



LA SEMILLA
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EDIBLE
EDUCATION

CHIA

LESSON PLAN



BY LA SEMILLA FOOD CENTER



Introduction

Greetings, teachers! Welcome to this lesson on chia! This Lesson Plan offers you an overview of the activities, with additional information, sources, and optional activities that you might choose to include around the lesson. The lesson consists of a series of 15-20 minute activities lasting 60 to 120 minutes, depending on the child's reading speed and how many breaks they take. Students are encouraged to take breaks in between activities.

Optional Pre-Work: Intro to Chia

Prior to beginning this lesson, consider having an initial conversation about chia. You might:

- Ask them if they already know chia or have heard of it. What do they know? What do they think about it?

This lesson is paired with a Language Arts activity on food metaphors and similes. You might talk with students about these concepts (described in detail on pages 5 and 6 of this packet). You might share some examples and ask them to come up with some of their own.

Activity ideas that you might choose to integrate are available on the last page of this packet.



CHIA LESSON - CONTENT OVERVIEW

Learning Objectives

By the end of this lesson, students will be able to:

- Name one way chia is good for our bodies.
- Write a metaphor or simile.
- Use their sense of taste to fine-tune a recipe.

Ground Rules & Safety

This brief section is titled “Get Ready to Explore Chia.” It lists behavioral and safety expectations.

Baseline Assessment

This optional activity aims to engage students by identifying what they already know. The lesson will then reaffirm, complement, and clarify their existing knowledge. In this case, the activity (“Chia and Me”) invites students to draw or write what they know about chia.



Background for teachers: Chia

This is an extended version of the "Story and Uses of Chia" section in the student handouts to be shared with students as applicable. Depending on the age level of students, have them read the "Story and Uses of Chia" section in their booklet independently or out loud with the class.

Chia is original to the ancient people of what is currently Mexico – the Mexica (sometimes called Aztecs) in central Mexico as well as the Maya in the Yucatan peninsula [1]. The word chia refers to the plant as well as to the seed, which is the most commonly used part. The first record of chia seed use by the Aztecs is from 3,5000 BCE. They ate chia seeds in different ways, such as adding it to water or pressing them for their oil. In those times, chia seeds were used as food as well as medicine.

Chia was considered – and is still considered by many – to be a sacred and strength-giving plant. It played a role in Indigenous spiritual ceremonies. It was an important food that provided stamina to warriors.

Spanish colonizers banned chia, along with other plants that were considered heretical [2,3]. They imported foreign grains that diminished the cultivation and traditional uses of chia. However, some people retained their food traditions, and the use of chia was not completely eradicated.



Uses and Benefits of Chia

Today, chia is used in a variety of dishes including traditional and new recipes. Mexican Tarahumara runners of the state of Chihuahua still drink a mixture of chia seeds, lemon, and water called Iskiate to prepare for their runs [4]. There is a good reason for this: chia is a nutritional powerhouse.

Chia has abundant amounts of calcium, protein, and good fats, which support bone health, muscle strength, and brain health, among other things [5]. Just 1 ounce of chia seeds contains 18% of the Recommended Daily Intake for Calcium! It is also a great source of antioxidants [6]. Chia is considered the richest plant source of Omega-3 fatty acids [7].

[1] Muñoz, LA, A Cobos, O Diaz, & JM Aguilera. Chia Seed (*Salvia hispanica*): An Ancient Grain and a New Functional Food. *Food Reviews International*. Vol 29, Issue 4. 9 Sept 2013. Available [online](#).

[2] Chia Seed History and Origin. Ancient Grants.com. 2016. Available [online](#).

[3] The Cultural Importance of Chia. *Beyond the Equator*. 11 Jul 2018. Available [online](#).

[4] Bildirici, L. Running, Chia Seeds, and an Incredible Trip with the Tarahumara People. *Women's Running*. 30 May 2017. Available [online](#).

[5] USDA. FoodData Central. Available [online](#).

[6] Gunnars, K. 11 Proven Health Benefits of Chia Seeds. 18 Aug 2018. *Healthline*. Available [online](#).

[7] Jamshidi, AM, M Amato, A Ahmadi, R Bochicchio, et al. Chia (*Salvia hispanica* L.) as a novel forage and feed source: A review. *AGRIS. Food and Agriculture Organization of the United Nations*. 2019. Available [online](#).

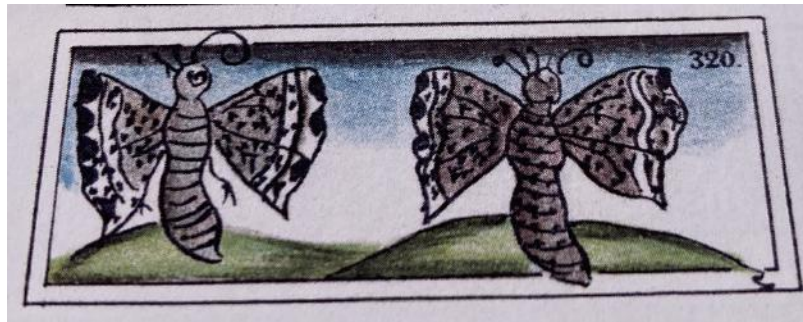


Food Metaphor

This is an extended version of the section "Food Sayings: Metaphors and Similes" in the student handouts.

A **metaphor** is a way of describing something – an object or an action – in a way that isn't literally true but helps people understand an idea. For example, if someone eats something spicy and says "my mouth is on fire" – we know there are no literal flames in their mouth, but we quickly understand that their mouth is burning with the spice that they ate.

In ancient Mexico, there was a butterfly known as a "chia butterfly" (chia papalotl, in Nahuatl). Can you guess why?



