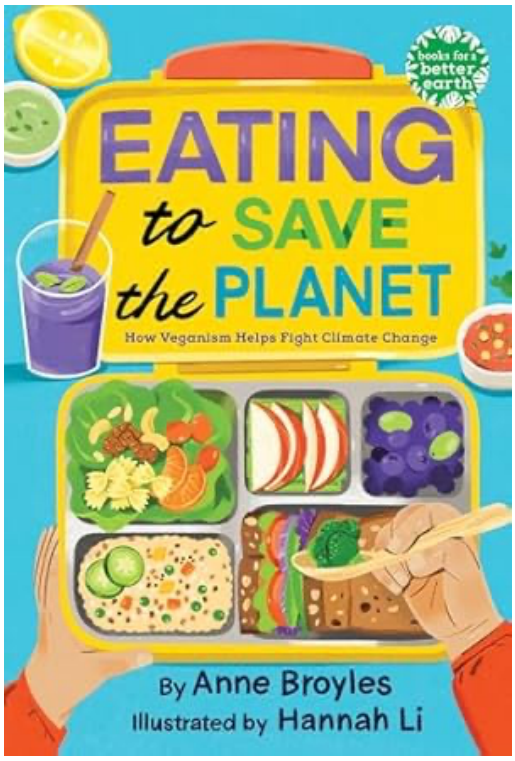

Eating to Save the Planet:
How Veganism Helps Fight Climate Change

A Teacher's Guide for Educators and Readers

Aligned to the Common Core & Next Generation Science Standards for Grades 3-7

A Books for a Better Earth™ Title

Discussion points, activities, and writing prompts to help educators use *Eating to Save the Planet* as a classroom read aloud or as a selection for independent reading. Great for book clubs, too!

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http://www.thisismarciecolleen.com/

About the Book

How do you change the world for the better? You start small. You start with what is on your plate.

When we walk down the aisles of a grocery store, most of us don't think about all the steps it took for each item to get on the shelf. Or how those different steps might impact the environment and even our own health.

With chapters that explore why we eat what we eat, the environmental impact of the meat industry, what terms like "vegan" and "plant-based" mean, and much more, *Eating to Save the Planet* is an accessible middle grade nonfiction title for curious eaters.

Supported by bright illustrations and infographics, this kid-friendly book is all about empowering readers to think critically about the food on their plate--how it got there and why it matters. Whether it's Meatless Mondays at home or advocating for better school lunches, there are plenty of ways for kids to get involved.

Back matter includes more information on nutrition, resources for further information, a bibliography, sources notes, and an index.

A Junior Library Guild Gold Standard Selection

About the Creators

Anne Broyles is a world traveler, vegan cook, hiker, art lover, avid reader, and award-winning children's book author. She lives in Portland, Oregon, in a multigenerational household that also includes three cats and a dog named Clover.

Hannah Li is a New York-based illustrator originally from China. Since graduating from the Savannah College of Art and Design in 2019, she has worked with various editorial clients and publishers, including The New York Times, The Washington Post, Scholastic, and Penguin Random House.

This guide is aligned for Grades 3-7 in both Common Core ELA and Math, and Next Generation Science Standards

3rd Grade: CCSS: ELA.RL.3.1,3,4,7; RI.3.1,2,3,4,6,7; W.3.1,2,3,4,7,8; SL.3.1,2,3,4,5; L.3.1,2,3,4
MATH: 3.OA.1,3; 3.MD.2
NGSS: 3-LS4-3; 3-LS4-4; 3-ESS3-1; 3-5-ETS1-1; 3-5-ETS1-2; 3-5-ETS1-3

4th Grade: CCSS: ELA.RL.4.1,2,3,4,6; RI.4.1,2,3,4; W.4.1,2,3,4,7; SL.4.1,2,4,5; L.4.1,2,3,4
MATH: 4.OA.1,5
NGSS: 3-5-ETS1-1; 3-5-ETS1-2; 3-5-ETS1-3

5th Grade: CCSS: ELA.RL.5.1,2,3,4,6; RI.5.1,2,3,4,7,8,9; W.5.1,2,3,4,7; SL.5.1,2,4,5; L.5.1,2,3,4
MATH: 5.OA.1,5
NGSS: 5-ESS3-1; 3-5-ETS1-1; 3-5-ETS1-2; 3-5-ETS1-3

