



# Tropical Paradise Homeschool Lesson Plan

## Raddish Lesson Plan Road Map

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We design these lessons to be adaptable and flexible to your students and your life. You can do A Little Taste in ~45 minutes, or you can use the extension activities and make the projects and activities listed last over several lessons or even weeks. The lessons are meant to be interdisciplinary, covering many subject areas at once. Students of all ages can use these materials, with learners who are pre-writers able to draw or verbally share responses.

If desired, you could extend these lessons into a project-based learning unit of study, where students tackle a real world problem and create solutions. The learning happens in the process of getting to the presentation of the solution, and students often find it more meaningful when they are investigating a topic of their choice.

For a deeper look at the topic, A Big Bite offers extension ideas for learners who are able to read, write, and think on a higher level.

We always love to see your finished projects! You can share them in our Facebook group, [The Raddish Table](#), or email us [hello@raddishkids.com](mailto:hello@raddishkids.com).

**Driving Questions:** What role do coral reefs play in the world's ecosystems and health?  
What do we need to do to save these reefs?

## A Little Taste

### Resource List

#### Background Information (also linked within lesson)

- "Healthy Coral Reef Sounds Attract Fish Looking for a Home", article from Science News for Students, <https://www.sciencenewsforstudents.org/article/healthy-coral-reef-sounds-attract-fish-searching-for-a-home>
- *The Coral Kingdom*, picture book by Laura Knowles, <https://bookshop.org/books/the-coral-kingdom/9781910277676>
- *The Coral Kingdom*, video read aloud by Prezi, <https://www.youtube.com/watch?v=TG2jLpljXCk>
- The World's Ocean, Google Earth project, <https://earth.google.com/web/@-5.14383804,108.73143948,-15521.50994059a,46354651.70149326d,35y,0.00040728h,0t,0r/data=CjASLhlgNjZINzQlNjM3OGMwMTFIOGJmMTZzMjYyMmZhYjAiCmllbGkta2FuZHU>
- Coral Reefs 101, National Geographic, <https://www.youtube.com/watch?v=ZiULxLLP32s>
- Quiz, Ocean Safari from Google Earth, <https://earth.google.com/web/@51.0980145.727533,-15617a,26717122d,35y,0h,9t,0r/data=CisSKRlgOTBINGFmYzI5NWlxMTFIOGE2MwVhOWQlMjA3NWl0NGUiBXNwbC0w>
- Aquariums and Zoos: Caring for Reefs from A to Z, list from NOAA Coral Reef Conservation Program, <https://coralreef.noaa.gov/aboutcrp/news/featuredstories/apr20/welcome.html>
- Coral Restoration Foundation website, <https://www.coralrestoration.org/>
- *The Brilliant Deep: Rebuilding the World's Coral Reefs*, picture book by Kate Messner, <https://bookshop.org/books/the-brilliant-deep-rebuilding-the-world-s-coral-reefs-the-story-of-ken-nedimyer-and-the-coral-restoration-foundation-environmental-scie/9781452133508>
- *The Brilliant Deep: Rebuilding the World's Coral Reefs*, video read-aloud by Katie Menges, <https://www.youtube.com/watch?v=cvsYeaz5uak>
- "Tell Me How Long", music video from Chasing Coral, [https://www.youtube.com/watch?v=I7vOQ3M\\_FjY](https://www.youtube.com/watch?v=I7vOQ3M_FjY)

#### Optional Extensions

- *Chasing Coral*, movie from Netflix, <https://www.netflix.com/title/80168188>
- "Oh My Bleach! Save our Reefs", podcast from Wow in the World, <https://podcasts.apple.com/us/podcast/oh-my-bleach-save-our-reef/id1233834541?i=1000395578806>

- *Dive In: Swim with Sea Creatures at Their Actual Size*, picture book by Roxie Munro, <https://bookshop.org/books/dive-in-swim-with-sea-creatures-at-their-actual-size/9780823443352>

### Conceptual Knowledge - What Do You Want Them to Know?

1. Coral reefs make up a small percentage of the earth but are an important ecosystem we need to try to protect.
2. Reefs are dying off due to climate change. The more people who know about this issue and decide to do something about it, the better chance we have of saving them.

### Key Vocabulary

- Ecosystem - a community of living organisms that live in and interact with each other in a specific environment
- Symbiosis - a close relationship between two different living organisms
- Coral polyps - the tiny soft-bodied organisms that make up a coral reef

### Cross-Curricular Links

- Language Arts, Social Science, Science

### Project Idea/Scenario

Make a coral reef come to life to show the issues facing coral reefs' survival and what we can do to help.

### Plan the Process: What Will the Students Do?

Read and explore different coral reefs around the world and examine the differences between a healthy and a dying reef. Select a project where they can draw attention to the situation the coral reefs are facing.