Chia Papalotl (Florentine Codex)

The butterfly was not literally made out of chia, of course! But it had small dots all over its wings. It was **speckled**. So, the phrase 'chia butterfly' is a metaphor – a way to say speckled butterfly.



Here are some food metaphors from around the world:

- “Butter fingers” (English/United States): When things tend to slip out of someone's hands.
- “Couch potato” (English/United States): When someone is not very active and watches a lot of TV.
- “Bring home the bacon” (English/United States) and “Bring bread butter” (American Sign Language/United States): both mean to earn the money for the family.
- “We need new meatballs in the soup” (Danish/Denmark): We need new ideas or energy.
- “A day of honey, a day of onions” (Israel): a good day, a bad day.
- “If your dear friend is honey, don’t lick him all up.” (Morocco): If your friend is very generous, don’t just keep taking from them.

A **simile** also describes something by comparing it to something else. A simile uses the words “as” or “like.” For example, “He’s as tall as a tree.” Here is a food simile from Iraq: “She is like a tomato.” This compliment means someone is willing to be flexible and easy to get along with in any situation.

Vocabulary

Metaphor: A way of describing something by stating it is another well known thing with those same qualities.

Speckled: when something is covered or marked with a lot of small spots or patches or color.”

Simile: A way of describing something by comparing it to another thing. Similes include the words 'like' or 'as.'

Mindess, A. “Food Speaks in Many Tongues: Edible Idioms in 17 Languages.” East Bay Eats. 3 Setp 2012. Available [online](#).

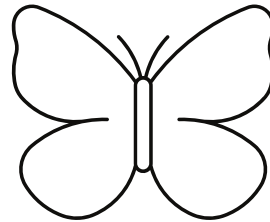


Activity - Make "A Chia Butterfly"

***Note:** Remind students to only use a pinch of chia for this activity. They will need to use the rest to make a drink in the next activity.

Supplies needed:

- A piece of paper to draw a butterfly
- Something to color with (crayons, colored pencils, or markers)
- Glue (liquid or stick)
- A pinch of chia seeds

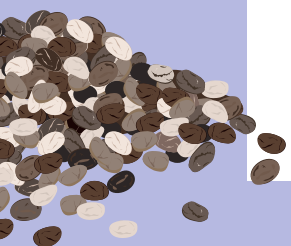


On a separate sheet of paper, draw the outline of a butterfly.

Color in the butterfly any way you want with any colors that you have, such as colored pencils, crayons, or markers.

Then, put some dabs of glue or slide a glue stick on the wings and sprinkle a pinch of chia seeds on the glue to make it a 'chia butterfly.' The wings will be speckled with chia seeds.

After the piece is completed, students can take some moments to enjoy it and invite people in their home to view it. If a camera is available, students can take a photograph of their creation.



Recipe - Chia Limeade (or Chia Lemonade) Please note that students will have to use lemon, lime, honey or sugar.

Lime or Lemon? You can make this drink with either lime or lemon.



LIME



LEMON



Grown-up Alert:

Ask a grown up for help cutting the lime or lemon!

Ingredients:

1 cup water

1 tablespoon lime or lemon juice

1 to 2 tablespoons honey or sugar

½ teaspoon chia seeds

Optional: 2 or 3 ice cubes



Supplies:

Cup

Spoon

Put the water and lime or lemon juice in your cup. Add the honey. Mix well with a spoon, not too hard or fast so your drink stays inside. Add the chia seeds and mix again. If you want, add some ice cubes.

Taste your drink. If it is too tangy, it may need a little bit more water or honey. If it is too sweet, it may need more water or lime or lemon juice. If it is too watery, it may need more lime or lemon juice.

Using our sense of taste to fine tune recipes is a very important skill!



Closing Activity

In the final handout "Amazing Chia," two questions assess if Learning Objectives were met:

- Name one way chia is good for our bodies.
- Write a food metaphor or simile you learned today.
- Did you adjust your recipe based on your sense of taste? If so, how?

Additional Activity Ideas for Older Students

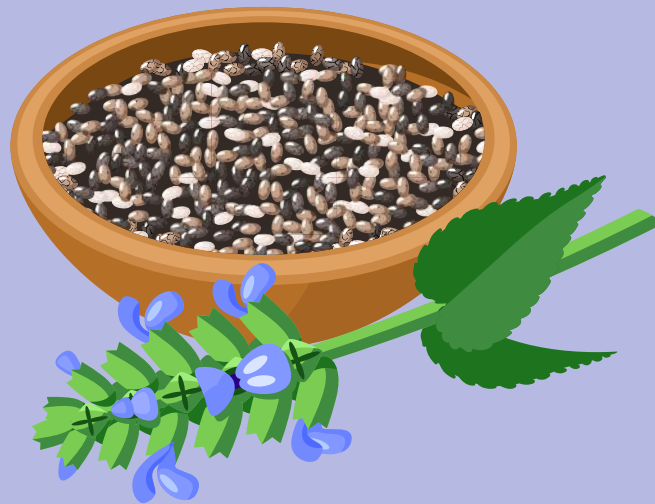
The following activities can be applied in art and science lessons.

Sensory Bowl. Learn about 'mucilage' by comparing a bowl of dry chia seeds with a bowl of chia seeds that has soaked in a little bit of water for 10 minutes.

Chia Sprouts. Experiment with growing chia sprouts in different media and under different conditions. Caitlin Fine and Margaret Conover offer a thorough lesson that includes these types of experiments, as well as art activities. Find it here: tinyurl.com/chiasprouts

Homemade Chia Pet. Several websites describe ways to make a 'chia pet' using a stalking and soil. Googly eyes and other decorative items make this a fun activity. The chia seeds will sprout through the head of the puppet. Find it here: tinyurl.com/chiapet2





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