



GrowingGreat

K-2 Lesson 3 (Pilot): Tummy Talk

By Sarah Minkow

OBJECTIVE: Students learn to listen to their bodies' hunger signals to understand when and how much to eat.

MAIN CONCEPTS:

- Listening to our bodies' signals/hunger cues
- Hunger levels and scale
- Eat when hungry, before you are starving
- Stop eating when satisfied, before you are full
- Mindful eating: using the 5 senses to pay attention to what we are eating

K-2 CALIFORNIA NEXT GENERATION SCIENCE STANDARDS:

- K-LS1 From Molecules to Organisms: Structures and Processes
 - K-LS1-1. Use observations to describe patterns of what plants and animals (including humans) need to survive.
- K.MD.A.2 Directly compare two objects with a measurable attribute in common, to see which object has “more of”/”less of” the attribute, and describe the difference. (K-LS1-1)
- MP.2 Reason abstractly and quantitatively. (K-ESS2-1)
- 2.MD.D.10 Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph. (K-2-ETS1-1),(K-2-ETS1-3)
- K.CC.A Know number names and the count sequence. (K-ESS2-1)
- K.CC Counting and Cardinality (K-ESS3-1),(K-ESS3-2)
- K.MD.A.1 Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object. (K-ESS2-1)

- K.MD.A.2 Directly compare two objects with a measurable attribute in common, to see which object has “more of”/”less of” the attribute, and describe the difference. (K-PS2-1)
- K.MD.B.3 Classify objects into given categories; count the number of objects in each category and sort the categories by count. (K-ESS2-1)
- W.2.8 Recall information from experiences or gather information from provided sources to answer a question. (K-2-ETS1-1),(K-2-ETS1-3)
- SL.2.2 Recount or describe key ideas or details from a text read aloud or information presented orally or through other media. (2-ESS1-1)

COMMON CORE STANDARDS:

- CCSS.ELA-LITERACY.RF.1.3
Know and apply grade-level phonics and word analysis skills in decoding words.
- CCSS.ELA-LITERACY.RF.1.3.G
Recognize and read grade-appropriate irregularly spelled words.
- CCSS.ELA-LITERACY.RF.1.4.A
Read grade-level text with purpose and understanding.
- CCSS.ELA-LITERACY.W.1.8
With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.
- CSS.ELA-LITERACY.SL.K.1
Participate in collaborative conversations with diverse partners about *kindergarten topics and texts* with peers and adults in small and larger groups.
- CCSS.ELA-LITERACY.SL.K.1.A
Follow agreed-upon rules for discussions (e.g., listening to others and taking turns speaking about the topics and texts under discussion).
- CCSS.ELA-LITERACY.SL.K.1.B
Continue a conversation through multiple exchanges.
- Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood.
- CCSS.ELA-LITERACY.SL.K.4
Describe familiar people, places, things, and events and, with prompting and support, provide additional detail.
- CCSS.ELA-LITERACY.SL.K.5
Add drawings or other visual displays to descriptions as desired to provide additional detail.
- CCSS.ELA-LITERACY.SL.K.6
Speak audibly and express thoughts, feelings, and ideas clearly.

- CCSS.ELA-LITERACY.SL.1.1
Participate in collaborative conversations with diverse partners about *grade 1 topics and texts* with peers and adults in small and larger groups.
- CCSS.ELA-LITERACY.SL.1.1.A
Follow agreed-upon rules for discussions (e.g., listening to others with care, speaking one at a time about the topics and texts under discussion).
- CCSS.ELA-LITERACY.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.
- CCSS.ELA-LITERACY.SL.2.4
Tell a story or recount an experience with appropriate facts and relevant, descriptive details, speaking audibly in coherent sentences.
- CCSS.ELA-LITERACY.L.2.5.A
Identify real-life connections between words and their use (e.g., *describe foods that are spicy or juicy*).
- CCSS.ELA-LITERACY.L.2.6
Use words and phrases acquired through conversations, reading and being read to, and responding to texts, including using adjectives and adverbs to describe (e.g., *When other kids are happy that makes me happy*).
- CCSS.MATH.CONTENT.K.CC.B.4.C
Understand that each successive number name refers to a quantity that is one larger.
- CCSS.MATH.CONTENT.K.CC.C.6
Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.¹
- CCSS.MATH.CONTENT.K.MD.A.2
Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference.
- CCSS.MATH.CONTENT.1.G.A.3
Partition circles and rectangles into two and four equal shares, describe the shares using the words *halves*, *fourths*, and *quarters*, and use the phrases *half of*, *fourth of*, and *quarter of*. Describe the whole as two of, or four of the shares. Understand for these examples that decomposing into more equal shares creates smaller shares.

