



# IS THAT TRASH OR TREASURE?

The TerraCycle Curriculum Series was co-created by The Cloud Institute for Sustainability Education and Learner-Centered Initiatives.

**Teacher's Guide**

**Grade: K - 2**

**Lesson: Is That Trash or Treasure?**

**Number of Class Periods:**

2 45-minute periods



[creativecommons.org/licenses/by-nc-sa/3.0/us/](https://creativecommons.org/licenses/by-nc-sa/3.0/us/) TerraCycle-Cloud Institute curriculum by The Cloud Institute [www.cloudinstitute.org](https://www.cloudinstitute.org) is licensed under a Creative Commons Attribution-NonCommercial-Share Alike 3.0 United States License [creativecommons.org/licenses/by-nc-sa/3.0/us/](https://creativecommons.org/licenses/by-nc-sa/3.0/us/). Permissions beyond the scope of this license may be available at [www.cloudinstitute.org/privacy-policy](https://www.cloudinstitute.org/privacy-policy).

THE  
CLOUD  
INSTITUTE FOR  
SUSTAINABILITY  
EDUCATION

# IS THAT TRASH OR TREASURE?

**Grade: K - 2**

**Number of Class Periods:** 3 45-minute periods

## Standards

### Common Core State Standards

#### ELA

##### Reading Literature

Key Ideas and Details

K - 1, 3

1 - 1, 3

2 - 1, 3

Range of Reading and Level of Text Complexity

K - 10

##### Writing

Text Type and Purposes

K, 1, 2 - 2

##### Listening/Speaking

Comprehension/Collaboration

K, 1, 2 - 1, 2, 3

Presentation of Knowledge and Ideas

K, 1 - 5, 6

2 - 4, 6



## EfS Standards

### Responsible Local and Global Citizenship

**B. 10** Use their own choices as exemplars which demonstrate an awareness that human choices contribute to sustainable or unsustainable consequences.

**B. 11** Determine and articulate group decision making processes and make decisions that are collective, vision oriented and solve more than one problem at a time while minimizing new problems.

**B. 12** Develop their sense of efficacy by using their legitimate voice to demonstrate advocacy skills.

### Dynamics of Systems and Change

**C. 1** See both the whole system and its parts, as well as place themselves within the system.

**C. 18** Take responsibility for the effect(s) of their actions on future generations.

### Inventing and Affecting the Future

**G. 5** Utilize lateral thinking skills (“out of the box” thinking) to address problems in the service of their vision.

**G. 7** Make a contribution that solves more than one problem at a time and minimizes the creation of new problems. (Create value.)

### Multiple Perspectives

**H. 7** Demonstrate the ability to work with people who present different perspectives and to synergistically communicate and cooperate to create shared visions, understandings and policies far richer than anything that could have been achieved alone.

### EfS Enduring Understandings (EU)

**1. A healthy and sustainable future is possible.** We can learn how to live well within the means of nature.

**2. We are all in this together.** We are interdependent on each other and on the natural systems. In this context, self-interests are best served through mutually beneficial relationships.

**3. Healthy Systems have limits.** Tap the power of limits.

**9. Read the feedback.** We need to pay attention to the results of our behavior on the systems upon which we depend.

**10. It all begins with a change in thinking.** Thinking drives behavior and behavior causes results. Think systems, cycles and out of the box.

**12. We are all responsible.** Everything we do and everything we don't do makes a difference.

## LESSON SUMMARY

This lesson is framed around a book about a little girl who learns about upcycling as a way of reducing the amount of trash that ends up in landfills. Students apply what they have learned from the story by engaging in an upcycling project. They look at trash that they produce in school and at home, and use their imaginations to determine what beautiful or useful things could be made from it. Like Maria and her grandmother, characters in the story they read, students actually engage in the upcycling of materials that would otherwise be thrown into the trash pile.

### OVERARCHING QUESTION

Is that trash or treasure?