6th Grade: CCSS: ELA.RL.6.1,2,3,4; RI.6.1,2,3,4,7,8,9; W.6.1,2,3,4,7,8; SL.6.1,2,4,5; L.6.1,2,4,5
MATH: 6.RP.A.1, 6.SP.B.4 (data representation for carbon footprint, CAFO pollution models, etc.)
NGSS: MS-LS2-1 (ecosystems & food webs), MS-ESS3-3 (human impact on Earth systems), MS-ETS1-1 (design solutions)

7th Grade: CCSS: ELA.RL.7.1,2,3,4; RI.7.1,2,3,4,7,8,9; W.7.1,2,3,4,7,8; SL.7.1,2,4,5; L.7.1,2,4,5
MATH: 7.RP.A.2, 7.SP.A.1 (using proportional reasoning and statistics for plant-based diet comparisons, greenhouse gas data, etc.)
NGSS: MS-LS2-4 (effects of resource availability), MS-ESS3-4 (climate change), MS-ETS1-2 (evaluating proposed solutions)

Introduction

1. Have you ever thought about where your food comes from before it reaches your plate?
    a. Choose one food you ate this week and write what you think its journey might have been to get to you.
    b. Now, do a little research—look up that food and find out one real step in its journey (such as where it's grown or how it's transported). Compare what you imagined with what you discovered.
2. How do you think the food we eat could impact climate change?
3. Do you think it's possible for our personal food choices to make a difference for the planet? Why or why not?
4. List the ways you think how food is produced might affect the following around the world:
    a. Workers
    b. Animals
    c. Communities
5. The text mentions that veganism reduces reliance on factory farming. What is veganism? Explain in your own words.
    a. What reasons might someone choose to be vegan besides helping the environment?
    b. What challenges might a person face if they decide to switch to a vegan diet?
6. If you wanted to make one small change to your eating habits to help the planet, what would it be, and how do you think it could make a difference?

Reading Nonfiction

While reading *Eating to Save the Planet*, take notes in two columns:

- *Things We Learned*
- *Questions We Have*

Pause before and after each chapter to add notes to the columns. These columns can either be individual or hung on the board and worked on as a class.

Things We Learned (Facts)	Questions We Have	Answers We Found

- Once the book is finished, discuss the *Questions We Have* column.
    - Were any of these questions answered as the book went along?
    - If so, find the answer within the text.
    - Record the answer next to the question in a third column labelled *Answers We Found.*

- For all remaining questions in the *Questions We Have column*, that have yet to be answered, take the steps to find answers, either through Internet or book research.
    - Discuss how to find answers to questions through research.
    - Record all answers in the *Answers We Found* column.

- After the answers have been documented, engage in a discussion on research practices.
    - What was the most difficult about finding answers?
    - Was it easier to find answers on the Internet or in a book?
    - Which source is more reliable, the Internet or a printed book? Why?
    - How can you determine whether to trust a source?
    - What tips would you give someone who is about to do research?

Extension: Design and illustrate posters representing each Fact, Question, and researched Answer based on *Eating to Save the Planet* and display them within the classroom.

Chapter One: What's On Your Plate?

1. Make a list of at least five foods you like and five foods you dislike.
    a. What about these foods do you like?
    b. What about these foods do you dislike?
    c. Ask three people what their five favorite foods are and five least favorite foods. Are there any similarities?
2. Define the following in your own words:
    a. Herbivore
    b. Carnivore
    c. Omnivore
    d. Vegan
    e. Flexitarian
    f. Vegetarian
3. What are staple foods?
    a. Think about what you ate so far today. Have you eaten any staple foods?
    b. Why do you think staple foods are important for communities or cultures?
4. "What we eat can be a part of our cultural identity, connecting us to our history and heritage." (pg 6).
    a. What foods do you eat that connect you to your cultural identity?
    b. Does your family have any religious or holiday traditions where you eat specific foods?
5. Describe a time you tried a new food. What was the experience like for you?

Create a "Food Story" Poster

Choose one food from your "like" list OR a food that is meaningful to your family or cultural background.

Create a one-page mini-poster, digital slide, or short video that answers the following:

- What is the food? Include a drawing or photo if possible.
- What do you like about it OR why is it meaningful to you?
- Where does this food come from? (What country, region, or community is it connected to?)

