

## GRADE 6 LEARNING EXPERIENCE

# The Reduce through Upcycling Challenge

### Summary

Students are challenged to creatively repurpose or “upcycle” common household items and pitch their innovations to their class. Students share their pitch with the rest of the school to promote learning about reducing consumption and repurposing items as an alternative to purchasing new items.

### Objective

Students reflect on common items that can be repurposed/upcycled. Students learn about the Mi'kmaw perspective of sharing with each other and treating all resources with respect (e.g. repurposing materials/ eliminating or minimizing waste). Students learn about practices to reduce waste and personal consumption, by thinking of new ways to use old items.

### Pre-Activity

## UPCYCLING COMMON HOUSEHOLD ITEMS

#### DIRECTIONS

The class is broken into groups to brainstorm about the concept of upcycling.

#### LAUNCHING PAD QUESTION FOR INQUIRY BASED LEARNING

*What is an item at home (or at school) that is being reused in a new way—one that is different from its intended purpose?*

If students are having trouble thinking of items at home or in the classroom, encourage them to think about elders in their life, and what items they may repurpose.

Examples of repurposed/upcycled items:

- Butter containers used for leftover food
- Jars used as drinking glasses
- Old T-shirt used as a reusable tote bag
- Broken mug pieces into framed artwork
- Shoe box used to hold socks neatly
- Refer to **Appendix 1** for more examples and pictures

#### MATERIALS

Paper, Markers, Pencils

#### Appendix 1

Repurposed Common Household Items

#### DURATION

15 mins

(cont'd)

#### MAIN LEARNING OUTCOME

GRADE:

6

SUBJECTS:

#### Social Studies



Learners will implement age-appropriate actions that demonstrate responsibility as global citizens.

#### SKILLS

##### Implement

**Select:** Locate several relevant and dependable details to support an answer

**Plan:** Identify steps to solve the problem. Execute the steps, modifying as necessary.

**Evaluate:** Review steps and results from an investigation or problem solving. Reflect on varying perspectives and alternative solutions or findings. Identify potential new problems and/or issues.

**Apply:** Carry out or complete a procedure/ technique

##### Analyse

Gather and select appropriate information. Begin to reflect on accuracy, validity, and importance, of the information. Communicate findings.

#### English Language Arts



##### Listening & Speaking

Learners will communicate effectively and clearly respecting cultural contexts.

Learners will use writing and other representations to explore, clarify and reflect upon thoughts and experiences.

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## UPCYCLING COMMON HOUSEHOLD ITEMS (CONT'D)

### DIRECTIONS

#### MI'KMAW PERSPECTIVE

Once students have had time to discuss, ask questions, and brainstorm ideas around repurposing, call their attention to a Mi'kmaw concept called "**Netukulimk**" (*pronounced: ne-du-gu-limk*) — having respect for all resources and encouraging sustainability by not taking more than you need.

Have students read **Traditional Materials and Other Useful Plants (Appendix 2)**

**OPTION** Students may have more questions about the Mi'kmaw perspective. To dive deeper, watch this video on Netukulimk.

**LINK** [youtu.be/0mYfx5Plo\\_4](https://youtu.be/0mYfx5Plo_4) (Elder Albert Marshall)  
(02:39 / Source: Unama'ki Institute of Natural Resources)

Students can add to their brainstormed list after considering Mi'kmaw traditional practices.

### TEACHER SUPPORT — GUIDING QUESTIONS IF NEEDED

- Thinking about traditional practices of the Mi'kmaw community, are there ways we can be more creative about repurposing items in our home or schools?
- How does repurposing items align with Mi'kmaw practices and values?
- Considering the Mi'kmaw traditional practices and the repurposing ideas you've brainstormed, how does reuse and upcycling affect our global community?

These questions are meant to address over-consumption and the influence that normalizing a positive behaviour (e.g. repurposing and sharing items) has on addressing this global concern.

