Bites, Camera, Action Lesson Plan for Homeschool
Overview

Raddish is designed by a dedicated team of teachers and chefs who believe the kitchen classroom is the tastiest place to learn. We love watching learning come alive when kids mix math, stir science, and taste culture!

Paired with the materials found in your Bites, Camera, Action box, this lesson plan divides your box into 3 30-90 minute lessons you can use and adapt to support your homeschool study, pre-k – middle school. Depending on your timeframe and child's age and engagement, these can be taught together or separated for a longer lesson. Please refer to the curriculum provided in your box: recipe guides, activity card, and introduction card. Happy cooking! Happy learning!

Lesson 1: Mini Meatball Sliders and the Wonders of Hand Washing

Activity Time: 30 minutes

Learning Outcomes

- Students will learn when and why it is important to wash their hands.
- Students will learn what germs are, that they are everywhere, and that they are so small that you cannot see them with your naked eye.
- Students will learn the term *cross contamination*.
- Students will learn how to limit their exposure to germs by thorough hand washing.
- Students will take part in an activity that demonstrates how germs are spread by unclean hands.
- Students will create materials to help teach friends and family about the wonders of hand washing.
- Students will make and share Mini Meatball Sliders.

Materials

- Recipe guide, ingredients, and tools listed within.
- Glitter Germs Experiment Teacher Guide (included)

- Glitter (2 or more different colors)
- Oil or lotion
- Paper towels
- Soap and warm water
- Container to catch excess glitter
- Pencils, crayons, markers

- *Websites used to create this lesson*
    - Glitter Germs lesson adapted from:
        - lessons.atozteacherstuff.com/682/glitter-germs
        - www.growingupherbal.com/teach-your-child-to-wash-their-hands-properly-using-glitter-germs/
    - www.kidshealth.org

1. Introduction

a. Ask students: *When it is important to wash your hands?* Examples include:
   i. Before eating or drinking.
   ii. Before beginning a new cooking project.
   iii. After handling raw meat or eggs.
   iv. After going to the bathroom.
   v. After touching animals.
   vi. After touching your face, coughing, sneezing, or blowing your nose.

b. Ask students: *Why it is important to wash your hands*? Reasons include:
   i. To avoid getting sick or getting others sick.
   ii. To keep clean.
   iii. To keep germs away.

c. Ask students: *What do you think germs are?*
   - **For younger students**:
       - Germs are tiny organisms that can cause sickness. They are so small and sneaky that they can get into our bodies and make us feel sick. They are so tiny that you need a microscope to see them. Although, germs sound pretty sneaky and tough you can fight them with knowledge and soap and water!
   - **For older students**:
       - Read the definition here: http://kidshealth.org/en/kids/germs.html

d. Read the *Featured Culinary Skill- Kitchen Cleanliness* on the Mini Meatball Sliders Recipe Guide. Be sure to do the Skill Check on "cross contamination!"

2. Glitter Germs Experiment

Messiness Warning: There will be glitter residue in the area you do the experiment.*
This experiment provides an opportunity to actually see how germs spread (transmission) and how best to wash them away.

a. Gather materials as listed above.
b. See Glitter Germs Experiment Teacher Guide. (included)

Extension Ideas

a. Take pictures of people washing their hands or situations where people should wash their hands.
b. Make a hand washing poster that explains how to wash your hands and/or why it is important.
c. Make up a song to sing while washing your hands to make sure you wash your hands long enough (30 seconds).

3. Kitchen Prep

a. Read the Mini Meatball Sliders recipe card together.
b. Identify and gather ingredients.
c. Gather tools.
d. Discuss kitchen safety. Specifically, stove top safety (Visit Raddishkids.com/pages/safety)

4. Prepare Mini Meatball Sliders

a. Ask children to read or describe each step. Have children tell you at what steps they should wash their hands and why.
b. Together, follow the steps in the recipe.
c. Give each child a turn to measure, stir and mix.
d. When the Mini Meatball Sliders are ready, eat, taste and share!
e. While you are eating have students share their findings from the Glitter Germ Experiment about how germs spread.
f. Have students display any posters they may have made about hand washing.