LESSON OUTLINE:

- 2 mins: Review last lesson
- 3 mins: ACTIVITY 1: "Spiderman Concentration"

- 3 mins: Overview of Digestion
 - ACTIVITY 2: Balloon demo
- 10 mins: Hunger signals and hunger scale
 - ACTIVITY 3: Hunger Scale Game
- 5 mins: Mindful eating
 - ACTIVITY 4: Mindful eating exercise
- 2 mins: Review/Conclusion

TOTAL: 25 mins

LESSON SCRIPT:

- **DOCENT:** *Hello class! Today, in our third and final GrowingGreat nutrition lesson, we are going to talk about listening to our bodies so we know when to start and stop eating. But first, let's do a review of our last two lessons. We all know humans need food to survive, and that it is good for us to eat a variety – or a combination – of many different colorful foods every day. We learned the five food groups – who remembers them? (Fruits, vegetables, protein, grains, and dairy). We also learned about where food comes from – that food is grown on a farm by a farmer before it gets to a grocery store or restaurant. And we learned it's best to eat food that is whole and “close to the source” like fruits and vegetables. It is also important to know **when** and **how much** to eat, which is what we will talk about today. But first, we are going to practice something called “Spiderman concentration.” Who here likes Spiderman? Great! Today we are each going to pretend to be Spiderman or Spiderwoman. We are going to use our “Spidey-senses” to observe ourselves and our surroundings in the present moment. What are the five senses?*
 - STUDENTS: *“Sight, smell, touch, taste, and hearing.”*

ACTIVITY 1: SPIDERMAN CONCENTRATION

- **DOCENT:** *(Speaking softly and slowly) Please sit still in a comfortable position. Relax your body and breathe slow, deep breaths – in and out – like this (demonstrate). Let's activate our “Spidey-sense” of sight. I want you to look around and notice what you see. To yourself, take a moment to think about what kinds of shapes and colors are around you. (Pause.) Now I want you to close your eyes – this*

makes it easier to activate our other “Spidey-senses.” What do you hear? Can you figure out where that sound is coming from without looking? (Pause.) Do you smell anything? Hopefully you can’t smell anything yucky! (Pause.) Can you taste anything – maybe toothpaste if you just brushed your teeth or something that you just ate or drank? (Pause.) What do you feel? Is it hot or cold? (Pause.) Can you feel the weight of your bottom in the chair? Can you feel your feet on the ground? (Pause.) What other sensations do you feel? (Pause.) Are you energetic or tired? (Pause.) Are you happy or sad? (Pause.) Do you feel hungry or full? (Pause.) OK, now I would like you to slowly open your eyes. Great job, Class! Does anyone want to share their experience with the Spiderman concentration? (Call on 1 or 2 students)

- **DOCENT:** Very good. It is important that we use our “Spidey-senses” to listen to our body and be mindful of how we are feeling at all times during the day, but especially when we are eating. Our body gives us hunger signals, letting us know when it is time to start and stop eating. We like to call this “tummy talk” and it is what we are going to learn about today. Question for you class: How does food get into our body? Do we put food into our ears?
 - o Students “Noooooo!”
- **DOCENT:** That would be so silly! We put it in our mouths and chew it. Then the chewed food goes from our mouth, down our esophagus, a long, tube-like structure, which leads to our stomach. (Docent demonstrate by pointing to the parts of the body on diagram.) Can all of you point to your stomachs? Great! The stomach holds food and liquid. It is like a balloon - it expands when we add food and liquid to it, and shrinks when it empties into the small intestine. We are going to use a balloon to model how the stomach expands and shrinks.

