



## **Campfire Kitchen 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 Campfire Kitchen box, this lesson plan divides your box into 4 45-90 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 cards, skill card, and introduction card. Happy cooking! Happy learning!

### **Lesson 1: Fireside Paella and Study of Spain**

Activity Time: 90 minutes

#### **Learning Outcomes**

- Students will learn about paella and its Spanish origins.
- Students will research the geography and culture of Spain.
- Students will demonstrate their knowledge by sharing with friends and family.
- Students will make and share Fireside Paella

#### **Materials**

- Recipe guide, ingredients, and tools listed within.
- Chart paper and markers
- Spain research checklist (included)
- Atlas, world map or European map
- Books or website about Spain
  - Optional storybook The Story of Ferdinand by Munro Leaf
- Blank map [www.edhelper.com/geography/Spain\\_map.htm](http://www.edhelper.com/geography/Spain_map.htm)



### Online Spain Resources

- Free Spanish language kids songs can be listened to from
  - [www.Freesongsforkids.com/Spanish](http://www.Freesongsforkids.com/Spanish)
- Helpful websites about Spain
  - [www.sciencekids.co.nz/sciencefacts/countries/spain.html](http://www.sciencekids.co.nz/sciencefacts/countries/spain.html)
  - [www.kids.nationalgeographic.com/explore/countries/spain](http://www.kids.nationalgeographic.com/explore/countries/spain)
  - [www.kids-world-travel-guide.com/spain-facts.html](http://www.kids-world-travel-guide.com/spain-facts.html)
- Helpful websites about Spanish Artists
  - [www.biography.com/people/groups/famous-spanish-painters](http://www.biography.com/people/groups/famous-spanish-painters)
  - [www.pablocicasso.org](http://www.pablocicasso.org)
- Helpful videos about Spain
  - About food (especially for younger students) (3:16)  
[http://www.youtube.com/watch?v=FZu-vzfl\\_4](http://www.youtube.com/watch?v=FZu-vzfl_4)
  - About sport and play (especially for younger students) (1:35)  
<http://www.youtube.com/watch?v=VNKmlxNn7rU>
  - Flamenco music and dance on the streets of Madrid (2:38)  
<http://www.youtube.com/watch?v=cjZ4UA18HGw>
  - Barcelona, architecture, sport, markets etc. (older students) (6:48)  
[http://www.youtube.com/watch?v=L\\_bgTJkFk3k](http://www.youtube.com/watch?v=L_bgTJkFk3k)
  - Madrid attractions (older students) (4:51)  
<http://www.youtube.com/watch?v=5cCCJ-5kW6g>

## 1. Introduction

- a. Ask students: what do you know about the country, Spain? Record discussion.
- b. Bring out map or atlas and ask students if they can find Spain. Discussion questions:
  - i. To what continent does Spain belong?
  - ii. What oceans are around its coastline?
  - iii. What is the capital?
  - iv. What else can you learn looking only at the map?
- c. Tell students that they will have the opportunity to learn more about Spain through research, using books, the internet and videos.

## 2. Spain Research

- a. Provide students with the Spain Research Checklist. Based on their grade level, determine how many questions they should answer. Read it through with them and help them to decide their focus of study.
- b. Support students with research materials, helping them to focus and sift through information. Finally, help them to prepare their report to present and share it in their own words.



- c. Go back to the initial chart of what students knew about Spain. Look at how much more they know, now!

### 3. Kitchen Prep

- a. Read the Fireside Paella recipe card together.
- b. Identify and gather ingredients.
- c. Gather tools.
- d. Discuss kitchen safety. Specifically, box grater safety, keeping fingers well back (Visit [Raddishkids.com/pages/safety](http://Raddishkids.com/pages/safety))

### 4. Prepare Fireside Paella!

- a. Ask children to read or describe each step.
- b. Together, follow the steps in the recipe.
- c. While the Paella is cooking gather your friends and family and present your research on Spain.
- d. Using the Ingredient Spotlight, on the Recipe Guide, let your guests know what paella is and where it comes from.
- e. When the Fireside Paella is ready, eat, taste and share!

