Agricultural Lesson Plan

LESSON PLAN :	FOOD SCIENCE

Lesson Title:	FOOD POETRY		
Grades:	5-8	Lesson Duration:	30+ minutes

Lesson Objectives:
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Standards:
HS-LS1-6. Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules. [Clarification Statement: Emphasis is on using evidence from models and simulations to support explanations.] [Assessment Boundary: Assessment does not include the details of the specific chemical reactions or identification of macromolecules.]

Materials / Equipment:
Materials Plates Tongs Envelopes Scraps of paper Pencils Dry erase board/marker for each group OR Butcher paper and marker for each group Food samples, cut up into bite-sized pieces Setup 3 tables spaced around the room, one food sample plate and tongs with an envelope, seed words, scrap paper, and pencils on each table. Have sets of dry erase board/markers or butcher paper squares/markers ready to hand out once groups form. Example seed words: Carrot – sword, soil, pull Beet – heart, earth, rain Spinach – hand, leaf, gather

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Summary of Tasks / Actions:

Part 1: Background

Begin by reading (with feeling) one of the following excerpts from Pablo Neruda's odes:

Ode to the Lemon

...In the lemon
knives cut
a small cathedral,
the hidden aspe
opened acid windows
to the light
and drops poured out
the topazes,
the altars,
the cool architecture...
so when your hand
grasps the hemisphere
of the cut
lemon above your plate
you spill a universe of gold,
a goblet yellow
with miracles... Ode to the Tomato

...The tomato
luminary of the earth,
repeated
and fertile
star,
shows us
its convolutions,
its canals,
the illustrious plentitude
and the abundance
without pit,
without husk,
without scales or thorns,
the gift of its fiery color
and the totality of its coolness.

Ask students: What makes a poem exciting or memorable?

- Invoking the five senses through sensory language
- Specificity – the poet tries to find exactly the right word to describe a thing (Flaubert's mot juste, the poet as pearl diver). For instance, a piece of furniture designed for more than one person sitting comfortably: sofa? couch? davenport? chaise lounge?

Part 2: Tasting and Describing

Review parts of speech. Begin with noun (person, place, or thing), verb (action), adjective (description), adverb (description of an action ending in –ly). Give examples of adjectives, which could describe taste, color, quality, texture.

Explain to students that they will taste the foods on each table, and should write down one ADJECTIVE or ADVERB on the scrap paper to describe their experience of the food and place it in the envelope on the table. One word per person per food item.

Part 3: Writing and Performing

After everyone has had a chance to try each food and offer a descriptor, divide students into three groups. Explain that the next thing they will do is write a poem using ONLY the words from the envelope associated with one food. Connecting words such as the, an, or, and and are acceptable. They will perform this poem for the group.

Assign each group one envelope of descriptive words and one dry erase board or sheet of butcher paper and ask them to arrange the words and write a poem.

Have each group share their poem as a 90-second group reading/performance.

SCIENCE CONNECTION

Which veggie tasted the best? Take a vote – it's probably whatever has the most sugar. Sugar is an important energy source in the body. Carbon, hydrogen, and oxygen from sugar combine with other elements to form amino acids and/or other large carbon-based molecules that are essential to cellular reproduction. Kinda like our parts of speech combined with others to make new, more complex ideas…

Follow up /References

Adapted from Shelburne Farms' Project Seasons. Abbey Palmer, MSU UPREC, 10/2019

Agricultural Lesson Plan

LESSON PLAN :	FOOD SCIENCE

Lesson Title:	GREAT CHATHAM SMOOTHIE SHOW		
Grades:	5-8	Lesson Duration:	30+ minutes

Lesson Objectives:
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Standards:

Materials / Equipment:
Materials Plates Tongs Envelopes Scraps of paper Pencils Dry erase board/marker for each group OR Butcher paper and marker for each group Food samples, cut up into bite-sized pieces Setup 3 tables spaced around the room, one food sample plate and tongs with an envelope, seed words, scrap paper, and pencils on each table. Have sets of dry erase board/markers or butcher paper squares/markers ready to hand out once groups form. Example seed words: Carrot – sword, soil, pull Beet – heart, earth, rain Spinach – hand, leaf, gather

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Summary of Tasks / Actions:

Part 1: Background

Ask students:

- What is a smoothie?
- What makes a smoothie good?
- And what, do you think, would make a smoothie great, capital “g” Great?

Smoothies are like cookies – there are endless variations, you’ve probably had one before, none of them are exactly bad, though we all have our particular favorites. Just like a great baker, a great smoothie maker can elevate a healthy standby into something you remember for the rest of your life.

Like the bakers and judges on the Great British Baking Show, we will work to find out what makes a smoothie—which is pretty hard to screw up—absolutely the best in its class.

Part 2: Pretty Basic

A smoothie, at its most basic, is two things blended together:

- Produce (sometimes frozen)
- Liquid (water, juice, nut milk, coconut water, etc.)

You can add in other things for additional flavor (hemp hearts, fresh ginger, nut butter, citrus zest, chocolate powder spices like cinnamon, cardamom, or turmeric), but it’s just produce and liquid in a blender. But what a world of new tastes are unlocked by this simple formula!

The twist we’re throwing in today is: VEGETABLES. Adding vegetables to a smoothie is an easy way to get an extra serving of veggies into your diet. Not all smoothies are “health food” – they’re often too sweet. Adding more veggies means there’s less room for sugary stuff, and you come up with a smoothie with a lower glycemic index. And veggies are nutrient dense – it’s pretty much universally known that they’re good for you and Americans need to eat more of them.

Go over ingredients available on the table and explain each one. Ask students about ratios.

Part 3: Create Your Masterpiece

Explain the guidelines for the veggie smoothie competition.

The rules are:

- 1 serving vegetables
- 1 banana
- Maximum 2 cups of juice
- Time limit – 10 minutes

Anything else you’d like to add—go for it! But keep track of what you use, as if your smoothie wins, we want you to share the recipe!

Explain that there are two jobs: assembling the ingredients and keeping track of the recipe.

Remind students that the task is to make the GREATEST SMOOTHIE EVER.

Divide students into pairs and give each gloves, index card, and a pencil.

Start timer.

Part 4: Tasting/Judging

Ask teacher/parent/chaperone to be a judge with you. When the timer goes off, ask each team to stand with their smoothie and recipe at the tasting table. One team at a time, pour samples for yourself, the judge, and the students. Taste, describe, and evaluate.

After you have tasted them all and discussed, select a winner. Let them know that we will share the winning recipe on social media.

Follow up /References

Lucy DeDecker and Abbey Palmer, MSU UPREC, 10/2019