ACTIVITY 2: BALLOON DEMO

- **DOCENT:** When your stomach is empty, it is like this deflated balloon (hold up deflated balloon). When you eat or drink, the food or liquid makes the stomach expand – which is a fancy way to say it gets bigger (blow up balloon with mouth, hold closed with fingers). Then the food travels from the stomach to the small intestine, then the large intestine, and then it is excreted when you go to the bathroom.

Then your stomach shrinks back to its normal size (let go of balloon and let it fly around classroom).

- **DOCENT:** *This cycle of emptying and filling up of the stomach is called digestion and it is happening constantly throughout the day. When we eat, our stomachs fill up with food, our bodies use what we need for energy, and then we excrete the waste when we go to the bathroom. How does your tummy tell you that you have an empty stomach and it's time to eat – does it call you on the phone or send you an email?*
 - STUDENTS: “Nooooooooo!”
- **DOCENT:** *That would be silly. We can tell it's time to eat by the hunger signals our stomach sends us. Our bodies are constantly giving us signals, like when to eat and when to use the bathroom. It is important to learn how to listen to your tummy talk and be mindful so you know when to start and stop eating. If we are not listening to our bodies we might miss the signals! With a show of hands, did anyone feel hungry when you listened to your body during our Spiderman concentration? What did that feel like? (OR How might you feel if you were hungry? (If no one felt hungry).)*
 - STUDENTS: (Ex: My tummy grumbled.)
- **DOCENT:** *That's right! When we're hungry, our tummies may start talking: they may make noises and grumble, or we might start thinking about food and salivating. Fun fact: Your tummy grumbles when you're hungry because it has more air and less food in it, and the gases cause the noise. Hungry is one of the levels of hunger – but there are 3 other levels. Can I have 4 volunteers to help me?*
 - STUDENTS raise hands to volunteer. Docent selects 4 students, gives each a hunger card, and arranges them in order of the hunger scale.
- **DOCENT:** *The 4 main hunger levels are **starving**, **hungry**, **satisfied**, and **stuffed**. We feel **hungry** when it's time to eat (point to student holding hunger sign), and if we don't eat when we're hungry, we may get to the point of feeling **starving** (point to student holding starving sign). We feel **satisfied** when we've eaten just the right amount (point to student holding satisfied sign), and we feel **stuffed** after eating too much (point to student holding stuffed sign). These hunger levels make up the hunger scale (show hunger scale), with starving being the most*

- hungry at level 1, and stuffed being the least hungry at level 4. Let's look at these hunger levels in more detail. What is number 1 on the scale?
- STUDENTS: Starving!
 - **DOCENT:** That's right – starving! Starving means we're really, really hungry. This might happen if we miss our bodies' signals telling us we're hungry, maybe because we were playing and forget to eat. How do you feel when you're starving?
 - STUDENTS: (Ex: Tired, stomach cramps)
 - **DOCENT:** You've got it! To my volunteer holding the "Starving" sign – can you show us what it's like to be starving? (Student acts it out.)
 - **DOCENT:** Great job! When we're starving we may have stomach cramps or a headache, and feel weak, tired, or cranky. Is this a good feeling?
 - STUDENTS: "Nooooooooo!"
 - **DOCENT:** We want to try to eat before we get to the point of being starving. It's not good for our bodies to go too long without food, but it's also not good to eat too much. How do you feel after you've eaten way too much food, when you're stuffed?
 - STUDENTS: (Ex: My tummy hurts.)
 - **DOCENT:** That's right! To my volunteer holding the "Stuffed" sign – can you show us what it's like to be stuffed? (Student acts it out.)
 - **DOCENT:** Exactly! When you've eaten too much, your tummy may hurt – it may even feel like it's going to explode! You may feel tired and want to hibernate like a bear in winter. Is this a nice feeling?
 - STUDENTS: "Nooooooooo!"
 - **DOCENT:** Being stuffed is not a good feeling – and it's not good for us either. We want to eat enough so that we feel satisfied and full, but not eat so much that we become stuffed – this can be very uncomfortable and make you feel sick. How do you feel when you're satisfied - when you've eaten just the right amount?
 - STUDENTS: (Ex: Happy, just the right amount full.)
 - **DOCENT:** That's right! You feel happy, content, and your stomach is just the right amount full. This is when you should stop eating. To my volunteer holding the "Satisfied" sign – can you show us what it's like to be satisfied after you eat just the right amount? (Student acts it out.)