Lesson 2: Perfect Pancake Bites
and Biography of a Famous Television Chef
Activity Time: 45-90 minutes

Learning Outcomes

- Students will research a famous chef using a variety of sources: video, magazines, cookbooks, and internet searches.
- Younger students will use a combination of drawing, dictating, and writing. They will compose an informative text, name what they are writing about, and supply some information about the topic.
- Older students will recall information from experiences and gather information from print and digital sources. They will take brief notes on sources and sort information into provided categories.
- Students will create their own cooking show informed by the research they have completed on a famous chef.
- Students will make Perfect Pancake Bites to share with their friends and family.

Materials

- Recipe guide, ingredients, and tools listed within.
- Food magazines
  - Examples: Rachel Ray Everyday, Martha Stewart Living etc.
- Cookbooks from famous chefs
  - Check cookbooks out from your local library!
  - Examples: Everyday Superfood by Jamie Oliver, Guy Fieri Food: Cookin′ It, Livin′ It, Lovin′ It, etc.
- Cooking shows
  - Examples: shows on PBS, Food Network, etc.
- Videos (Links provided below)
- Biographical Sketch of a Television Chef student worksheet (included)
- (Optional) Print out a Bio Cube (to share information about a famous chef): http://www.readwritethink.org/files/resources/interactives/cube_creator/
- Video device to record student

Websites used to create this lesson

- www.readwritethink.org/classroom-resources/lesson-plans/writers-workshop-biographical-skech-1039.html
- www.educationworld.com/a_tsl/archives/04-1/lesson017.shtml

1. **Introduction**
    a. Ask students: *What famous chefs can you name?*
        - *What makes them a famous chef?*
        - *What did they need to do to become famous?*
        - *Where do you see these famous chefs?*
    b. Show a video of a famous chef.
        - Young students
            - Kid-Friendly Eggnog with Elmo- Emeril Lagasse (3:18) https://www.youtube.com/watch?v=04DaM5vbcS4
            - Quick Family Pizza: Jamie, Petal and Buddy Oliver (5:25) https://www.youtube.com/watch?v=K2RB1KcNtAM
        - Older Students
            - Jacques Pepin Makes an Omelet (5:48) https://www.youtube.com/watch?v=s10etP1p2bU
            - Julia Child Makes an Omelet (8:35) https://www.youtube.com/watch?v=RThnq3-d6PY
    c. Today students will get to choose their favorite famous television chef and learn all about them!

2. **Research your Favorite Chef**
    a. Have students choose a famous chef.
    b. Tell students they will be writing a **biographical sketch**- a short piece of factual writing about another person.
    c. Start researching! Tell students to read about the life of the chef and watch some of their television shows.
    d. Have students complete the *Biographical Sketch of a Television Chef student worksheet.* (included)
    e. Decide how to share what they learned. (Ideas are included on the worksheet.)

3. **Filming your Flip**
    Tell students that now it is their turn to be their own famous television chef!
    a. Have students review how their favorite television chefs set up their show.
        - *Do they film in front of a live audience?*
        - *How do they introduce themselves at the beginning of the show?*
        - *Do they have all the ingredients ready beforehand?*
        - *Do they measure or eyeball the ingredients?*
        - *Do they have a catchphrase?*
            - Read the **Create Your Own Catchphrase** section on the Mini Meatball Sliders recipe guide to get ideas.
            - Examples:

a. Julia Child: "Bon Appetit"

b. Emeril Lagasse: "Bam!"

- *Is there a color scheme on set?*
- *What does the chef say when they taste a bite of the food they have made?*

b. Have the students read **Filming Your Flip** section on the Perfect Pancake Bites recipe guide and review the **Featured Culinary Skill of Flipping a Pancake**.

c. Have students put together their costume and props, script, and finish their video with special effects.