- Is it considered a staple food anywhere in the world? If so, where?
- Does this food show up in any of your celebrations, holidays, or traditions?
- Bonus: Interview someone (family member, neighbor, classmate) and ask what that same food means to them. Include one quote from your interview.

Chapter Two: Code Red

1. What are some changes in the climate that you've noticed where you live?
2. Use the internet to find recent examples (from the past year) of the following:
    a. Colder-than-usual winters
    b. Hotter-than-usual summers
    c. Unusually strong hurricanes
    d. Destructive wildfires
    e. Droughts
    f. Flooding
3. In your own words, explain what U.N. Secretary General Antònio Guterres meant when he said we are facing "a code red for humanity."
4. How has Earth's climate changed over its 4.5-billion-year history?
    a. In what ways are current climate changes different because of human activity?
    b. Why do you think it's important to understand the difference between natural climate change and human-caused climate change?
5. What is the "greenhouse effect?"
    a. Create a simple 3D model or diagram to show how the greenhouse effect works. What materials could you use to represent the atmosphere, the sun, and trapped heat?
    b. Why is the greenhouse effect necessary for life on Earth?
    c. What happens when the greenhouse effect becomes too strong?
6. Define the following, in your own words:
    a. Renewable resources
    b. Nonrenewable resources
7. Some industries have historically caused a lot of environmental damage. What are some ways these or other industries are now trying to make positive changes to help combat climate change?
    a. Choose one industry and give a specific example of positive change or new technology they are using.
    b. How might this change help reduce harm to the environment?

What's Your Carbon Footprint?

Explore how daily choices affect the environment by calculating and reflecting on your personal carbon footprint.

<u>Step 1: Explore the EPA Calculator</u>
Go to the EPA's Carbon Footprint Calculator (search for "EPA carbon footprint calculator" to find it easily).

Look through the different sections—home energy, transportation, waste, and more.

<u>Step 2: Calculate Your Footprint</u>
Using your best estimates, enter your information into the calculator. If you don't know exact numbers (like utility usage), make reasonable guesses or discuss as a household or group.

Step 3: Record Your Results
Write down your total carbon footprint score and note which area (home energy, transportation, waste, etc.) had the highest impact.

Step 4: Reflect and Compare
Answer the following questions:

- Which area of your lifestyle has the biggest carbon impact?
- Did anything surprise you about the results?
- How does your footprint compare to the national average listed on the calculator?

Step 5: Take Action Challenge
Choose one specific action the calculator suggests (like reducing hot water usage, carpooling, or recycling more).

Write a short plan for how you could realistically make that change in your life for one week.

Chapter Three: No Bones About It: What We Eat is Connected to Climate Change

1. What is a CAFO (Confined Animal Feeding Operation)?
    a. How is this different from traditional farming?
    b. How do CAFOs affect the animals that live in them?
2. What are the economic reasons behind large-scale animal farming?
3. Explain the environmental impacts CAFOs have on the following:
    a. Air
    b. Water
    c. Soil quality
4. What kinds of health or quality-of-life issues might be caused by CAFOs being built near some communities?
5. Define the following in your own words:
    a. watershed
    b. "dead zones"
    c. "algae bloom"

Protecting Our Watersheds

A watershed is an area of land that drains into a body of water. Every place on Earth has its watershed, and we all live within a watershed.
Turn an opened umbrella upside-down, and you'll form a clearer picture of how a watershed works. A watershed is an area of land that catches precipitation (rain, sleet, snow) that flows and drains into a body of water such as a wetland, stream, river, lake or groundwater.

The following Crumpled Paper Model was adapted from the Institute of Agricultural and Natural Resources at the University of Nebraska-Lincoln https://water.unl.edu. Visit them for more information.

To create a crumpled paper model of a watershed you will need:

- Two sheets of paper. Use paper from the recycling bin, if possible.
- A spray bottle filled with water.
- Non-permanent markers so the colors will run when moistened. You'll need 3-4 different colors (blue, brown, green, and red.)
- A tray or lots of old newspapers or towels to catch the water.

