

RECYCLING LESSON PLANS

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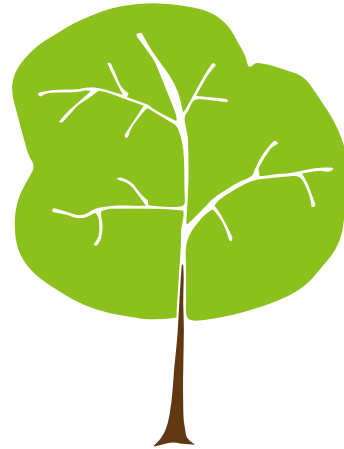


5E PRINTABLE LESSONS TO PROMOTE RECYCLING

Brought to you by WeAreTeachers and PepsiCo Recycling

Dear Educators,

You're teaching a generation of kids who will have a huge impact on our environmental future. Lessons about recycling, sustainability, and eco-friendly practices are incredibly important. To help bring these important topics to your classroom, we pulled together five complete lesson plans in the popular 5E lesson format. These lessons focus on key subject



areas like science, technology, and language arts. Through the easy-to-implement 5E model, you'll be able to incorporate these into units you already have planned for the year.

For even more resources, we recommend checking out the free lessons, articles, ideas, and printables on PepsiCo Recycling's website, [PepsiCoRecycling.com](https://www.pepsico.com/recycling). You can also sign up to participate in their recycling program for schools, Recycle Rally.

Thanks for all you do as educators in teaching our future generation.



THE BASICS OF 5E

The 5E model is an easy, hands-on way to create lesson plans for your classroom. You can either choose to do the activity in a single lesson, or you can spread it out over several days or weeks.

There's no perfect or right way to do these lessons. In fact, adapting them to work for you and your classroom needs is definitely recommended. Based on your students' age, interests, or the unit you're trying to cover, always adjust to make them work for you.

Best of all, they're designed to be printed on a single 8½ x 11 sheet of paper, making it even easier to incorporate into your daily lesson plans.

Engage: Introduce the topic.

In the engage area, introduce your students to the topic in a clear, concise way. Make sure all your students have a strong understanding of the main concepts before moving forward.

Explore: Go to the lab.

Now it's time to really get hands on with the lessons. This section includes an interactive activity where students get to put their own personal touch on the project.

Explain: Take notes.

The notes section, where students write about what they learn, is a feature in all the projects. This will help students grasp important concepts they've been putting into practice in the lab section.

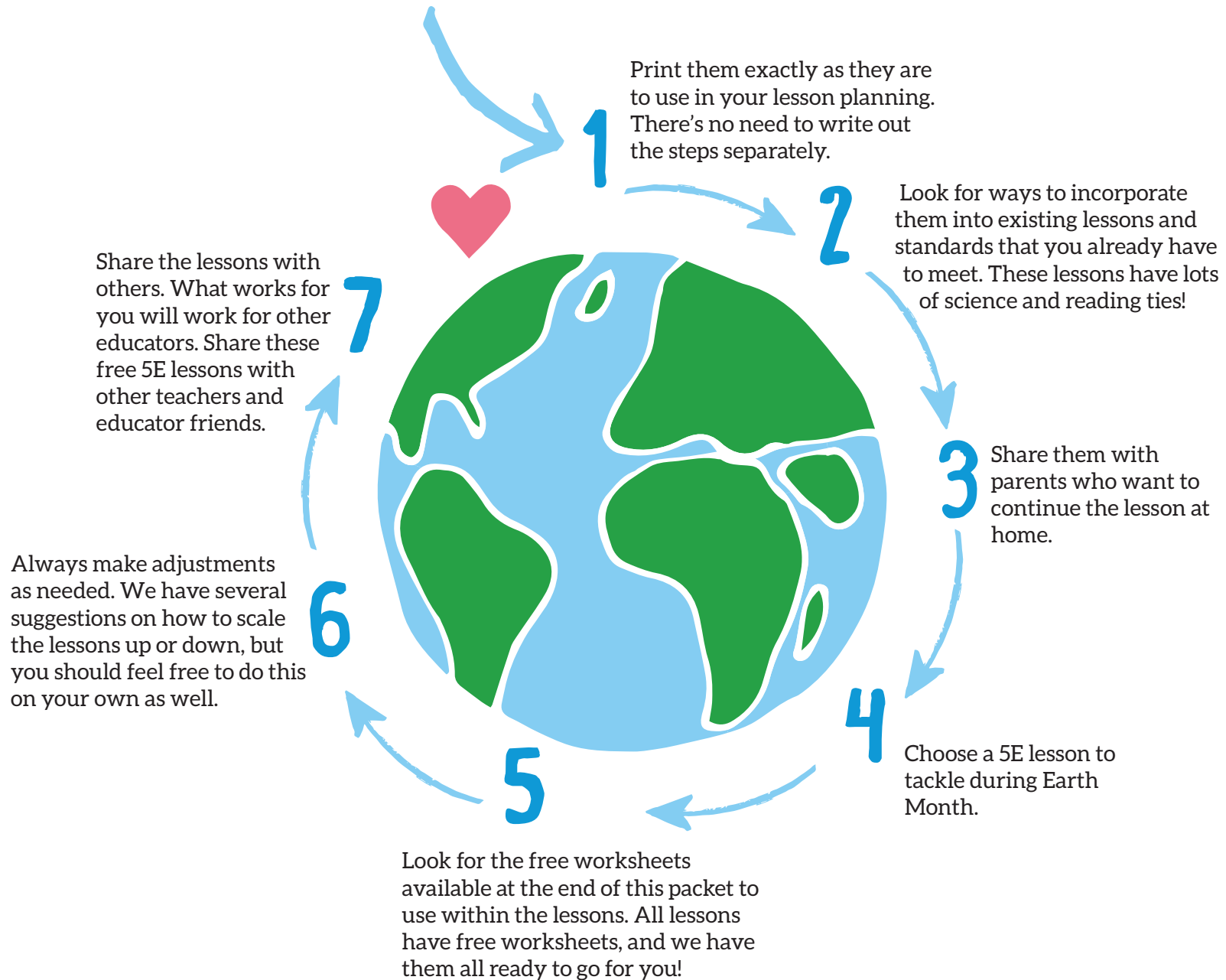
Elaborate: Review and extend.

