

# School Recycling Club SHIP

(Supporting Home Instruction Program)



## Lesson Plan 9

- Grade Level: 9-12
- Lesson: III.B.3.—How Can We Reduce Waste? Recycling—  
Speaking For Recycling
- Source: *3 R's of the Common Core*
- Activity/Craft: Creating Index Cards for Your Speech (<https://www.youtube.com/watch?v=HjTZ4WPGpxQ>)
- Video Link: Public Speaking for Beginners (<https://www.youtube.com/watch?v=i5mYphUoOCs>)
- Video Link 2: Speaking Up Without Freaking Out (<https://www.youtube.com/watch?v=XIXVKKEQQJo>)



# Lesson Matrix Grades 9-12

## 3R's of the Common Core

Lesson	Leading Question	Objective	Common Core Alignments	Skills
9-12 <b>Sources of Waste</b> I.A.1	How do we determine the amount of waste we produce?	Research the sources of waste in society Trace the production of waste in industry	<b>Grade 9-10</b> CC.RI.9-10.7 CC.W.9-10.7 CC.HSS.ID.1	Analyzing Collecting and interpreting data Designing Researching
9-12 <b>Packaging Preferences</b> I.A.2	How have beverage containers changed over the years?	Evaluate the environmental impact of different packaging types	<b>Grade 9-10</b> CC.W.9-10.4 CC.WHST.9-10.7 CC.HSS.ID.1	Evaluating Gathering information Graphing data Researching
9-12 <b>Nonrenewable Resources</b> I.B.1	How long will our natural resources last?	Compare estimated life expectancies of some nonrenewable natural resources Understand the role recycling and careful use play in meeting the demand for extending availability of these resources	<b>Grade 9-10</b> CC.L.9-10.6 CC.RST.9-10.7 CC.SL.9-10.2 CC.W.9-10.4	Applying ideas to solve problems Explaining Interpreting data Predicting outcomes
9-12 <b>Shopper Survey</b> I.C.1	What things influence our purchasing choices? Why is there so much waste?	Assess typical purchasing criteria Determine the influence of packaging on consumer choices Determine if consumers consider waste disposal and recycling when making purchases	<b>Grade 9-10</b> CC.SL.9-10.3 CC.W.9-10.4 CC.HSS.IC.3	Analyzing Gathering information Hypothesizing Interviewing
9-12 <b>Garbage</b> I.C.2	Name something that New York City produces more of than any other city in the world.	Read Katie Kelly's essay "Garbage" to examine author's use of analysis and persuasion Examine continuing problems of trash volume and disposal	<b>Grade 11-12</b> CC.SL.11-12.3 CC.W.11-12.1 CC.W.11-12.4 CC.HSS.IC.3	Analyzing Evaluating Interpreting information Researching
9-12 <b>The Dump Ground</b> I.C.3	What do people mean when they use the expression, "One man's trash, another man's treasure"?	Interpret the themes of "The Dump Ground" and "Garbage" Derive history and culture of a people from the essays	<b>Grade 9-10</b> CC.RI.9-10.6 CC.RI.9-10.10 CC.SL.9-10.1c CC.W.9-10.4 CC.HSS.ID.1	Analyzing Comparing Evaluating Interpreting
9-12 <b>GNP(P):Great New Purchasing Power</b> I.C.4	Does a higher income cost more?	Detect general relationships between GNP/capita and energy consumption per capita Examine the specific factors encouraging high energy use Understand relationship between recycling and conserving energy	<b>Grade 9-10</b> CC.L.9-10.6 CC.W.9-10.4 CC.HSS.ID.6	Evaluating Graphing data Interpreting data Recognizing patterns