### Warm-up Activity - Activating Background Knowledge

- What sounds do you associate with certain places? Think about the sounds you might hear at the zoo, park, grocery store, and library. Next, have students close their eyes and [listen to this audio clip](#). Ask for guesses on where this sound might have been recorded.
- After all guesses, explain that this is the sound of a healthy and busy coral reef.
- In this lesson, we will be learning about healthy coral reefs, where to find them, and the issues facing their survival.

### Sequence/Procedure

1. [Read](#) or [listen to the picture book](#) *The Coral Kingdom*.
  - a. Identify and discuss what coral is and what lives in the reefs. Look at the colors, numbers of creatures, and different relationships between the coral and its inhabitants.

- b. What are the major problems facing coral reefs? Who, or what, is at the root of these problems?
2. Explore reefs around the world through [Google Earth's Ocean](#) and [NOAA aquarium sites](#). Begin to complete the handout on page 9 of the lesson plan by highlighting the coral reefs and aquariums that you visit.
  - a. Do you notice any major differences between the different reefs?
  - b. Identify and mark on the handout which coral reef you live closest to.
3. [Watch the video from National Geographic](#) about coral. Write down one of the new facts you have learned from the video on your handout.
  - a. Take [the quiz about ocean creatures from Google Earth's Ocean Safari](#).
  - b. How many of these creatures do you think interact with life on the reefs?
  - c. Which creature featured in the quiz would you most like to see in real life?
4. [Learn about the steps that organizations like the Coral Restoration Foundation](#) are taking to try to save coral reefs.
  - a. What are some of the ways they suggest you can get involved that you hadn't heard of before? Which ideas are most appealing to you? Which ideas do you think would be most appealing to other kids?
5. [Read](#) or [listen to the book](#) *The Brilliant Deep* for a more detailed explanation of one of the strategies scientists are using to help reefs.
  - a. Go back and [listen to the sound of the healthy coral reef](#) again. Review the article about why they are playing these sounds in dying reefs.
6. Complete the rest of the handout on page 9 of the lesson plan. Select a project that will highlight some of the issues facing the reefs and ways we can help. Share the finished creation while enjoying any of the recipes from your Tropical Paradise Raddish kit.

### Possible Creations

1. Write a newsletter from the point of view of one of the fish living in the reef. The newsletter should include current events from the reef and fun facts about life there. Be sure to highlight ways that life in the reef has changed over time.
2. Create a song like [the one Kristen Bell performs in Chasing Coral](#), but write the song to personify and give a voice to the coral reef. You can use the tune of another song and write your own words, or create your own original tune and lyrics. Consider how it would feel to be living somewhere that was dying right in front of you, and what you would want outsiders to do to help.
3. Unless people know what healthy coral looks like, they might not recognize that a bleached coral is dying. Create a flip book showing coral bleaching by creating images that change slightly from page to page to show it going from brightly colored to white. Write an explanation at the end of the book to explain what is happening to the coral.

## Extensions

1. [Watch the movie \*Chasing Coral\*](#). While watching, write down 5 new-to-you facts that the film presents, and then see if you can verify them afterwards with your own research. What was the overall message of the film, and do you think the film was successful in getting that message across?
2. [Listen to the podcast about coral bleaching](#) and a slightly different problem facing the reefs. What are some of the ways scientists are trying to stop the outbreak of crown-of-thorns starfish? Draw a guide showing the steps of one of the solutions to show how it works so that someone who hadn't listened to the podcast would understand the process.
3. Using large butcher paper, a ruler, and [the book \*Dive In!\*](#), outline your body and draw fish to scale around you. Calculate how many sea creatures "tall" you are and write the equations (e.g. my body = 7 parrot fish)

**Driving Questions:** Why is surfing just now being recognized as a sport by the Olympics?  
Why is it important to Hawaii to honor the origin of surfing?