1. Take one sheet of paper and crumple it up in your hands.
2. Then open the paper, but do not flatten it. You want to have some "relief"—some high and low places. The high places are hills, the low spots are valleys, the wrinkles are streams and rivers.
3. With the blue marker, draw on the paper where you think the streams and rivers would be.
4. Place the paper on a tray or newspapers or towels. With the spray bottle, make it rain in the watershed by squirting a fine mist over the crumpled paper model, enough to make water flow down the "hills."
    a. Did you draw the streams and rivers in the right places?
    b. Do you have a lake?

This is how watersheds function, the water is shed by the land into streams, rivers, and lakes.

5. Now do the same thing with the second piece of paper. Crumple it and then open it up but not too much.
6. Draw the streams and rivers with the blue maker. Maybe include a lake or two.
7. Next, use the brown marker and draw along the tops of the hills. With a green marker you can draw trees, grass, crop or pastureland. Use a red marker to draw towns, houses, or businesses.
8. Place the "watershed" on a tray or newspapers or towels and mist it with water.

You'll see streams again. But you will also see a lot of other stuff (colors) running into the streams along with the water. If this were a real watershed, the brown would be dirt from bare soil, the green could be grass clippings or leaves, and the red could be oil from leaky cars or fertilizer someone spilled. That's what happens when things on the ground are picked up by stormwater runoff. They end up in streams and rivers moving down the watershed.

Our daily activities around our homes, on our streets, and in our neighborhoods can greatly impact the quality of our water. Making informed choices about our activities such as washing our cars, changing the oil in our cars, and having our pets go to the bathroom outdoors can greatly reduce or increase the amount of pollution going into our lakes and rivers every time it rains or the snow melts.
To reduce the amount of pollution going into our streams, rivers, and lakes you can do the following:

- Wash your car at the carwash or on your lawn (not driveway) and use as little soap as possible.
- Pick up pet waste and put it in the trash.
- Keep storm drains free of debris and litter.
- Bring used oil to a disposal facility; do not dump it on the ground or a storm drain.
- Brainstorm other ways to reduce watershed pollution in your area.

Chapter Four: The Meat Industry's Effect on People and Animals

1. What changes might occur in the local economy when small farms disappear?

2. Describe at least three of the issues faced by people who live in small towns with a factory farm.
    a. How might factory farms affect the air and water quality in the area?
    b. What health concerns do residents often report when living close to these facilities?
    c. How could property values, local businesses, or job opportunities be impacted?
    d. What emotional or social challenges might community members experience as a result of living near a factory farm?
3. Who typically works in slaughterhouses?
    a. Why might these jobs attract certain populations?
    b. What kinds of physical and emotional challenges do slaughterhouse workers face on the job?
    c. How might working in a slaughterhouse affect a person's mental well-being?
4. What responsibilities do companies have toward the people who work in their facilities?
    a. Why might some workers be afraid to speak up about unsafe conditions?
    b. How can consumers influence how workers in the meat industry are treated?
5. In your own words, define "sentient."
    a. What does it mean for an animal to be aware or capable of feeling emotions like fear, joy, or stress?
    b. Make a list of emotions or responses that you believe animals might experience.
    c. If animals are sentient, what responsibilities do humans have toward them?
    d. How might this affect the way we treat animals in farming?

Food Systems and Justice – Making the Connections

"The fact of the matter is that our current food system is interconnected with so many issues of justice in America: racial justice, health justice, environmental justice, economic justice." – Cory Booker

Write a short definition, in your own words, of each type of justice mentioned:

- Racial justice
- Health justice
- Environmental justice
- Economic justice

How might each of these connect to food? Write one sentence for each.

<u>Food System Connections Chart</u>

Create a 4-box chart. Label each box with one of the justice categories.
In each box, list two ways the food system could impact that area.
Example starters:

- Who grows our food?
- Who has access to healthy food?
- Who lives near pollution from farming or factories?
- Who makes money in the food system—and who doesn't?

Pick one justice area that interests you most.

- Why did you choose this one?

- Can you think of a real-world example (a news story, a community you know about, or even something in your town) where food and this type of justice overlap?

Do you think it's possible to have a fair food system without addressing these justice issues? Why or why not?

- Write a speech starting with "Food is a justice issue because…"

  OR

- Write a letter to a community leader explaining why food justice matters.