Lesson	Leading Question	Objective	Common Core Alignments	Skills
<b>9-12 New Landfills II.A.1</b>	If we need a new landfill, how will we go about siting and designing one?	Become familiar with local government, land-use planning, and complexities of solid waste planning process	<b>Grade 9-10</b> CC.RI.9-10.7 CC.SL.9-10.2 CC.WHST.9-10.8 CC.HSG-MG.3  <b>Grade 11-12</b> CC.RI.11-12.7 CC.SL.11-12.2 CC.WHST.11-12.8 CC.HSG-MG.3	Comparing solutions Designing Gathering information and data Problem solving
<b>9-12 Methane II.A.2</b>	Can we recover energy from solid waste?	Understand the energy-producing potential of some solid wastes Understand some systems of generating methane from waste	<b>Grade 9-10</b> CC.RST.9-10.3 CC.SL.9-10.1 CC.WHST.9-10.7  <b>Grade 11-12</b> CC.RST.11-12.3 CC.SL.11-12.1 CC.WHST.11-12.8	Carrying out investigation Interpreting data Observing Researching
<b>9-12 Spreading Sludge II.A.3</b>	Is it safe to put sludge on land all year round?	Determine the benefits and drawbacks of land application of sewage sludge	<b>Grade 9-10</b> CC.SL.9-10.1c CC.SL.9-10.4 CC.W.9-10.6 CC.W.9-10.7  <b>Grade 11-12</b> CC.SL.11-12.1c CC.SL.11-12.4 CC.W.11-12.6 CC.W.11-12.7	Evaluating Formulating questions Gathering information Hypothesizing Interviewing
<b>9-12 Toxic Waste in the Lab II.A.4</b>	Are there alternatives to disposal of toxic wastes in the solid waste stream?	Upgrade the school's lab cabinet	<b>Grade 9-10</b> CC.RST.9-10.3 CC.SL.9-10.4 CC.W.9-10.7  <b>Grade 11-12</b> CC.RST.11-12.3 CC.SL.11-12.4 CC.W.11-12.7	Carrying out investigation Evaluating Explaining Researching
<b>9-12 Community Solid Waste II.B.1</b>	How do we manage our solid waste?	Evaluate both the current solid waste disposal practices and future plans in their community	<b>Grade 9-10</b> CC.SL.9-10.2 CC.SL.9-10.4 CC.W.9-10.4  <b>Grade 11-12</b> CC.SL.11-12.2 CC.SL.11-12.4 CC.W.11-12.4	Communicating information Designing Gathering information and data Synthesizing
<b>9-12 Twenty Foot Swath III.A.1</b>	Have personal or global problems such as poverty or environmental pollution ever become so overwhelming that you were immobilized or driven to some action that actually aggravated the problem?	Discern the author's purpose in writing the essay Develop a plan for decreasing pollution in environment by setting realistic personal goals	<b>Grade 9-10</b> CC.RI.9-10.3 CC.SL.9-10.1c CC.W.9-10.4  <b>Grade 11-12</b> CC.RI.11-12.6 CC.SL.11-12.1d CC.W.11-12.4	Analyzing Applying ideas to solve problems Engaging in collaborative conversation Evaluating

## Lesson Matrix Grade 9-12

### 3R's of the Common Core

Lesson	Leading Question	Objective	Common Core Alignments	Skills
<b>9-12 Recycling Paper Pollution III.B.1</b>	Does recycling solve all our solid waste problems?	Investigate methods of recycling paper and the technical problems encountered in the recycling industry	<b>Grade 9-10</b> CC.RST.9-10.3 CC.SL.9-10.1c CC.W.9-10.7 CC.HSS.ID.1	Carrying out investigation Communicating solutions Interpreting Researching
<b>9-12 Collecting and Sorting III.B.2</b>	What kind of recycling program would be best for our town or our school?	Understand some of the design considerations of establishing a recycling facility Use the information to design a hypothetical recycling center for their town or school	<b>Grade 9-10</b> CC.RI.9-10.7 CC.SL.9-10.2 CC.W.9-10.4 CC.HSG-MG.3	Applying mathematical concepts Designing Gathering information Problem solving
<b>9-12 Speaking for Recycling III.B.3</b>	What do we need to know about recycling?	Become more familiar with recycling and solid waste management issues Develop their public presentation skills	<b>Grade 9-10</b> CC.RI.9-10.8 CC.SL.9-10.4 CC.W.9-10.2	Communicating information Researching Sharing research and writing Synthesizing
<b>9-12 The Cart Before the Horse? III.B.4</b>	Why isn't everybody recycling?	Consider ways to reduce waste in the United States	<b>Grade 9-10</b> CC.RI.9-10.7 CC.SL.9-10.1 CC.W.9-10.4	Analyzing Engaging in collaborative conversations Gathering information Using evidence
<b>9-12 Microorganisms III.C.1</b>	Can you identify microorganisms responsible for the composting process?	<ul style="list-style-type: none"> <li>Relate the importance of healthy microorganism activity to composting</li> </ul>	<b>Grade 9-10</b> CC.RST.9-10.3 CC.SL.9-10.1 CC.WHST.9-10.4	<ul style="list-style-type: none"> <li>Carrying out investigations</li> <li>Collecting and interpreting data</li> <li>Observing</li> <li>Predicting</li> </ul>
<b>9-12 Effective Fertilizers III.C.2</b>	What are fertilizers made of?	Rate the effectiveness of various organic and inorganic fertilizers	<b>Grade 9-10</b> CC.L.9-10.6 CC.SL.9-10.1 CC.WHST.9-10.4	Carrying out investigation Hypothesizing Interpreting data Observing

