repeat.

Chasing Coyote: left leg steps backwards with left arm down and around. Right leg steps backwards with right arm down and around. (Tip: this exercise requires more space)

Remind students to breathe slowly and deeply, know where their feet and hands are, and think like the animal. After the students have finished, guide them in a discussion about their experience. Reinforce the idea that doing the exercise in this way shows them that they need to control and use their minds and bodies to make good choices every day: to be active every day and to eat good foods every day.