



ELA Common Core Content Standards:

Writing Standards 2

Speaking and Listening Standards 1, 3, 4

Language Standards 1, 2, 5, 6

Estimated time:

One 2 hour session

Goal: Students will learn about how nutritional foods and physical exercise help their bodies keep healthy, and that gathering and eating Native Foods help prevent diet-related diseases.

Teacher Background: Native Americans have lived sustainably with their environment by gathering, hunting and fishing respectfully and through the lessons learned through traditional ecological knowledge. In our region, the traditional ways of indigenous life was suddenly and violently interrupted in the mid-18th century with the onset of the California gold rush. As thousands of miners flooded into Northern California to stake their claims – and the U.S. Army was called upon to ensure miners' safety – indigenous Peoples were murdered, massacred, and enslaved.

Unfortunately, the gold rush was only the beginning. Since then, the economy and politics of the middle Klamath River region has been driven by the quest to extract natural resources: mining operations and the hydropower and timber industries have continued to deplete the fish and wildlife species that have nourished the indigenous peoples of this region since time immemorial. Most recently the middle Klamath River region has become a destination for illicit marijuana growing operations, which once again pose a whole new series of threats and risks, both environmental and social.

Today, the middle Klamath River region remains unhealed, with many species of plants, birds, animals, reptiles and fish struggling to recover from the devastating effects of this unrelenting series of disruptions to the social, economic and natural systems. Indigenous people continue to suffer under denied access to traditional foods, their replacement with commodity foods, high unemployment, and limited availability and affordability of fresh, healthy foods.

The epidemics of obesity and diabetes in Native communities, even among children, are direct consequences of limited access to traditional and healthy food. This lesson attempts to lead students in understanding that understanding the relationship between the foods we eat and our physical activities are directly related to our health.

- Theme/Big Ideas:** We can learn from teachers/messengers of all kinds.
- Big Question:** How can we be healthy?
- Vocabulary:** nutrient, type 2 diabetes, ultraviolet (UV) rays, airborne, urban myth, heart, exercise, pulse (*learned through teacher clarification*)
- Karuk Vocabulary:** **ikxáramkunish** (black); **thúkk inkunish** (green, yellow, blue); **taahkúnish** (white, also: **chánchaafkunish**); **amkuufkunish** (blue-gray); **amtaapkunish** (gray); **aamakunish** (pink)

Materials:

- How Coyote Gets Good Eyes**, adapted from traditional story (included in lesson plan)
- Knees Lifted High** (included in curriculum set)
- Coloring Worksheets** (included)
- Crayons or markers for coloring activity (not included)
- Optional: **Eagle Book Series DVD** (included in Grade 2 curriculum binder)

Preparation: Review lesson and instructions for activities. Get books from library to pass out to students. Copy worksheets; prepare crayons drawing activity. Optional: upload video from the Eagle Book Series DVD and prepare speakers and screen for viewing.

Preparation for Listening: Ask students if they “have good eyes.” You may want to explain that when people ask this, they aren’t asking if their eyes are pretty or a nice size, but that if they can see well. Ask them if they know how people can maintain their good eyesight and list answers on the board, using a version of the suggested populated template:

Eye Health		
People		
1. don’t smoke		
2. wear sunglasses when it’s sunny		
3. use safety wear when doing something that might damage the eyes		
4. don’t look at computers, televisions or electronic devices		

for long		
5. get vision check-ups regularly		
6. eat for good vision		

Tell students that you will read to them a version of a traditional story about how coyote gets good eyes. This version is not in the traditional form, since those stories cannot be told – according to tribal code – when there is no snow on the mountains.

Listening: Read the following adapted story version of **How Coyote Gets Good Eyes:**

Coyote was on his way to new adventures. He came to a place where there was a pond of clear water close to the river. His eyes were not good, and so he couldn't see clearly. He heard something swishing in the water, and he thought it must be Steelhead Trout. But as soon as the fish approached the water's edge, he suddenly darted away. Coyote thought to himself: "This fish must have good eyes. He can see me or my shadow quickly."

Coyote called out: "You mustn't be so wild, Trout. I won't harm you." Soon he heard the fish swimming back close to the shore, and then Trout lay there in the water and exchanged polite conversation with Coyote.