## A Big Bite

### Resources

- The Complicated History of Surfing, video from Ted-Ed, [https://www.youtube.com/watch?v=jyn\\_orqdyHQ](https://www.youtube.com/watch?v=jyn_orqdyHQ)
- “Are Pro Athletes Overpaid?”, article from The New York Times, <https://upfront.scholastic.com/issues/2018-19/040119/are-pro-athletes-overpaid.html#1010L>
- “How much money does an average pro surfer make?”, article from Surfer Today, <https://www.surfertoday.com/surfing/how-much-money-does-an-average-pro-surfer-make>
- Olympic Surfing, article from International Surfing Association, <https://www.isasurf.org/olympic-surfing/>
- “I’m Not Anti-Anything. I’m Pro-Hawaii”, article from The New York Times, [https://www.nytimes.com/2021/05/17/sports/olympics/olympic-surfing-hawaii-flag.html?smtyp=cur&smid=fb-nytimes&fbclid=IwAR3c4yTmCWRHuLSGklaKWHhA391139627E2NB766YfAZXf\\_fICjOIBDs9U](https://www.nytimes.com/2021/05/17/sports/olympics/olympic-surfing-hawaii-flag.html?smtyp=cur&smid=fb-nytimes&fbclid=IwAR3c4yTmCWRHuLSGklaKWHhA391139627E2NB766YfAZXf_fICjOIBDs9U)
- “All of these women are kicking butt”, video profile of Carissa Moore by the Olympics, <https://olympics.com/en/video/women-kicking-butt-surfer-carissa-moore-inspired>
- “John John Florence ready to prove doubters wrong”, video profile from The Olympics, <https://olympics.com/en/video/john-john-florence-ready-to-prove-doubters-wrong>
- “For some American athletes, competing for another country can bring rewards and controversy”, article from NBC News, <https://www.nbcnews.com/news/asian-america/some-american-athletes-competing-different-country-can-bring-rewards-controversy-n850811>
- “It’s Officially Official: Surfing’s an Olympic Sport” < article from Surfer magazine, <https://www.surfer.com/features/it-is-offically-official-surfing-is-now-an-olympic-sport/>

### Project Idea/Scenario

Write about the sport of surfing, showcasing its history. Show its evolution to now being recognized as an Olympic sport for the first time.

### Sequence/Procedure

1. What do you know about surfing? Do a quick write and write down all the things you know already about it. Review and consider:
  - a. Do you consider surfing a sport? How do you define a sport?
  - b. Do you participate in any activities that are not traditionally classified as sports but should be, according to your definition?

2. [Watch the video about the history of surfing](#), from its origins to today.
  - a. Why is surfing culturally important for Hawaii? Are there any sports you know of that also carry such significance for a group of people?
  - b. Hawaii is one of the most geographically isolated places in the world, being 2,400 miles away from the next closest landmass. How do you think this contributed to surfing's development and its popularity today?
3. Do you know how much professional athletes make? Make some guesses across some different sports, and then [read the two opinions about the pay of professional athletes](#). Contrast this with [the article about the earnings of professional surfers](#).
  - a. Which opinion writer do you side with? Consider the differences between different sports, and the difference in pay for men and women. Is there a way to make pay for professional athletes more equitable?
  - b. Were you surprised to discover what professional surfers earn? Do you think professional surfers are compensated fairly?
4. Read [the article about Olympic surfing](#), and [the article from The New York Times](#) about the surfers from Hawaii competing in the Olympics for the first time. Discuss:
  - a. Why has it taken this long for surfing to be included in the Olympics?
  - b. How do surfers feel about the current way that surfing competitions are divided? Is it better overall for them to compete under the US flag, or would it be more true to the sport to have a separate flag for Hawaiian surfers?
  - c. If you were an Olympic athlete, would you ever compete for a country that is not the one you currently reside in? Why or why not?
5. Complete the handout, found on page 10 of the lesson plan, that compares the life of professional athletes in various sports, including surfing.
6. Select a project, and share the completed creation while enjoying any of the recipes from the Tropical Paradise Raddish kit. Share your newfound knowledge of the sport to convince someone to watch the inaugural surfing competition at the 2021 Tokyo Olympics Games.

### Possible Creations

1. Watch the [videos from the Olympics for Carissa Moore](#) and [John John Florence](#), and read [the article from NBC News](#) about how many athletes compete for different countries in the Olympics. Write a letter to the Olympic Board as if you were Carissa Moore or John John Florence, advocating for being able to surf under the Hawaii state flag.
2. Create a visual representation that illustrates the similarities across different sports including surfing in terms of training, athleticism, and skill required to make it as a professional athlete. Include the varying pay. Use your data to advocate for a change in payment for pro surfers or, conversely, that all professional athletes should be paid similarly at a lower scale.
3. There have been sports that have been entered as Olympic events but then taken out of the Olympics. After the Tokyo Olympics, how would you convince future Olympics boards to continue to include surfing? [Review the article from Surfer magazine](#) about the initial push

to have the Olympics include surfing. Make sure to include details on the sport's longevity and increasing interest among viewers, and any thoughts on how to make this sport even more accessible and enjoyable for others.



### Coral Reef Exploration

Mark yourself on the map, and then highlight the reefs that you visited using Google Ocean and other virtual aquariums. Circle the one closest to you!



Draw and color a healthy coral:

Draw and color a dying coral:

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## Surfing Showdown

Fill in the chart and see how surfing stacks up against popular Olympic sports and other popular sports.

	What is required to be great at this sport? ( <i>equipment needed, skills required</i> )	Typical earnings for a professional ( <i>male</i> )	Typical earnings for a professional ( <i>female</i> )	Who are the modern ambassadors of this sport?
Gymnastics				
Swimming				
Baseball/Softball				
Basketball				
Surfing				

What sports should be featured in the Olympics more prominently?

What other sports should be included in the Olympics but aren't yet?