4. Kitchen Prep

a. Read the title page together.

b. Identify and gather ingredients and tools.

c. Discuss kitchen safety, in particular stove top safety. (Visit Raddishkids.com/pages/safety)

5. Prepare Perfect Pancake Bites

a. Ask children to read or describe each step.

b. Give each child a turn cracking eggs (make sure to wash hands afterwards to avoid cross contamination), measuring, and mixing.

c. Once the Perfect Pancake Bites are ready, eat, taste and share!

d. While you are eating, have students share their Famous Television Chef Biographical Sketches and watch their cooking shows!

Lesson 3: Strawberry-Yogurt Pops and The Science of Expansion and Contraction
Activity time: 45-60 minutes

Learning Outcomes

- Students will learn and discuss the three states of matter: **solid, liquid** and **gas.**
- Students will learn the terms*:* ***expansion*** and ***contraction***.
- Students will explore the ideas of expansion and contraction with their bodies and with liquids.
- Students will conduct experiments and record their findings.
- Students will learn knife safety.
- Students will make Strawberry-Yogurt Pops.

Materials

- Recipe guide and ingredients and tools listed within.
- *For **Activity 1**—Expansion and Contraction Through Movement:*
    - Music: Choose a song with both slow and fast parts or both quiet and loud parts
- *For **Activity 2**—Solid, Liquid, Gas- Exploration Through Movement:*
    - Masking tape
- *For **Experiment 1**—What happens to water when it freezes?:*
    - A paper cup
    - Marker
    - Paper, pencil
    - Water
    - Clock
- *For **Experiment 2**—What happens to ice when it melts?:*
    - A glass filled with water
    - An ice cube
    - Paper, pencil

Resources consulted for this lesson plan

- The Science Chef- 100 Fun Food Experiments and Recipes for Kids by Joan D′Amico and Karen Eich Drummond
- https://www.dramanotebook.com
- www.learnnc.org/lp/editions/designtech/6811
- www.scientificamerican.com/article/size-changing-science-how -gases-contract-and-expand/
- http://www.bbc.co.uk/bitesize/ks2/science/materials/solids_liquids_gases/read/1/

1. **Expansion and Contraction**

Activity 1: Expansion and Contraction Through Movement

a. Warm up: Ask students to stand up to play "Simon Says"

b. Tell students that next they are going to have an opportunity to dance.
   i. Ask: *How should we behave in order to be safe during this activity?*

c. Tell students that during the dance they are going to move their bodies in two different ways:
   i. They are going to make their bodies as big as possible. Show examples as a group. Tell them that this is called **expansion**.
   ii. They are also going to do the opposite and make their bodies as small as possible. Show examples as a group. Tell them that this is called **contraction**.

d. Play music and have students decide on their own when to move into expansion or contraction or you can call out "expand" or "contract" when you think it fits the music.

e. Stop the music every now and then and have students freeze so that their classmates can appreciate the cool expanded and contracted shapes that they are making!

2. **Solid, Liquid, Gas**

Definitions

a. Explain to students that today they are going to make Strawberry-Yogurt Pops, which are made of ice. Ask students to describe ice.

b. Explain the three states of matter: solid, liquid, and gases.

Ice is a **solid**, one of the three states of matter. Solids stay in one place and can be held. They do not flow like liquids and they do not spread out like gases.
When ice gets hot it melts and it changes to water, a liquid.

Water is a **liquid**, another state of matter. Liquids can flow and be poured, unlike a solid, and they are not easy to hold. They can change shape to fit into a container
When water gets hots it boils and it changes to steam, a gas.

Steam is a **gas**, the final state of matter. Gases are often invisible. They can spread out and change their shape to fill up any container and can be squashed.
Steam can be cooled down and turned back into a liquid.