- **DOCENT:** Great job! Now that we know the different hunger levels – starving, hungry, satisfied, and stuffed – we are going to play a game!

ACTIVITY 3: Mix Up

- **DOCENT:** Ok Class, now we are going to play a game called “Mix Up.” Right now your classmates are standing in the correct order of the hunger levels – starving, hungry, satisfied, and stuffed. I am going to mix them up, and then I will call on a volunteer to help me put them back in the right order. Who would like to volunteer first? (Select volunteer). (Speaking to new volunteer) Please come up to the front of the class. (Speaking to students with hunger level cards) I am going to mix you up. (Mix students up.) (Speaking to new volunteer) Please organize the hunger level in order from most hungry to least hungry (have class assist if student needs help). (Repeat with other volunteers as time permits.)
- **DOCENT:** Great job and thank you, volunteers! You may hand me the hunger level cards and take your seats. Ok Class, now that we know the levels of the Hunger Scale, I’m going to ask you some questions about it.
- **DOCENT:** When on the hunger scale is the best time to eat?
 - o STUDENT: Hungry! (Ask class to help, if student needs it.)
- **DOCENT:** Exactly! (Hold up Hungry sign.) We want to eat when we’re just a little bit hungry, but before we become starving. That is because it is dangerous to go without food for too long. Also, once we finally get food, we might wind up overeating because we are sooooo starving. Has that ever happened to you – when you’re so starving that when you finally get food you eat super fast and before you know it you’re stuffed? It’s not a good feeling. It’s much better to stop eating BEFORE we are stuffed. When is the best time on the Hunger Scale to stop eating?
 - o STUDENT: Satisfied!
- **DOCENT:** You’ve got it! (Hold up Satisfied sign.) We feel satisfied when we’ve eaten just the right amount, not too much, and not too little. We should stop eating at this point, before we get stuffed. Has anyone here ever eaten too much? Why did that happen? (Call on 1-2 students to share).
- **DOCENT:** Sometimes we don’t realize we’re stuffed until the meal is finished. Usually this happens because we ate too fast, or we were distracted while eating, maybe

because we were watching TV or playing on our phones. It is important to pay attention to each bite when we're eating so that we can be aware of our body's hunger signals. In order to prevent overeating, we should eat slowly and chew our food properly. Chewing properly helps us get all the healthy nutrients out of our food, and makes sure we don't choke on large pieces of food. Does anyone know how many times you should chew every bite?... It depends what you are eating. For really chewy things it may be 30 chews per bite! Has anyone ever counted their chews?... (Call on 1 to 2 students.)

○ STUDENTS: I have!

- **DOCENT:** Don't worry if you haven't counted your chews before, we are going to have a chance to in a little bit! Whenever it is time to eat we want to practice something called mindful eating to make sure we eat only when we are hungry. Why might you eat when you're not hungry? (Call on 1 student.) Exactly! We may eat when we're not hungry because of emotions, maybe we eat because we're sad, tired, stressed, or because it's a special occasion, or simply because it's there! Has this ever happened to you... You just had dinner and you sit down to watch TV. A fast food commercial comes on and you see a cheeseburger with a sizzling beef patty and ooey-goey cheese melting off the side. And then come the fries, crispy, golden and salty! I bet your mouth is watering! Maybe even though you just had dinner, you go to the kitchen to get some chips to eat. Is this an example of being mindful and listening to your body?

○ STUDENTS: Nooooo!

- **DOCENT:** Eating when we are not hungry means we weren't being mindful. Mindful eating means understanding why you are eating and only eating when you are hungry. Being mindful when you eat requires you to be in the moment and to pay attention to your "Spidey-senses" to see if you are really hungry or you are eating for another reason. Who remembers the Spidey-senses?