**Bonus Table Talk:** *If you could travel to Spain what would you want to see or do?*

**Lesson 2: Happy Trails Granola  
and All About Trees**  
Activity Time: 90 minutes

### Learning Outcomes

- Students will learn the these types of trees: broad-leaved, conifer, evergreen and deciduous.
- Students will learn the parts of a tree.
- Students will learn the lifecycle of a tree.
- Students will take a nature walk, practice identifying trees, and record their findings in a tree journal.
- Students will make their own Happy Trails Granola to enjoy on their walk.

### Materials

- Recipe guide, ingredients, and tools listed within.
- Nature Walk Tree Journal Pages (included)
- Large Card Stock or Construction Paper (11x17)- for journal cover



- Pencils, markers, crayons, tape
- Clipboard

### **Additional Online Resources**

- Optional Books
  - The Tree Farmer by Chuck Leavell and Nicholas Cravotta- explains the important role that trees play in our lives
  - Tell Me, Tree: all About Trees for Kids by Gail Gibbons
  - The Great Paper Caper by Oliver Jeffers- a story about animals that discover trees are disappearing from their forest and they launch an investigation
  - The Tree Book: For Kids and Their Grown-ups by Gina Ingolia- a tree guide of North American Trees
- Optional Videos
  - YouTube video with a song about seed back to seed (good for younger students) (2:09) Life Cycle of an Apple Tree  
[https://www.youtube.com/watch?v=0DDDBwk\\_-bM](https://www.youtube.com/watch?v=0DDDBwk_-bM)
  - YouTube video first person account from an oak tree (3:07)  
<https://www.youtube.com/watch?v=CZssBTnoLUM>

Sites Consulted for this lesson plan

- [www.ecokids.ca](http://www.ecokids.ca)
- [www.projectforest.ie](http://www.projectforest.ie)
- [www.projectplantit.com](http://www.projectplantit.com)
- [www.texasreeid.edu](http://www.texasreeid.edu)

### **I. Introduction**

- a. If you have a tree in your yard or in a nearby park, consider starting this lesson under its branches!
- b. Have students examine a tree. Encourage them to use all of their senses (except taste). Ask them to describe what they see.
- c. Tree background info:





- d. What different parts of the tree can they name? What jobs do different parts of the trees do? How are trees classified?

### **Tree background:**

The trunk carries water and nutrients, or food, from the roots to the branches and leaves. It also carries the food made by the leaves to the rest of the tree.

There are two main types of trees: *conifers* and *broadleaves*. *Conifers* are trees with needlelike leaves. They grow woody cones. Pine, spruce and fir trees are conifers. *Broadleaves* have flat, wide leaves with veins. Apple, oak and maple trees are all broad-leaved trees. Most conifers are *evergreen*, this means they keep their leaves in all seasons and lose them gradually. Most broad-leaved trees are *deciduous*, this means they lose all of their leaves for part of the year. In cold climates, this happens during the autumn so that the trees are bare throughout the winter. In hot and dry climates, deciduous trees usually lose their leaves during the dry season.

## **2. Lifecycle of a tree**

- a. Discussion Questions
  - i. Are trees alive? How do you know?
  - ii. How are they born? Do they die?
  - iii. How does a tree's life compare to the life of a person?
- b. You can show the students one or both of the videos mentioned above. Or use books to show the lifecycle. Steps in the lifecycle of a tree differ from one book/website to another in the number of steps described. For younger students the steps of seed, seedling, sapling, tree can be sufficient. Here is one website, for older students, that includes more steps [www.texasreeid.edu/content/howTreesGrow/](http://www.texasreeid.edu/content/howTreesGrow/) (you need to scroll part way down the page).
- c. Have students act out the lifecycle using the lesson plan outlined here <http://www.greeneducationfoundation.org/institute/lesson-clearinghouse/351-Tree-Life-Cycle-Creative-Movement.html>
- d. Get students to label and draw their own tree, or label a blank tree lifecycle.
- e. Extensions
  - i. Study photosynthesis
  - ii. Why are trees important to humans, animals, and the earth?
  - iii. What do trees give us?
  - iv. How can we protect trees?