Definitions from BBC

Activity 2: States of Matter Exploration Through Movement

a. Using masking tape mark off a square on the floor, leaving one side open. Make sure it is big enough to fit all of your students standing up. Explain to students that this is our "jar."
b. Tell students that they will pretend to be all three states of matter. They will start as water molecules as a solid (ice) changing to a liquid (water) and then a gas (steam).
c. ***Tell students to behave like ice:***
    i. Everyone begins by standing close together at the bottom of the "jar" (the end opposite to the opening). Tell the students that they are molecules of ice. They are frozen solid.
d. ***Tell students that it's warming up:***
    i. Tell students that the sun is coming out and they're beginning to melt.
    ii. Have everyone sway side to side a little bit to represent the molecules vibrating. Tell the students that they can feel the heat. Start to sway back forth more and more. They are melting and becoming a liquid.
e. ***Tell students to behave like liquid:***
    i. Everyone starts to sway and then begins to move around slowly. Tell the students that they are a liquid now. Have them rock back and forth as they walk around slowly in the bottom part of the jar. Remind them to stay inside the lines of the jar.
f. ***Tell students that it's warming up:***
    i. Tell the students that someone is holding the jar over a stove. Tell them to rock back and forth more. Instruct some students to evaporate from the top of the jar and move around quickly in the space of the room.
    ii. Tell the students that it is so hot that they are boiling! Have all the students sway more and continue to walk until they leave the jar. Tell them they are rising out of the jar into the air.
g. ***Tell students to behave like gas:***
    i. Tell the students to now move quickly outside the jar. Tell them they are a gas now and should move in a straight line until they come up against something and then move off in a straight line in another direction.
h. ***Repeat the activity in reverse:***
    i. Tell students that it's cooling down, until you get all of your students back inside the "jar" from gas to liquid to solid.
i. ***Ask the students questions to assess learning:***
    i. How do water molecules behave when frozen? What state is that? Why do you think they behave that way?
    ii. Ask the same question for liquid and gas.
    iii. In which of the three states does water keep its own shape?

5. Expansion and Contraction with Water

Experiment 1- What happens to water when it freezes?

a. Gather materials as listed above.

b. Procedure:

i. Fill the paper cup half full of water.

ii. Using a marker, mark how high the water is on the outside of the cup.

iii. On a piece of paper draw a picture of your cup and its fill line.

iv. (Optional) Weigh the cup of water before and after freezing to see whether the weight of the water changes between states.

v. Put the cup of water standing up in the freezer for 4 hours.

vi. Write your **hypothesis**: Your guess as to what will happen, something you can test

- *What do you think will happen? Will the water expand or contract when it freezes? Will it change weight?*

vii. Open the freezer and take out the cup.

- *Where is the top of the cube of ice in relation to the line you drew?*

viii. Draw what your cup looks like now.

ix. *Was your hypothesis correct? What happened to the water?*

Experiment 2- What happens to ice when it melts?

c. Gather materials as listed above.

d. Procedure:

i. Fill a glass with water almost up to the rim.

ii. Carefully place the ice cube on top of the water.

iii. On a piece of paper draw a picture of your glass.

iv. Write your **hypothesis**: Your guess as to what will happen, something you can test

- *What do you think will happen? Will the ice expand or contract when it melts? Do you think the water will overflow out of the glass?*

v. Observe as the ice cube melts.

vi. Draw what your glass looks like after the ice has melted.

vii. *Was your hypothesis correct? What happened to the ice cube? What happened to the level of water in the glass?*

Ice has some unique properties. When you put a container with water into the freezer, the water expands (gets bigger) during freezing. Most substances contract (get smaller) when frozen.

Extension Ideas

- Older students
  - Air expansion experiment:
    - www.learnnc.org/lp/editions/designtech/6811 or
    - www.scientificamerican.com/article/size-changing-science-how -gases-contract-and-expand/
- Younger Students
  - Test freezing on different materials:
    - Have students choose a variety of small household materials (vinegar, bread, rice, etc.) and put each in a container.
    - Draw a picture and describe each material's feel.
    - Place the containers in the freezer overnight.
    - Check the materials the next day. Ask students: *What are they like now?*
    - Draw a picture and describe what they feel like now.