## Activity

## UPCYCLING CHALLENGE

### DIRECTIONS

Students remain in groups from the pre-activity and are introduced to the Upcycling Challenge. The guidelines of the challenge are as follows:

- Each group picks one item listed from the pre-activity brainstorm
- In 10 minutes create an exhaustive list of all the possible ways the item could be upcycled

**OPTION** YouTube has many "Life hack" and "Repurpose/Upcycle" videos that may help with this brainstorm. For example, Blossom Channel  
[www.youtube.com/channel/UC2WuPTt0k8yDJpfenggOAVQ](https://www.youtube.com/channel/UC2WuPTt0k8yDJpfenggOAVQ)

### MATERIALS

Appendix 2  
Traditional  
Materials and  
Other Useful Plants

Internet access,  
Chromebooks or  
Projector/Screen  
(optional)

### MATERIALS

Chart paper,  
Markers, pencils

Chromebooks  
(if available)

**DURATION**  
35 min

(cont'd)

## UPCYCLING CHALLENGE (cont'd)

### DIRECTIONS

## THE PITCH

Each group prepares a short “pitch” to share with the class on the new use(s) for their item. They should include how it is made/used, and how repurposing the item in this way will have a positive impact on the community and the environment.

**OPTION** For pointers, students can watch **How to Start a Pitch**  
[youtu.be/P2LwuF7zn9c](https://youtu.be/P2LwuF7zn9c) (02:32)

Once each group has drafted a pitch, they present it to the class. Students vote for best upcycled product/pitch. The group with the most support wins the challenge!

## Post-Activity

## UPCYCLING: SPREAD THE MESSAGE

### DIRECTIONS

Students work with the top one or two products from THE PITCH activity, and spread the upcycling message to the whole school!

Using marketing tools (e.g. video, print ad or poster, display, samples) they will publicize the upcycled item(s) to the student body. Remember to have them include not only why this item works in this new way, but the environmental/community benefit as well.

Students are also encouraged to include Mi'kmaw values in their explanation, based on the concept of **Netukulimk**.

**OPTIONS** Instead of marketing tools, teachers could use one of these ideas:

**1) SNOWBALLS** – Using scrap paper, have students write down something they learned (or something they found surprising) during a pitch. Ask the students to bunch up their paper like a snowball and stand to form a circle. Each student throws their paper snowball into the middle. Then one by one, have each student pick up one of the “snowballs” and read it aloud. Remember to recycle your paper!

**2) T-SHIRT TOTE BAG** – Ask students to bring an old T-shirt to class (from home, with permission of their parents, or bought from a second-hand shop). Instructions to turn a T-shirt into a reusable tote bag are found at this link:  
[www.ourpositiveplanet.com/no-sew-t-shirt-tote-bag/](http://www.ourpositiveplanet.com/no-sew-t-shirt-tote-bag/)

**ADDITIONAL MI'KMAW RESOURCES** – Visit the Mi'kmawey Debert website or contact: Mi'kmawey Debert 1-877-892-2424, ext. 271  
[www.mikmaweydebert.ca/home/sharing-our-stories/education-and-outreach/](http://www.mikmaweydebert.ca/home/sharing-our-stories/education-and-outreach/)

## Assessment

### FORMATIVE

Evaluate student comprehension of the positive effects of repurposing/upcycling items through class discussions and passively monitoring group conversations.

### MATERIALS

Internet access,  
Chromebooks or  
Projector/Screen  
(optional)

### MATERIALS

Supplies to make  
the marketing  
tools (will vary for  
what works best  
for each school)

Old T-Shirts for  
the optional  
activity

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Share on social media!  
#NothingWasted

## ABOUT DIVERT NS

Divert NS is a not-for-profit organization championing recycling in Nova Scotia. For over 20 years we've helped build a culture of recycling through environmental stewardship, education, and innovation.

Divert NS operates the Beverage Container Deposit-Refund Program and the Used Tire Management Program. In addition, we work in collaboration with government, industry, and academia to divert waste-resources from landfill.

Divert NS, in partnership with municipalities, delivers education and awareness programs to schools, businesses, and community groups. Divert NS also works to develop stewardship agreements and funds innovative research and development initiatives.