## **3. Going on a Nature Walk**



Choose a destination with many trees for your Nature walk. Provide students with Nature Walk Tree Journal Pages (included). Decide how many different trees you would like the students to study and make as many copies of the second page as necessary.

- a. Review the information to be filled in on the Journal Pages.
  - i. Older students can use measurement tools.  
(measuring tape or string to measure the circumference and height)
  - ii. Younger students can also make comparisons. (as tall as \_\_\_\_\_, I can reach around the tree myself or it takes three friends to hug it)
- b. Pack crayons with the paper removed (to take tree rubbings of the bark), clipboards, pencils and Happy Trails Granola, for your nature walk.
- c. When you return from your walk have students decorate the 11x17 page for a cover page.
- d. Have students share their Tree Journals with friends and family.

#### **4. Kitchen Prep**

- a. Read the title page together.
- b. Identify and gather ingredients and tools.
- c. Discuss kitchen safety, in particular oven safety.

#### **5. Prepare Happy Trails Granola**

- a. Ask children to read or describe each step.
- b. Give each child a turn measuring, mixing, etc.
- c. Package up your Happy Trails Granola for a snack on the go.
- d. Eat, taste and share!

### **Lesson 3: Campfire Banana Boats and Science Gone Bananas!**

Activity time: 45 minutes

#### **Learning Outcomes**

- All students will learn scientific fun about bananas.
  - Younger students will learn whether bananas and other fruits float or sink.
  - Older students will conduct science experiments to determine what makes a banana ripen.
- Students will make hypotheses -- ideas you can test.
- Students will record and share the results of their experiments.
- Students will make and enjoy Campfire Banana Boats.



## Materials

- Recipe guide, ingredients and tools listed within.
- A bunch of green bananas
- Younger Students Experiment Worksheet (included)
- Older Students Experiment Worksheet (included)
- Pencil and crayons
- Some experiments require other simple household items such as plastic containers and light and plastic bags.

## Sites consulted for this lesson plan

- [www.theartofdoingstuff.com](http://www.theartofdoingstuff.com)
- [www.thebanapolice.com](http://www.thebanapolice.com)
- [www.jokes4us.com](http://www.jokes4us.com)
- [www.clipartbest.com](http://www.clipartbest.com)
- <http://ripening-fruit.com/banana>

## I. Introduction

- Ask your students:
  - What is your favorite fruit?
  - Did you eat a banana today? If not, when was the last time? This week?
  - How do you like to eat bananas? (whole, sliced, in cereal, in a smoothie?)
  - Do you eat bananas as a snack or at a meal? Which one?
- Get excited for the lesson by learning fun facts about bananas at [www.thebanapolice.com/fun/facts](http://www.thebanapolice.com/fun/facts). *Don't share the surprise fact about bananas floating or you'll spoil the float or sink experiment.:*
  - Americans eat an average of 27 pounds of bananas per person every year!
  - The scientific name for banana is *musa sapientum*, which means "fruit of wise men."
  - If you tape a banana peel over a splinter the enzymes help the splinter work its way out.
  - A banana plant is not a tree, it's actually the world's biggest herb.
- Optional younger students activity: watch Sid the Science Kid show about mushy Bananas (24:41) <https://www.youtube.com/watch?v=jFr9qms9ks0>

## 2. Banana Inspired Experimentation

### Younger Students

- Sink or Float-** use Younger Students Experiment Worksheet (included)
  - Do you think a banana will sink or float? What is your hypothesis, or the idea you are going to test? Set up your experiment and observe. Was your hypothesis correct? Why do you think it sank or floated?
- Banana Ripening-** use Younger Students Experiment Worksheet (included)