Finally, Coyote asked: "How would you like to have good eyes?"

"Oh, I have good eyes," replied Trout. "I don't need better eyes than I have."

Coyote thought of a good way to trick him and said: "I don't think you have eyes as good as mine. Look up at that mountain. I can see flies there. Can you see them?"

Trout peered out of the water and into the mountains for a sign of those tasty flies he was looking for his dinner for earlier. Then, shaking his head he said: "No, I can't see them."

"Well," said Coyote. "I'll take my eyes out and you try them." Coyote took out his eyes, and Trout removed his own and put Coyote's in their place.

"Can you see the flies?" asked Coyote.

"Yes," said Trout slowly. "I can see them now." But he only imagined he saw them. In reality, Coyote's eyes were so bad that Trout's vision was filled with floating specks.

"Let's trade then," said Coyote. "Then you can see so well you can catch all the flies you want."

Trout gave him his own, and with his new eyes, Coyote travelled happily on.

Comprehension: Ask the students how Coyote got his good eyes. Then ask them if that's how people get good eyes. You may wish to populate the template shown above with suggested answers:

Eye Health

People	Coyote	Good Foods
1. don't smoke	1. pretend to have good eyes	
2. wear sunglasses when it's sunny	2. trick Trout into trading his good eyes with Coyote's	
3. use safety wear when doing something that might damage the eyes	3. replace eyes with better ones	
4. don't look at computers, televisions or electronic devices for long		
5. get vision check-ups regularly		
6. eat for good vision		

Discussion: Tell students that protecting your eyes starts with the food on your plate. Lots of people say that eating carrots will improve your vision, and this is true: Carrots are high in vitamin A, a nutrient essential for good vision. Eating carrots will provide you with the small amount of vitamin A needed for good vision, but vitamin A isn't limited to carrots; it can also be found in milk, cheese, egg yolk, and liver.

Studies show that nutrients such as omega-3 fatty acids, lutein, zinc, and vitamins C and E might help ward off vision problems as they get older. Ask them if they know of some good foods that help protect and maintain good eyesight and list them in the column on the right, titled "Good Foods." Then, explain to students that regularly eating the following foods can help lead to good eye health and list some of the ones not already discussed:

- Green, leafy vegetables such as spinach, kale, and collards
- Salmon, tuna, and other oily fish
- Eggs, nuts, and beans
- Oranges and other citrus fruits or juices

Explain to students that eating a well-balanced diet also helps them maintain a healthy weight, which makes them less likely to get obesity-related diseases such as type 2 diabetes. Diabetes is the leading cause of blindness in adults.

Other related discussion points:

- Smoking makes people more likely to get problems with their eyes, such as cataracts, and nerve damage.
- The right kind of sunglasses will help protect your eyes from the sun's ultraviolet (UV) rays. Too much UV makes you more likely to get eye problems.
- When working with hazardous or airborne materials, wear safety glasses.
- Certain sports such as football and baseball can lead to eye injury. Wear eye protection (such as helmets with protective face masks) to shield your eyes.
- Staring at a computer screen for too long can cause:
 - Eyestrain
 - Dry eyes
 - Blurry vision
 - Headaches
 - Trouble focusing at a distance
 - Neck, back, and shoulder pain

Students should take the following steps to protect their eyes:

- Position computer so that your eyes are level with the top of the monitor. This allows you to look slightly down at the screen.
- Try to avoid glare on your electronic screens from windows and lights.
- Choose a comfortable, supportive chair when looking at the television or computer. Position it so that your feet are flat on the floor.
- If your eyes are dry, blink more.
- Every 20 minutes, rest your eyes by looking 20 feet away for 20 seconds. At least every 2 hours, get up and take a 15-minute break.

Tell students that the following are “urban myths,” which means that they are stories or statements that aren’t true but are often repeated, and believed by many to be true.

Urban Myths regarding Eyesight

Sitting Too Close to the TV Damages Vision.

Fiction: Sitting closer than necessary to the television may give you a headache, but it will not damage your vision. Some people may do this to see the TV more clearly, but they may, in fact, need glasses.

Reading in the Dark Weakens Eyesight

Fiction: As with sitting too close to the television, you may feel eyestrain or get a headache from reading in the dark, but it will not weaken your eyes.