### GUIDING QUESTIONS

- WHAT IS TRASH?
- WHERE DOES TRASH GO?
- WHY DO WE NEED TO MAKE SURE STUFF DOESN'T OVERFLOW (FLOW IN FASTER THAN IT FLOWS OUT)?
- WHAT ARE THINKING HABITS? WHAT ARE SYSTEMS THINKING HABITS?
- WHAT IS UPCYCLING?
- HOW CAN I STOP TRASH FROM ENDING UP IN LANDFILLS?
- WHY IS IT IMPORTANT TO THINK ABOUT MYSELF AS PART OF A LIVING SYSTEM THAT INCLUDES NATURE AND PEOPLE?
- WHAT CAN WE DO WITH MATERIALS INSTEAD OF THROWING THEM IN THE TRASH PILE?

### RESOURCES/MATERIALS FOR THIS LESSON:

- Copy of the book [Turning Trash into Treasure](#)
- Pictures of landfills
  - [www.zerowasteamerica.org/BasicsOfLandfills.htm](http://www.zerowasteamerica.org/BasicsOfLandfills.htm)
  - [www.zerowasteamerica.org/landfills.htm](http://www.zerowasteamerica.org/landfills.htm)
  - [www.zerowasteamerica.org/Pictures.htm](http://www.zerowasteamerica.org/Pictures.htm)
- TerraCycle Designers Brainstorm Video  
<http://www.youtube.com/watch?v=n-VtyvhKwaY>

**Note to teachers:** This lesson can stand alone, and can be taught as the third lesson in the sequence of lessons beginning with the Natural Laws and Principles and then Healthy Commons to reinforce and extend students' prior knowledge. If students have already experienced those lessons, then direct links and references can be made to this lesson. If those lessons have not been used, it may be helpful to review them so that activities and resources can be tapped if the need or interest arises.

# LEARNING OPPORTUNITIES, ACTIVITIES, AND PROCEDURES

## DAY 1

I. Teacher reads story [Turning Trash into Treasure](#) and discusses with students

**Some possible guiding questions:**

- What did Maria put in the bag when she cleaned up her room?
- Why does she think those things are trash?
- What do we throw in the trash?
- What do systems thinking habits help us do?
- What's a landfill?
- How does Maria feel when she sees the pictures of the landfills?
- Why do you think Maria's mom asked her to take things out of her room before bringing more things into her room?
- What would her room look like if she brought more things in faster than she took them out? (Teacher note: show the picture of Maria's room with arrows flowing in and out.)
- How does Maria think about trash at the beginning of the story?
- How does Maria think about trash at the end of the story?
- What has Maria learned?
- What could we upcycle?



## DAY 2

2. Show the short video of TerraCycle Designers planning to upcycle things to model for students what the design process looks like.
3. Create improvisational role plays for students around the question, “What are you doing with that trash?”
  - a. Have empty and clean props ready like:
    - water bottle
    - coffee can
    - juice box
    - toilet paper or paper towel rolls
    - snack food bags (like potato chip bags)
    - sandwich bags
    - bottle caps
    - corks
    - old sneaker
    - milk container
    - egg cartons
  - b. Assign each pair of students a different piece of trash.
  - c. Provide them with the following instructions:
    1. Person 1 is the questioner and Person 2 has the trash.
    2. When Person 1 sees Person 2, he/she says, “What are you doing with that trash?”
    3. Person 2 then has a choice. He/She can either say, “I am throwing it in the trash pile,” or “I am going to turn it into treasure by using it to make \_\_\_\_\_ (fill in with an idea for an upcycled product).”
    4. If Person 2 says they are throwing it in the garbage, Person 1 then says, “Why don’t you turn it into treasure by using it to make \_\_\_\_\_ (fill in with an idea for an upcycled product).”
  - d. Remind students to use their imaginations and systems thinking habits to help them come up with different and interesting ideas.
  - e. If the pair cannot generate an idea, open it up to the rest of the class.
  - f. This can continue until no more ideas for upcycled products can be generated. There could be multiple ideas for each piece of trash.

**Note to teachers:** This can be implemented as a game where students work in teams and get points for each new upcycling idea, or it can simply be used to generate a list of upcycling ideas. For younger students, this may need to be modeled a couple of times until they get the idea.