This section checks for understanding, and then it encourages students (and you) to take it to the next level. What more can you do with this lesson? What questions have come up that you can tackle? This is a great place to grow.

Evaluate: Check for understanding.

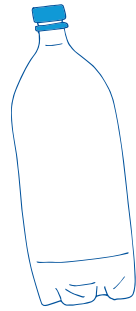
Each lesson should have a follow-up to check for understanding. If much of your class didn't understand a key concept or takeaway, it might be time to go back to the lab or review and extend again.

7 TIPS FOR USING THE 5E LESSONS



Lesson 1

MICRO-COMPOSTER IN A BOTTLE



Students will explore the process of decomposition using a micro-composter made of two-liter plastic bottles.

Grades: 1–6

Core Concepts:
Reuse, Decomposition

Key Question: What is needed for decomposition to occur?

MATERIALS »

- Two-liter plastic bottles
- Organic materials
- Thermometer
- Kitchen scale
- Whiteboard and markers for recording results
- Chart paper and colored pencils for graphing
- “Composting in the Classroom” worksheet

1 ENGAGE: INTRODUCE THE TOPIC

Teacher: What do students know about the process of composting? Prompt students by using images or video of compost bins. Write notes and questions on chart paper to refer back to throughout the project.

Student: Discuss the compost bin and what happens to any materials put inside. What questions do you have about composting and decomposition?

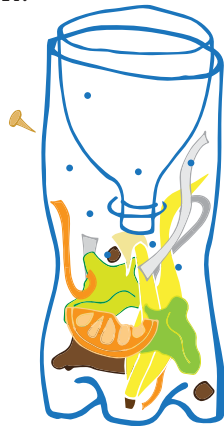
3 EXPLAIN: TAKE NOTES

Teacher: Use student observations and data from tracking the temperature and mass of the compost to explain the process of decomposition. Create a class poster of vocabulary words and their definitions.

Student: Use the data collected and the vocabulary words to explain what happened to the materials in the mini-composter.

2 EXPLORE: GO TO THE LAB

Teacher: Give your students a jump-start by preparing your bottles for the micro-compost bin. Cut the top off a plastic bottle, about three inches below the neck. Then cut a second bottle about four inches from the bottom. Place air holes in this second bottle—a thumbtack works great. Do this with several bottles so they are ready for student assembly and graphing.



Student: Assemble the micro-composter by turning the second bottle upside down and filling it with organic material (mixing food scraps, soil, paper scraps, etc.). Then place the inverted top of the first bottle into the bottom of the second bottle. Secure the pieces together with packing tape. Now record the temperature and weight of organic material. Every other day, draw and label a picture of the organic material and record the temperature and weight of the bottle. Once you have enough information, put it into graphs.

4 ELABORATE: REVIEW AND EXTEND

Teacher: Ask students to respond to questions about the lesson (samples below) in writing or through a class discussion.

- How does what happens in a compost bin compare with what happens in nature?
- Why do cities and towns have green waste and composting programs?

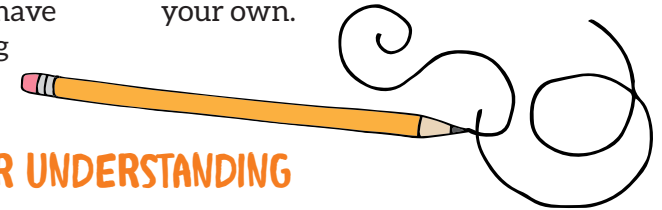
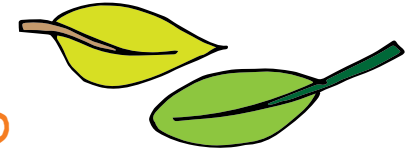
- Why would it be important for them to collect organic materials separately from garbage?

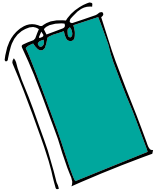
Student: Think about why you think it's important to compost. Discuss your ideas as a class or write them on your own.

5 EVALUATE: CHECK FOR UNDERSTANDING

Teacher: Using the worksheet, have students draw a series of pictures with labels. Have them explain the decomposition process from their observations on the worksheet.

Student: Use the data and information from your notes for the final step in this project. Be sure to use the right vocabulary words.





Lesson 1 Worksheet

COMPOSTING IN THE CLASSROOM

OBSERVATIONS

Record your observations about your micro-composter in these boxes.

Name: _____

Date: _____

Date: _____ Weight: _____
 Temperature: _____ Observations: _____

Date: _____ Weight: _____
 Temperature: _____ Observations: _____

Date: _____ Weight: _____
 Temperature: _____ Observations: _____



Date: _____ Weight: _____
 Temperature: _____ Observations: _____



Date: _____ Weight: _____
 Temperature: _____ Observations: _____

Date: _____ Weight: _____
 Temperature: _____ Observations: _____