



# THE 3RS

## Grade 5, Science and Technology

Source: Adapted from *The 3Rs, Earth Day Canada's EcoKids Program*

### DESCRIPTION

Students learn to identify the amount of packaging used in commercial products and understand the recycling cycle. They will come up with creative ways to reduce waste and reuse existing products.

### CURRICULUM LINKS – SCIENCE & TECHNOLOGY, GRADE 5

*Understanding Matter & Energy – Properties of Changes in Matter*

Overall Expectation: 1

Specific Expectations: 1.1, 1.2

### PLANNING NOTES

#### Materials

- Reusable containers
- Flyers
- GOOS paper
- *Recycling Trivia* (Appendix 1)

#### Learning Skills & Work Habits

Collaboration, initiative

#### Recommended Class Time

- 1-2 periods

#### Prior Learning

The Earth is a closed system in terms of matter. Matter cannot be created or destroyed – it can only be changed from one form to another. Everything we think we have thrown away is still with us in some form or other – there is no “away”!

Reduce – to use less or make less, decrease

Reuse – to use again

Recycle – to change and use again in a different form

### TEACHING/LEARNING STRATEGIES

#### Introduction

1. To introduce the 3Rs, ask students to turn to the person next to them and share the last thing they threw away. Share their responses with the whole class.
2. Ask students if they know what we mean when we say “the 3Rs”? Let the class come up with the definitions of reduce, reuse, and recycle. With a partner, discuss which how the 3Rs are different and which one makes the biggest difference. Share and compare responses.
3. As a whole class, record the definitions of all 3Rs – reuse, reduce, and recycle. Challenge the class by adding two additional Rs – refuse and rethink. Then describe all the steps of a recycling cycle including: buy item, use, place in recycling bin, transport to sorting station, sorted, transport to plant to make new product, process to make new product, new product sold to user.
4. Make two columns on the board, one with the title, “Reasons people don’t do the 3Rs,” and the other, “Solutions.” Ask the students: What stops people from doing each of the 3Rs? What are some ways we can encourage people to recycle, reuse, and reduce? Let your students be creative and think big to come up with solutions.

### Activity

5. Divide the class into small groups and give each group a selection of flyers. Ask them to go through the flyers and find two or three items that have one layer of packaging. For each item, discuss why it has the layer of packaging? Is it necessary? How can it be reduced?
6. Repeat the activity a second time, but ask students to look for items that have two or three layers of packaging. For each item, discuss why it has the layers of packaging? Are they necessary? How can they be reduced?
7. After discussing the different types of packaging, ask students to identify the products with the least and most packaging. As a group discuss why products have so much packaging and ways this can be reduced. Share and compare ideas with the whole class.
8. Circulate reusable containers and challenge each group to come up with new ways to reuse the existing containers. Record all the ideas for students to use in the class and at home.

### Conclusion

9. Give each group a piece of GOOS paper and ask them to write the numbers 1-6. Ask the class the recycling trivia questions from *Recycling Trivia* (Appendix 1) and/or add trivia questions that relate to your school community. Have the groups mark each other's responses and post the trivia answers in the classroom.

### EXTENSION

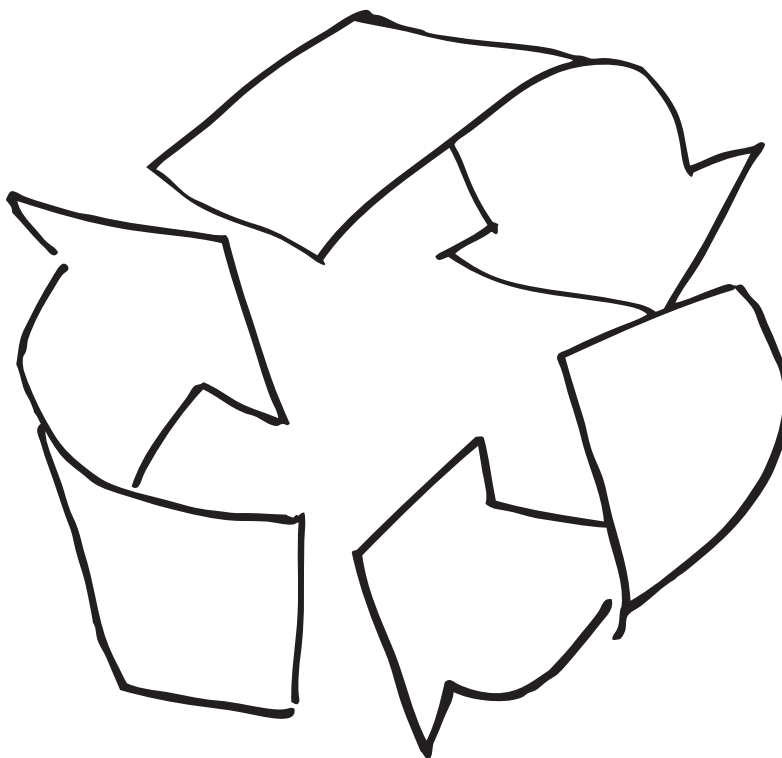
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**Media Campaign:** Contact your local waste authority or board facilities department and ask them for an up-to-date list of your school's recyclable items. Review them with your students and design a school wide media campaign to reinforce the recycling policies. This can include information posters, visual displays, announcements, and skits.

### APPENDIX

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#### Appendix 1 - *Recycling Trivia*





APPENDIX 1  
THE 3RS  
RECYCLING TRIVIA

1. **Recycling one aluminum can save enough energy to run a TV for**
  - a) 3 minutes
  - b) 30 minutes
  - C) 3 HOURS**
  - d) 10 hours
  
2. **This animal helps organic matter like vegetables turn into soil:**
  - a) caterpillars
  - B) WORMS**
  - c) beetles
  - d) slugs
  
3. **In 2006, the percentage of Canadians households that recycled was:**
  - a) 20%
  - b) 40%
  - c) 60%
  - D) 80%**
  
4. **In landfills, what is the average percentage of items made from paper?**
  - a) 50%
  - b) 18%
  - C) 30%**
  - d) 16%
  
5. **In landfills, what is the average percentage of items made from plastics?**
  - a) 50%
  - b) 18%
  - c) 30%
  - D) 16%**
  
6. **In landfills, what is the average percentage of food waste?**
  - a) 50%
  - B) 18%**
  - c) 30%
  - d) 16%