

STEAM Subject: Ecology
Lab: Cool Ways to Recycle

Grades: 2nd-5th

Learning objective:

Students will learn about recycling and the correct way to prepare items for recycling.

ENGAGE:

Ask students the following questions:

- Do you recycle at home?
- What is the difference between compost, recycling, and trash? *Compost is organic matter that has been decomposed in a process called composting. Recycling is waste that can be converted into material that can be used again. Trash is waste material that will not undergo processes for recycling.*
- Why is it important to recycle? *Recycling allows us to reuse materials (ex. a bike can be made from plastic water bottles) rather than making new materials all the time. It is better for the environment because creating new materials takes up energy and resources. Keeping materials out of landfills by reusing them also prevents our environments from becoming full of trash and reduces greenhouse gas emissions.*



EXPLORE:

Students will play a game called “Cool Ways to Recycle,” built by students from University of California San Diego, and explore how they can make a difference in helping the environment.

Recycling:

Your household waste can be separated into three main groups: compost, recycling, and trash. Examples of compost include fruit and vegetable peels, food scraps, and coffee grounds. Good compost is great for gardens! Examples of recyclable materials are plastic water bottles, newspapers, cardboard, and aluminum cans. Most cardboard boxes are made from recycled paper! Examples of trash include soiled pizza boxes, styrofoam, and candy wrappers. These materials cannot be composted or recycled yet and can only be thrown away as trash.



Cool Ways to Recycle Game:

Students will play the “Cool Ways to Recycle” game to learn about recycling and how they can help the environment by recycling.

Materials needed per student:

- 1 computer with the latest version of Chrome, Firefox, or Safari

Directions:

Access detailed instruction steps on RecyCool’s website:

<https://cse125.ucsd.edu/recycool/for-teachers>

1. Before the activity, print out a certificate award for each student (<https://goo.gl/oTJ5q6>, optional).
2. Ask students questions from “Engage” in the section above and discuss what sort of materials can be composted, recycled, or trashed.
3. Access the game at this URL: <http://recy.cool/>
4. Once the game loads, instruct students to find their elementary school by filling in the fields for “School Name,” “City,” and “State,” or if the school is not listed, ask students to “Skip” the school selection page.
5. During or after the game, ask students to write down two things they learned.
6. After they complete the game, have students take the quiz at <https://cse125.ucsd.edu/recycool/quiz>



Discussion:

Ask students what they learned from the game. What goes in compost, trash, and recycling? Where does trash go after you throw it away? After playing the game, do you think you will do your best to recycle now?

Optional Activity: Give students the certificate award and have them write their names on it. Congratulations!

EXPLAIN:

- Watch video about recycling:
 - How to be a better recycler:
<https://www.youtube.com/watch?v=fYsFK6ZiZRr>
- Learn what you can recycle in San Diego:
 - <https://www.sandiego.gov/environmental-services/recycling/residential>
- Review vocabulary:
 - **Compost:** organic matter that has been decomposed in a process called composting
 - **Recycling:** waste items that can be converted into material that can be used again
 - **Trash:** waste material that cannot be composted or recycled and can only be thrown away

EVALUATE:

Have students help with sorting trash and recycling at home.

How recycling helps the environment?

Write 5 things you can do help reduce the amount of trash you produce.

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