○ STUDENT: sight, smell, taste, touch, and hearing

- **DOCENT:** If you find that you want to eat something when you aren't hungry, try to distract yourself. Drink a glass of water, brush your teeth, or do some jumping jacks. Or if you just can't resist and you want to have a little snack, what would be a "whole, close to the source" snack you could have? (Ex: carrot sticks, sliced apples, grapes).

That's right! Pretty much any fruit or vegetable makes a good snack. It is really hard to overeat fruits and vegetables! Now we are going to practice mindful eating.

ACTIVITY 4: Mindful eating

(Docent give each student a slice of cucumber and a raspberry (or selected food: could also use raisins, orange slices, blueberries, carrot sticks, etc.)).

- **DOCENT:** *In a moment you are each going to have a chance to eat the cucumber and raspberry in front of you, but we are not just going to stuff it in our mouths, we are going to practice mindful eating. When eating the raspberry I want you to use your “Spidey-senses”: sight, smell, taste, touch, and hearing. By using all your senses you will be more likely to enjoy your food. You will probably eat slower and be able to realize when you are satisfied and stop eating before you are stuffed. Are you ready to try mindful eating?*
 - STUDENTS: Yesss!
- **DOCENT:** *Let's start with the raspberry. When I ask you the following questions, please answer them in your head. Please stay very quiet so we don't disrupt anyone else's mindful eating. OK – here we go! Please sit still in a comfortable position. Relax your body and breathe slow, deep breaths. (Pause). What food is in front of you? (Pause). What is its shape? (Pause). How big is it? (Pause). What color is it? (Pause). Pick it up and hold it in your fingers. (Pause). Look at it closely. What do you notice about its skin? What is its texture – how does it feel in your fingers? (Pause). Now slowly place the raspberry near your nose. How does it smell? (Pause). Do you think it will taste salty, sweet or sour? (Pause). Place the raspberry up to your ear. Do you hear anything? Now put the raspberry in your mouth. Move it around with your tongue before you start chewing. What does it feel like? (Pause). How does it taste? (Pause). Now I want you to count how many chews it takes you to eat the raspberry. (Pause). When you swallow it, notice how it feels going down your throat and into your stomach (Pause). You have finished your guided mindful eating of a raspberry. How many chews did it take you to eat the raspberry? (Call on 2 or 3 students).*
 - STUDENTS: 7!...3!... 9!

- **DOCENT:** Great! How are you feeling after mindfully eating the raspberry? (Call on 2 or 3 students). You are probably not full from just one raspberry. Should we try it again with the cucumber?
 - o STUDENTS: Yesss!
- **DOCENT:** OK! This time I want you to guide yourself through the mindful eating. Use your “Spidey Senses” to observe eating the cucumber. Take your time, and remember to count your chews! We will share our experiences with the class when everyone has finished eating the cucumber. Go ahead and start mindfully eating the cucumber now. Please sit quietly and put your hand on your head when you have finished.
- **DOCENT:** Ok! How many chews did it take to eat the cucumber?
 - o STUDENTS: 16!...22!... 12!
- **DOCENT:** Was this more or less than the raspberry? Why do you think that is?
 - o STUDENTS: More! Because the cucumber is crunchier!
- **DOCENT:** Great job class, you are now masters in mindful eating! Let’s review! (Hold up hunger scale and point to each part of scale when talking about it.) Our bodies send us hunger signals, telling us when to start and stop eating. We feel hungry when it’s time to eat, and if we don’t eat for a long time we feel starving. We feel satisfied when we’ve eaten just the right amount, and we feel stuffed after eating too much. I hope from now on you listen to your tummy talk and you practice mindful eating. When eating, use your “Spidey Senses” to help you become aware of what is happening in the moment. Ask yourself why you are eating, and only eat if you are hungry. Thank you!

SUPPLEMENTAL BOOK:

- *The Very Hungry Caterpillar* by Eric Carle
- DOCENT NOTE: If reading the *The Very Hungry Caterpillar*, you can introduce the book by saying something like, “Now that we know about listening to our bodies and mindful eating, we are going to read a book about a caterpillar who doesn’t listen to his body’s hunger signals.”