Using Glasses Weakens Eyesight, and Eyes Will Eventually Become Dependent On Them

Fiction: Your eyes will not grow weaker as a result of using corrective lenses. If you need

them, wear them. Your prescription may change over time due to aging or the presence of disease, but it is not because of your current prescription.

Preparing for Reading: Tell students that what we eat affects our health. Eating well helps keep us strong and able to fight off illnesses. At the same time, our level of activity affects our health, too. Tell students that it is important for our bodies to stay active to build muscles, including the heart; strengthen bones, and; burn up the calories taken in by food. Many modern-day children’s activities, such as playing video games and watching TV, are not as good as those done on a regular basis in the past, such as hunting, fishing, and gathering foods, basket materials and firewood. Individuals have some responsibility for their own health, and students should think about those choices they make that can maintain and improve health. Playing outdoors, brushing their teeth, and helping with chores are a good start.

Reading or Listening: Depending on the level of your students, you may wish to or have someone else read **Knees Lifted High** aloud. Optional is to upload video from the Eagle Book Series DVD (included in Grade 2 curriculum binder).

Comprehension: Prompt discussion that can help you evaluate your students’ text comprehension with some or all of the bulleted questions (suggested answers in italics):

- Who are the main characters of the story? *Rain That Dances, Thunder Cloud, and Eagle.*
- Why is Eagle sad? *Children are not playing outside and keeping fit.*
- Why is the village quiet? *People aren’t outside of their homes, and children are spending too much time inside watching TV or sitting around.*
- Why is it important to keep active? *To stay healthy and prevent diseases such as diabetes.*
- What is diabetes? *It is a disease when the body can’t use the sugar in food the way it should.*

Preparing for Physical Activity: By moving their bodies in different ways, student will explore and learn about the muscles in their bodies—and get exercise at the same time! They also can learn how activity affects a very important muscle in their body—the heart.

1) Body, arm, leg, and foot muscles: Invite students to do different kinds of movements just like Rain That Dances and Thunder Cloud. They can reach up with their arms, touch their toes, flap the arms like the Eagle’s wings, or walk in funny ways. They can try zigzag steps, giant steps, baby steps, hopping, and slow-motion walking. Ceremonial dance steps are fun, too. Then, ask the children to indicate which parts of their bodies come into play when they do certain movements.

Teacher Tip: Borrow a chart showing the human muscle system from a biology teacher in your local high school. Have the children point out on the chart the muscles they think they are moving. Don't worry about the names of the muscles, just get the kids moving! This activity is best done in the gym and is a great rainy day activity.

2) The Heart Muscle: 1) Ask students to sit very quietly at their desks for two minutes. Show them how to find the r pulse and have them describe what they feel. 2) Then have the students jump in place for two minutes beside their desk. While still standing, ask them to find their pulse again and describe what they feel. Discuss with the class what is happening to their heart when they exercise.

Materials/Environment: Human muscle chart or model (optional). Make sure there's enough room for children to exercise safely.

Teacher Tip: Teachers can demonstrate on their own body where to put a finger to feel the pulse—the thump which accompanies the surge of blood with each beat of the heart. Pulse locations that are easiest to feel are at the wrist and in the carotid artery in the neck.

Drawing Activity: Pass out the worksheets and crayons for a coloring activity.

Resources:

Diabetes in American Indians and Alaska Natives (NDIC, NIDDK, NIH) www.niddk.nih.gov

Karok Myths, A.L. Kroeber and E.W. Gifford, University of California Press 1980

Native Diabetes Wellness Programs, www.cdc.gov/diabetes/eagle/index.html

DETS (Diabetes Education in Tribal schools. www.hasketll.edu/soe/nihdets.htm

American Indian Games Manual, 24 traditional games. Classroom exercise Break Box, <http://hscunm.edu/pathways/Downloads/patvity.htm>

Web MD: Eye Health Center. *How to maintain Good Eye Health*, <http://www.webmd.com/eye-health/good-eyesight?page=2> and *Myths about Your Eyes and Vision*, <http://www.webmd.com/eye-health/fact-fiction-myths-about-eyes>

Name: _____

Coloring Worksheets