Chapter Five: Working For a Better Future

1. Why would it be beneficial to have stricter federal regulations regarding waste management at factory farms instead of leaving it to individual states?
2. What are three ways that CAFOs can prevent or lessen air and water pollution and greenhouse gas emissions from their facilities?
    a. Most of these changes require money and would eat into profits. Do you think large corporations should be required to make these changes anyway, even if it costs them more? Why or why not?
    b. Who do you think should be responsible for paying for environmental improvements—companies, the government, or consumers? Explain your reasoning.
3. What is "regenerative farming?"
    a. How is White Oak Pastures modeling responsible practices at their farm?
    b. Explain in your own words want you think the White Oaks Pastures motto means: "The dollars you spend with our farm impact the world you live in."
4. What environmental concerns can be caused by livestock manure?
    a. Describe at least two sustainable ways to deal with the manure?
5. What is lab-grown meat?
    a. How might meat from a laboratory benefit the environment?
    b. Would you personally want to eat or trust it as a safe and ethical alternative to traditional meat? Why or why not?
6. In many parts of the world, insects like crickets, are eaten as a protein source. What environmental benefits might come from eating bugs instead of traditional livestock?
7. What are the differences between organic and non-organic foods?
    a. How might choosing organic impact the environment?
    b. How might choosing organic impact a family's budget?
    c. Do you think the benefits of organic food are worth the higher cost? Why or why not?

The Future of Food — Lab-Grown Meat Debate

Step 1: Choose a Role
Each student (or group) selects one of the following perspectives:

- Environmental Scientist – Focus on climate change and resource use.
- Farmer – Concerned about jobs, tradition, and rural communities.
- Consumer – Focused on cost, safety, and trust.
- Animal Welfare Advocate – Focused on ethics and reducing animal suffering.

- Food Company Executive – Interested in profit, innovation, and the future market.

Step 2: Prepare Your Arguments
From your assigned perspective, write:

- Two reasons FOR lab-grown meat.
- Two reasons AGAINST lab-grown meat.

Step 3: Debate
Discuss the question:
Should lab-grown meat become a major food source in the future?

During the debate:

- Speak from your role's point of view.
- Respond to others' arguments, don't just read your notes.
- Try to persuade the group while staying true to your character's beliefs.

Chapter Six: How to Eat for a More Sustainable Future

1. Vegan sometimes sounds like an impossible diet. But some of the foods you eat are vegan. Think about what you ate this last week. Which foods are naturally vegan?
    a. Of the foods that are not vegan, research if there is a way to easily make a vegan option.
    b. Create a list of vegan foods that you have eaten and that you like.
2. What does a "plant-based" diet mean?
3. Explain how each of the following concerns might lead someone to choose a vegan lifestyle:
    a. Religious
    b. Cultural
    c. Ethical
4. What are some of Jane Goodall's reasons for not eating meat?
5. What is "ahimsa?"
6. How is veganism more than a diet?
    a. How does a veganism lifestyle impact more than what foods to eat?
7. How did COVID change how some people ate?

Set Up Your Food Tracker

Create a chart or journal with the following columns:

- Beneficial foods = vegetables, fruits, grains, beans, nuts
- Adverse foods = processed foods, red meat, fried foods
- Neutral foods = refined grains, lean meats, shellfish, potatoes that were not fried

Track what you eat for 3–5 Days placing each food into its proper column.

After each meal or snack:

- Notice your body and mood 30–60 minutes later.
- Add any notes like "felt sleepy," "lots of energy," "stomach hurt," "felt full and satisfied," etc.

After a few days, answer:

- Which foods showed up most often in your beneficial category?
- Were you surprised by any adverse reactions?
- Did you notice any patterns (like certain foods that make you feel great in the morning but not at night)?
- If you could make one small shift in your eating based on this, what would it be?

Chapter Seven: One Plate at a Time

1. What is a food that you used to dislike but now enjoy?
    a. What do you think caused your taste to change?
2. What is a food you used to enjoy but don't really like anymore?
    a. Why do you think your feelings about this food changed?
3. Define the following diets in your own words:
    a. Lacto-ovo vegetarian
    b. Demaritarian
    c. Flexitarian
    d. VB6
4. Why might easing into a vegan lifestyle make the transition easier?
5. What is "Meatless Monday," and how can it support better health and help the environment?
6. What does the term "vege-terrible" mean?
    a. Write three examples of "vege-terrible" comments someone might say to a friend or family member.
7. List at least five positive ways to share your vegan beliefs or choices with others.