- i. Do you think bananas will ripen faster if they are in a bunch or separate?
- ii. Record your hypothesis.
- iii. Take a bunch of green bananas separate one from the bunch. Then observe over the next 4 days. Every day draw a picture of what you observe.
- iv. After 4 days what is your conclusion? Was your hypothesis correct?
- v. If you want, you can measure how ripe your banana is using the Banana Ripening Guide found at <http://ripening-fruit.com/banana>.
- vi. Now you can use your bananas to make Campfire Banana Boats!

c. **Can you peel a banana without the stringy bits?**- use Younger Students Experiment Worksheet (included)

- i. There is some belief that monkeys peel their bananas from the bottom end because that way you don't get the stringy bits. What do you think will happen?
- ii. Write a hypothesis. Then test it by peeling one banana the usual way and another from the bottom. Was your hypothesis correct

**Older students**

- a. **Banana Ripening** -- use Older Students Experiment Worksheet (included)
  - i. Does having the bananas in a bunch make them ripen faster?
  - ii. Does light have an effect on banana ripening?
  - iii. Does temperature have an effect on banana ripening?
  - iv. You can measure how ripe your banana is using the Banana Ripening Guide found at <http://ripening-fruit.com/banana>

**3. Kitchen Prep**

- a. Read the title page together.
- b. Identify and gather ingredients and tools.
- c. Discuss kitchen safety, in particular oven grill safety.

**4. Prepare Campfire Banana Boats**

- a. Ask children to read or describe each step.
- b. Give each child a turn measuring, wrapping, etc.
- c. While Campfire Banana Boats roast on the grill, oven, or around the campfire, share the results of your experimentation and any fun facts that you learned about bananas.
- d. Eat, taste and share!

**Campfire Banana Jokes**

Q. Why do bananas where suntan lotion?



A. Because they peel!

Q. Why did the banana go out with the prune?

A. Because he couldn't find a date.

"I am going bananas" That's what I say to my bananas when I'm leaving the house.

Q. Why don't bananas snore?

A. Because they don't want to wake up the rest of the bunch!

## Lesson 4: Solar Oven Experiment and The Great Ice Melt

Activity time: 90 minutes

### Learning Outcomes

- Students will learn about solar energy.
- Students will chart the temperature of their solar oven.
- Students will hypothesize how long it will take an ice cube to melt.
- Students will learn the scientific term *variable*.
- Students will discover what happens when one variable changes.
- Students will make delicious solar nachos to share with friends and family.

### Materials

#### For Solar Oven Experiment

- Solar Oven Experiment activity card and all the materials listed
- Oven thermometer
- Temperature Chart Observation Sheet (included)

#### For Ice Cube Experiment

- Ice cubes
- 2 clear containers (plastic cups)
- Timing device (timer or phone timer)
- Pencil for recording data.
- Ice Cube Observation Sheet (included)

### Optional

- Camera for time lapse time recording of experiments

### Sites consulted for this lesson plan



- [www.study.com/academy/lesson/what-are-variables-in-science-definition-types-examples.html](http://www.study.com/academy/lesson/what-are-variables-in-science-definition-types-examples.html)

## 1. Introduction

- Discuss: What is a renewable resource? (A resource that can be replaced naturally and can be used again and again.) What is an example of a renewable resource? (Solar power, wind, fresh water, etc) Why are they a good thing? What makes them renewable? How do these resources create power?

## 2. Solar Oven Experiment

- Read the Solar Oven Experiment card together.
- Gather all the materials listed.
- Follow the steps to make your solar oven.
- Find a sunny spot and place it there.
- Place your oven thermometer in the box.
- Using your Temperature Chart, record the initial/starting temperature.
- Every 5 minutes record the new temperature.
- While you're waiting, discuss some of the questions on the activity card about weather and color.
- Once the cheese is melted eat, taste and share!