We welcome feedback from students and teachers on these lesson plans and resources. Please send your feedback to:

Toll-free  
1.877.313.7732  
info@divertns.ca

## APPENDIX 1

### THE REDUCE THROUGH UPCYCLING CHALLENGE

# Repurposed Household Items

Almost any household item can be repurposed or upcycled to make something new. Even old parts or found items can make interesting pieces of art. Here are a few examples:



Pieces of fabric from old clothes can be used for a quilt — a blanket with memories!



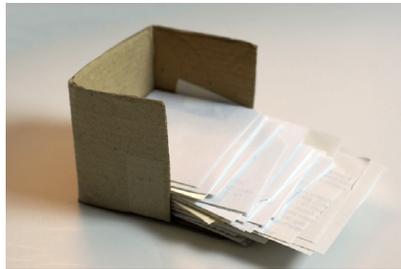
Discarded books (like out-of-date textbooks) can be used for crafts, like these paper roses.



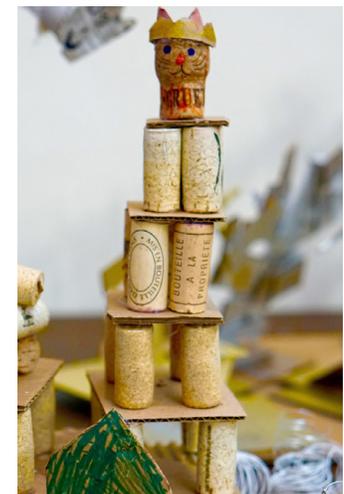
Vorwärts! (Go Forward!), 1897  
Art made from discarded objects



A classroom wish tree, complete with magazine paper cranes



Scrap paper becomes note paper.



Corks and cardboard used for model tower building



Old license plates make a nice roof!



A broken drum sees new life as a planter.



Statues made with plastic bags — art with a message



Seedlings start out in this 2-L pop bottle.



What could you use these metal rings for?

Photo credits: Quilting – Anna [CC BY 2.0 (creativecommons.org/licenses/by/2.0)], Paper Roses – Julie N2212 [CC BY-SA 4.0 (creativecommons.org/licenses/by-sa/4.0)], Chart Art – Jeff Wassmann [CC BY 3.0 (creativecommons.org/licenses/by/3.0)]; All other photos from morguefile.com

## APPENDIX 2

### THE REDUCE THROUGH UPCYCLING CHALLENGE

# Traditional Materials and Other Useful Plants

“Aside from food and medicines, Mi’kmaq people utilized various natural resources for a wide range of other purposes.

Animal, bird and fish skins were tanned using animal materials or smoked, and then used to make clothing, footwear, and baby blankets. Pelts were used to make fur robes. Sinew from animal carcasses served as thread.

A variety of wood types were used in shelter construction. Spruce poles, birch bark sheets, and flexible moosewood (striped maple) saplings were used in the construction of conical dwellings known as “wikuom” or wigwams. Various woods were also used in the construction of devices to aid in transportation, and to create fish traps and weirs.

Other woods were used to make storage containers and vessels. Tools such as axes, adzes and gouges were made from reworking suitable stone and wood materials. Stones such as chalcedony were used to make tools for hunting, cooking, carving, and preparing hides.

Spears were made of bone and wood, while bone was also used to make needles, awls and painting tools. Copper was used to make fish hooks and needles. Teeth from beavers were used for fine carving, while walrus tusks were used for ivory. Bags and mats were made from woven reeds, grasses, cattails, cedar, and basswood bark.

Dwellings and clothing were often decoratively painted using red and yellow ochre, charcoal, and ground eggshell, mixed with fish roe or egg yolks as a binder. Clothing was also decorated with animal bones, teeth, and claws and quills, and sometimes feathers. Bird wings were sometime worn by men. Pipes were made from stone, bone, bark, wood, and lobster claws. After 1600, the Mi’kmaq made decorative porcupine quillwork and shell beadwork for sale to Europeans. Dyes for quills and mats came from a variety of roots, bark, leaves, and flowers.”

(Excerpts from Nova Scotia Museum factsheet, ND)