The "Try It Once" Campaign

Imagine you are creating a friendly campaign to encourage others to try a plant-based meal or participate in something like Meatless Monday, VB6, or simply reducing meat a little—without pressure or judgment.

Design a poster, flyer, or social media-style post that invites others to *try it once*.

Your campaign should include:

1. A simple, catchy slogan
    - Examples: *"Just One Meal, Big Impact!"* or *"Try It, Don't Knock It!"*
2. One clear benefit
    - Health example: *"Even one plant-based meal can give your body a fiber boost."*
    - Environmental example: *"Skipping meat for one meal saves more water than you think."*
3. A kind, welcoming tone
    - Avoid guilt or shaming language.

- Use wording like:
  "You don't have to go vegan—just give it a taste!"
  "Curious? Start with one meal."

4. A simple action step
   - "Try a plant-based meal this Monday."
   - "Swap your usual lunch for a veggie version just once."
5. Optional Visual Element
   - Draw or include an image that makes the meal look appealing, fun, or adventurous—like a colorful plate or a playful cartoon character encouraging the change.

Final Projects

Now that you have finished reading the book, here are a few final project ideas based on *Eating to Save the Planet: How Veganism Helps Fight Climate Change*.

Theme-Based Reflective Essay (500–700 words)

Choose one major theme from *Eating to Save the Planet*:

- Everyday Actions Add Up
- Food Systems and Justice
- Small Changes, Big Impact
- Compassion as Climate Action
- Food Choice as Identity

Write an essay that answers:

- How is this theme shown throughout the book?
- What message do you think the author wants readers to carry into their own lives?
- What is one personal change or reflection you had while reading?

"Famous Vegan Spotlight" Profile Project

Using the backmatter section on Famous Vegans, choose one real person (actor, athlete, activist, scientist, etc.) and create a digital slide or illustrated one-page profile.

Include:

- Who they are and what they are known for
- Why they chose veganism (environmental, ethical, health, spiritual reasons, etc.)
- A quote or message that connects to the book's themes
- *Optional:* Write a pretend interview question you would ask them—and answer it in their voice.

"Will You Get Enough Protein?" Educational Poster or Video

Based on the backmatter about veganism and protein intake, create a myth-busting infographic, poster, or 60-second video answering:

- Where do vegans get protein?
- List at least five plant-based protein sources
- Compare one day's worth of plant-protein meals to typical meat-based meals

Design a Better School Lunch Menu

Imagine your school cafeteria has asked for your help in making the lunch menu more sustainable and climate-friendly.

- Create a one-week menu that includes plant-based or low-impact meal options.
- For each day, include one note about environmental benefit (ex: "Using beans instead of beef uses less water and creates fewer emissions.")
- Optional extension: Pitch your menu in a persuasive paragraph or recorded presentation to your school board.

Mini Documentary or Podcast Script: *One Plate at a Time*

Write a 2–3 minute script (or record it!) explaining how small food choices create ripple effects for the planet.

Your script should:

- Start with a hook: "It's just one meal… but is it?"
- Reference at least two chapters from the book
- Include one quoted idea or fact from the text
- End with a call to action: *"What's one change you could try?"*

Justice & Food Systems Creative Response

Inspired by the Cory Booker quote:

"Our food system is interconnected with racial justice, health justice, environmental justice, and economic justice."

Choose one form of expression:

- Visual: Create a justice web, poster, or illustrated concept map.
- Spoken word / poem: Write from the perspective of a farmworker, a kid in a food desert, or an animal in a CAFO.
- Monologue or diary entry: Tell a day-in-the-life story showing how food and justice meet.

End your piece with one reflection sentence: *"Food justice matters because…"*

Plan a Community Event

Imagine your class is asked to host a "Planet-Friendly Food Fair."

Create a proposal packet including:

- Event title and theme slogan (ex: "One Bite Can Spark Change")
- One booth featuring plant-based taste-testing
- One education station on CAFOs, protein, or Famous Vegans
- One hands-on demo or model (greenhouse effect jar, watershed paper model, carbon footprint station, etc.)
- Optional: promotional poster or digital invite encouraging "try it once" participation