6. **Kitchen Prep**
   a. Read the title page together.
   b. Identify and gather ingredients and tools.
   c. Discuss kitchen safety, in particular Knife Safety Rules in the Featured Culinary Skill section of the recipe guide. (Visit Raddishkids.com/pages/safety)

7. **Prepare Strawberry-Yogurt Pops**
   a. Ask children to read or describe each step.
   b. Give each child a turn, chopping, blending, assembling, etc.
   c. Once your Strawberry-Yogurt Pops are ready, gather your family and friends together to eat, taste and share!
   d. Have an expand and contract dance party together!

Glitter Germs Experiment - Teacher Guide

1. Put a small amount hand lotion or oil on each student′s hands. Have them rub it all over their hands.
2. Sprinkle a small amount of glitter into each student′s hands. Do this over a container to avoid messy spills.
    a. Giving different colored glitter to different students will allow you to discuss transmission of germs.
    b. Have the students rub their hands to spread the glitter evenly.
    c. If worried about the mess glitter will leave behind, try this activity outside.
3. Ask students: *What do you think the glitter represents?*
    a. Explain that, although germs are much smaller, the glitter represents germs in our experiment.
4. Have students complete a couple of short activities such as:
    a. Writing their names on a sign in list. Provide only one writing utensil for everyone.
    b. Play with a certain toy, build a block tower, etc.
    c. Greet a friend with a handshake.
5. Take a picture of each student′s hands or have them draw what their hands look like.
6. Ask students: *Are all the germs still on their hands? Are all the germs the same color? Where did the other germs come from?*
7. Have students try to clean their hands in a variety of ways.
    a. First: Use a dry paper towel.
    b. Second: Use plain cold water.
    c. Third: Use warm water and soap.
        i. **See the Featured Culinary Skill- Kitchen Cleanliness for Hand Washing Tip.**
8. Have students record their level of success at removing germs after each washing attempt. Younger students can draw their hand with spots for where the germs are. Older students can estimate what percentage of their hands are germ covered vs. clean.
9. Once all students have clean hands have them investigate the area where they did the above activities.
    a. What do they find there?
    b. Are they surprised at how many places they find glitter?
    c. Is there only one color of glitter?
    d. If the glitter were germs what would it mean to see two different colors of glitter?
10. Review Questions:
    a. What is a germ?
    b. How big is a germ?
    c. How do germs get transmitted?
    d. What is the best way to clean germs from your hands?
11. Have students help clean up the germs from the experimental area.

Biographical Sketch of a Television Chef
Student Worksheet

Explore Different Resources:

- Books, cookbooks, and magazines – Check cookbooks for a short bio of your chef
- Videos and cooking shows
- Websites – Check Wikipedia and your chef's personal website.

Start Your Research:

- Use the questions below to help focus your research on a famous chef.
- Explore what interests you! You don't have to answer all these questions and you can explore questions that aren't included.
- Take notes on what you learn.

1. Who is your famous chef?
2. When were they famous?
3. Where do they live and work?
4. Personal Background- information like:
    a. Where were they born?
    b. Did they study to be a chef?
    c. Have they opened any restaurants?
    d. What were the experiences that shaped them into the chef they are today?
5. What makes this chef significant?- information like:
    a. Did the chef do something unique that no other chef had done before?
    b. Did they create new dishes? What?
    c. Did they teach cooking differently? How?
    d. What makes this chef famous?
    e. What makes this your favorite chef?
    f. Does the chef contribute to a charity? (Examples: Rachel Ray yum-o.org, Jamie Oliver Food Foundation)
6. Has this chef faced any obstacles in their career? If so what obstacles and how did it shape the chef they have become?
7. Does your chef have an important quote, motto, or catchphrase?

Share What You Have Learned:

- Use one of these ideas or create your own:
    1. Complete a Bio Cube: http://www.readwritethink.org/files/resources/interactives/cube_creator/
    2. Make a poster that includes information and pictures.
    3. Put on a Dramatic Play: Act as the famous television chef and tell about your life.