

WORKSHOP OVERVIEW | UP-CYCLED ENGINEERING



Overview:

With Change is Simple, students learned the many ways they can dispose of trash in order to reduce their environmental impact. One way students can do this is by reusing materials and up-cycling them. In America each person produces 3.5 pounds of waste, with a population of 300 million people that means 18.4 billion ft. of space is occupied by trash! If this trash was put into a landfill that was 400 feet deep, it would still cover over 1,000 acres of land. Much of what is thrown away or burned can easily be recycled, composted, or re-purposed. The most important step in the waste cycle is reducing consumption of single use items. By having students create an up-cycled project, they are actively reducing their waste production and positively impacting the environment!

Activity Duration: 1.5 -2 hours

ESSENTIAL QUESTIONS

- *Why is it important to divert waste from landfills?*
- *How does creating an up-cycled project make a positive environmental impact?*

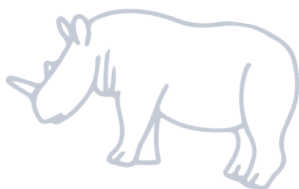
MATERIALS NEEDED

- [Video](#)
- *Student computers*
- *Recycled materials*
- *Scissors*
- *Glue*
- *Tape*
- *Coloring materials*



ACTIVITY DESCRIPTION

In this activity, students will be repurposing waste by upcycling it! Students will have the opportunity to pick their own project and collect waste to bring their project to life. This project connects to the waste lesson students received from Change is Simple by inviting students to reduce their waste by repurposing it instead!





WORKSHOP OVERVIEW

UP-CYCLED ENGINEERING

ACTIVITY RUNDOWN

1. Explain to students that they will be using waste (recycled, trash, etc.) for an up-cycling project. It's important to explain to students that they shouldn't go out and buy anything for this project. The purpose of this project is to use something that would already be on its way to the trash such as items from the recycling bins or empty containers from their lunch that would end up in the trash.
2. Have a brief discussion with your class using the essential questions from the previous page. Students should have the opportunity to talk to a partner about the questions prior to the discussion. The discussion should last around 10-15 minutes.
3. After having a class discussion, watch the linked [video](#) and encourage students to begin generating ideas.
4. Following the video, give students 15-20 minutes to research up-cycling projects. During their research, students should select the project they'd like to create.
5. Over the next few days, have students collect the recycled materials they need for their projects. Remind students that they should only be bringing in items that are already on their way to being recycled or thrown away. They should not be buying any materials.
6. Give students 45-60 minutes to create their up-cycling project! These projects can be displayed and eventually brought home.

UP-CYCLING PROJECT EXAMPLES



Turn tin cans into planters!
From [Tiny Beans](#)



Turn yogurt containers into
bracelets! From [Simply Green](#)



Turn paper towel rolls into
bird feeders! From [4 The Love of Food](#)