## 3. The Great Ice Melt Experiment

- Discuss: What is ice? (frozen water) What state of matter is it? (solid) What temperature does water need to be to freeze? (32 degrees F)
- Experiment: How long does it take an ice cube to melt?
- Gather materials- 2 containers, 2 ice cubes, timer, paper, pencil.
  - Make a hypothesis about the length of time it will take for ice cube #1 to melt.
  - Test hypothesis. Then, decide which *variable* to change. In science, a *variable* is any item, condition or factor that can be controlled or changed. For example: type of container, location of container, time of day, size of ice cube.
  - Write a new hypothesis to indicate how the variable will effect the amount of time (faster or slower) it will take for the ice cube to melt.
  - Test, observe, record and time your experiment, using Ice Cube Observation Sheet.

## Spain Research Checklist

### PART ONE → What interests you most about Spain?

Choose \_\_\_\_ guiding questions from the following list help you narrow your research.  
The questions included are just a starting point to get you going.

- **How does language influence the culture and country of Spain?**
  - ✓ What languages are spoken? Where are they spoken? Can you learn some words in those languages?
- **How does the geography of Spain affect the country and the people who live there?**
  - ✓ Investigate the oceans, mountain ranges, capital city, population, etc.
- **How have famous artists influenced Spain, and how has their work been shaped by their country?**
  - ✓ Research painters (Picasso, Miro, Dali). Who are they? Where were they born? Describe their art. What impact have they had on the world?
- **How has Spain's culture and people embraced dance and music?**
  - ✓ Investigate types of dance (flamenco, ballet), or types of music (flamenco, jota). Who dances/plays? How does the dance make you feel? What instruments are used?
- **Does Spain's rich culture make it a good destination for tourists?**
  - ✓ Research famous architecture/landmarks/museums. What/where is it? Who built it? Why go visit?
- **What makes food eaten in Spain unique?**
  - ✓ What are typical foods of Spain? What ingredients do they include? Where in the country are they served? What crops are grown locally?
- **How has Spain been shaped by sports?**
  - ✓ What sports are played in Spain? What are their teams? Where do they play? History of bullfighting?



**PART TWO → Choose how you want to share your information.**

You can pick as many different ways as you want to present to friends and family.

- Make a travel brochure or poster.
- Perform a dance, play, or song.
- Create a piece of art.
- Write a report.
- Make a commercial.
- Cook something.
- Teach someone the rules of a sport.
- Make a map.
- Write a news article about a city in Spain.





## Nature Walk Tree Journal

Use your senses to learn about trees. Get up close to a tree. What does it smell like, sound like, look like, feel like? How does that make you feel (emotionally)? Draw or write your observations.



How do trees make you feel?



## Tree Identification

Choose a tree and study it carefully. Record your observations below.

1. How tall do you think the tree is?

\_\_\_\_\_

2. How big is the trunk?

\_\_\_\_\_

3. What type of tree is it? (broad-leaf, conifer, deciduous, evergreen)

\_\_\_\_\_

4. Find, name and touch all of the parts of the tree: roots, trunk, branches, leaves.

5. Look at one leaf. Draw and describe it.

6. Use your crayon to take a rubbing of the bark.

7. What kind of tree is it? \_\_\_\_\_





## Banana Experiments (for younger students)



### Will a banana sink or float?

1. Gather materials- bowl, water, banana, and other fruit and vegetables you have at home.
2. Use the chart below to mark your hypothesis.
3. Test and record your findings in the conclusion column.
4. Was your hypothesis correct?

Fruit/Vegetable	Hypothesis		Conclusion
	Sink	Float	What happened?
<i>Ex. Apple</i>	<i>x</i>		<i>it floated.</i>

### How long will it take a banana to ripen?

1. Gather materials- a bunch of green bananas, designated space where you can leave them to ensure they won't get eaten!
2. Circle your hypothesis- "I think that the banana WILL or WILL NOT ripen faster in a bunch."
3. Test and draw your observations below.
4. What was your conclusion? Was your hypothesis correct?



Day 1	Day 2
Day 3	Day 4

**Can I peel a banana without the stringy bits?**

1. Gather your materials- 2 ripe bananas
2. Circle your hypothesis- “When I peel a banana from the bottom (instead of the top) I WILL or WILL NOT see all those stringy bits.
3. Test by peeling your bananas – one from the top down and one from the bottom up.
4. What is your conclusion? Was your hypothesis correct?