EfS/Common Core Standards	EfS Indicators/ National Benchmarks	Assessment Instrument	EfS/ State Scoring Criteria
Common Core ELA  Reading Literature	Key Ideas and Details	Discussions related to book and upcycling role play activity	<p><b>K Students can:</b></p> <p>1. With prompting and support, ask and answer questions about key details in a text.</p> <p>3. With prompting and support, identify characters, settings, and major events in a story.</p> <p><b>Grade 1 students can:</b></p> <p>1. Ask and answer questions about key details in a text.</p> <p>3. Describe characters, settings, and major events in a story, using key details.</p> <p><b>Grade 2 students can:</b></p> <p>1. Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text.</p> <p>3. Describe how characters in a story respond to major events and challenges.</p>
	Range of Reading and Level of Text Complexity	Reading and discussion of book	<p><b>K Students can:</b></p> <p>10. Actively engage in group reading activities with purpose and understanding.</p>
Common Core ELA  Writing	Text Types and Purposes	Description and illustration of upcycled product	<p><b>K Students can:</b></p> <p>2. Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.</p> <p><b>Grade 1 Students can:</b></p> <p>2. Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure.</p> <p><b>Grade 2 Students can:</b></p> <p>2. Write informative/explanatory texts in which they introduce a topic, use facts and definitions to develop points, and provide a concluding statement or section.</p>



EfS/Common Core Standards	EfS Indicators/ National Benchmarks	Assessment Instrument	EfS/ State Scoring Criteria
Common Core ELA  Speaking/ Listening	Comprehension/ Collaboration	Discussion and answering of guiding questions; role play activity	<p><b>K Students can:</b></p> <ol style="list-style-type: none"> <li>1. Participate in collaborative conversations, with peers and adults, in small and larger groups.               <ol style="list-style-type: none"> <li>a. Follow agreed-upon rules for discussions.</li> <li>b. Continue a conversation through multiple exchanges.</li> </ol> </li> <li>2. Confirm understanding of a text read aloud by asking and answering questions about key details and requesting clarification if something is not understood.</li> <li>3. Ask and answer questions in order to seek help, get information, or clarify something that is not understood.</li> </ol> <p><b>Grade 1 Students can:</b></p> <ol style="list-style-type: none"> <li>1. Participate in collaborative conversations, with peers and adults, in small and larger groups.               <ol style="list-style-type: none"> <li>a. Follow agreed-upon rules for discussions.</li> <li>b. Build on others' talk in conversations by responding to the comments of others through multiple exchanges.</li> <li>c. Ask questions to clear up any confusion about the topics and texts under discussion.</li> </ol> </li> <li>2. Ask and answer questions about key details in a text read aloud.</li> <li>3. Ask and answer questions about what a speaker says in order to gather additional information or clarify something that is not understood.</li> </ol> <p><b>Grade 2 Students can:</b></p> <ol style="list-style-type: none"> <li>1. Participate in collaborative conversations, with peers and adults, in small and larger groups.               <ol style="list-style-type: none"> <li>a. Follow agreed-upon rules for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion).</li> <li>b. Build on others' talk in conversations by linking their comments to the remarks of others.</li> <li>c. Ask for clarification and further explanation as needed about the topics and texts under discussion.</li> </ol> </li> <li>2. Recount or describe key ideas or details from a text read aloud.</li> <li>3. Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue.</li> </ol>
	Presentation of Knowledge and Ideas	Classroom discussions, role play activity, description of upcycled product	<p><b>K Students can:</b></p> <ol style="list-style-type: none"> <li>5. Add drawings or other visual displays to descriptions as desired to provide additional detail.</li> <li>6. Speak audibly and express thoughts, feelings, and ideas clearly.</li> </ol> <p><b>Grade 1 Students can:</b></p> <ol style="list-style-type: none"> <li>5. Add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings.</li> <li>6. Produce complete sentences when appropriate to task and situation.</li> </ol> <p><b>Grade 2 Students can:</b></p> <ol style="list-style-type: none"> <li>4. Tell a story or recount an experience with appropriate facts and relevant, descriptive details, speaking audibly in coherent sentences.</li> <li>6. Produce complete sentences when appropriate to task and situation in order to provide requested detail or clarification.</li> </ol>

Teachers can monitor student engagement with an understanding of the enduring understandings by focusing on students' responses to questions identified with an EU.