# Banana Ripening Experiments (for older students)



## I. To bunch or not to bunch?

1. Gather materials- a bunch of green bananas, designated space where you can leave them to ensure they won't get eaten!
2. Circle your hypothesis- "I think that the banana WILL or WILL NOT ripen faster in a bunch."
3. Test and draw your observations below.
4. What was your conclusion? Was your hypothesis correct?

Day 1	Day 2
Day 3	Day 4

5. What is your conclusion? Why?

---

---

---

## II. Does light have an effect on banana ripening?

1. Gather your materials- a black plastic bag or small opaque box, 2 green bananas, a light source (a small lamp or under-counter light)



2. Circle your hypothesis- "I think that the banana in the LIGHT / DARK (circle one) area will ripen faster"
3. Test your hypothesis - put one green banana in a dark bag/box and put the other under a light.
4. Observe - after 4 days what happens to the two bananas? How have they changed?
5. Conclude - The banana in the LIGHT / DARK ripened faster.
6. Ask: Why do you think this happened?

---

---

---

### III. Does temperature have an effect on banana ripening?

1. Gather materials- 2 green bananas, 2 similar containers, a refrigerator.
2. Circle your hypothesis- "I think that the banana in the COLD / AT ROOM TEMPERATURE (circle one) will ripen faster."
3. Test your hypothesis- put each green banana in a container and put one in the fridge and another somewhere safe where it won't get eaten and the temperature will stay about the same.
4. Observe- after 4 days what happens to the two bananas?
5. Conclude- The banana in the COLD / AT ROOM TEMPERATURE (circle one) ripened faster.
6. Ask: Why do you think this happened?

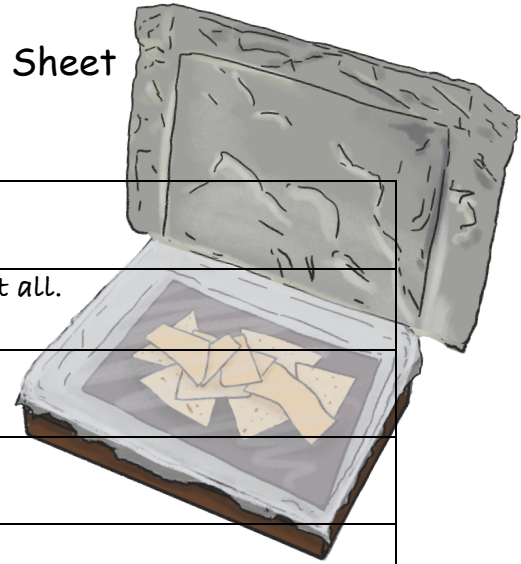
---

---

---



# Solar Oven Temperature Observation Sheet



Time Elapsed	Temperature	Observations
0 min.		Ex: Cheese is hard and not melted at all. Chips are cold.
5 min.		
10 min.		
15 min.		
20 min.		
25 min.		
30 min.		
35 min.		
40 min.		
45 min.		
50 min.		
55 min.		
60 min.		





# Ice Cube Experiment

## Ice Cube #1

Make a Hypothesis:

I think it will take \_\_\_\_\_ minutes for ice cube #1 to melt entirely.



<p><b>Draw or describe the set-up or surroundings of ice cube #1:</b></p>	<p><b>Observations:</b></p>    <p><b>Conclusion:</b> It took _____ minutes for ice cube #2 to melt entirely.</p>
---	--

## Ice cube #2

I varied \_\_\_\_\_.

Make a Hypothesis:

I think it will take \_\_\_\_\_ minutes for ice cube #2 to melt entirely.

<p><b>Draw or describe the set-up or surroundings of ice cube #2:</b></p>	<p><b>Observations:</b></p>    <p><b>Conclusion:</b> It took _____ minutes for ice cube #2 to melt entirely.</p> <p>The <b>variable</b> effected the melting because/by:</p>
---	--