## How Can We Make Less Waste?

### Concept

Communicating a knowledge of recycling to an audience.

### Objective

Students will become more familiar with recycling and solid waste management issues and will develop their public presentation skills.

### Method

Students will present an informational speech relating to recycling.

### Materials

Research materials, note cards

### Subjects

Language Arts, Speech, Social Studies, Science

### Skills

Communicating information, researching, sharing research and writing, synthesizing

### Time

One class period plus library time

### Vocabulary

Recycling

### 3R's of the Common Core

#### Information

All of the Information Section.

#### Resources

Solid Waste and Recycling Waste Management Agencies by State

### Leading Question

What do we need to know about recycling?

### Procedure

*Students will:*

1. Research some aspect of recycling or solid waste management.
2. Write a speech outline using collected information that includes an introduction, supporting evidence and conclusion.
3. Put the supporting material on notecards.
4. Practice delivering the speech to the class or another group.

*Topics might include:*

- Why is home source separation easy?
- How does an Eager-Beaver Trailer (or other recycling equipment) work?
- What are plastic soda bottles (or any other recyclable material) made into?
- How does composting work?
- What are the benefits of recycling to society? The drawbacks?
- How recycling works in our town?
- What economic problems work against recycling?
- What changes in society, in national policy would promote recycling?

### Evaluation

Students will be evaluated on the quality of research, depth of information presented, delivery of speech and class reaction.

## Common Core Alignments

### GRADE 9-10

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#### CC.RI.9-10.8

Reading Informational Text:  
Integration of Knowledge & Ideas

#### CC.SL.9-10.4

Speaking & Listening:  
Presentation of Knowledge & Ideas

#### CC.W.9-10.2

Writing:  
Text Types & Purposes

### GRADE 11-12

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#### CC.RI.11-12.8

Reading Informational Text:  
Integration of Knowledge & Ideas

#### CC.SL.11-12.4

Speaking & Listening:  
Presentation of Knowledge & Ideas

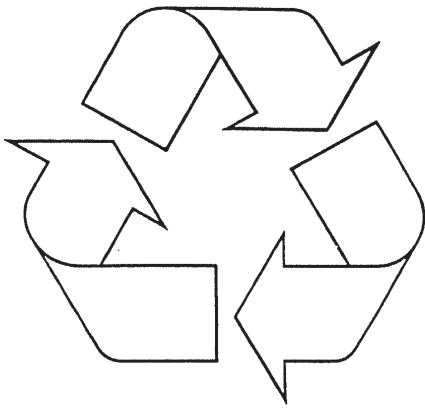
#### CC.W.11-12.1

Writing:  
Text Types & Purposes

## Classroom Activities

- A. Focus on specific recycling topics such as aluminum, glass, etc.
- B. Present speech to other groups: (e.g.: community groups, school board, town officials, service groups.)
- C. Attend various public hearings and evaluate information.
- D. Develop an informational speech into a persuasive speech.  
Persuasive topics might include: Recycling should be mandatory in our town, Non-recyclable beverage containers should be banned by the state, Recycling should not be mandatory until it is cheaper than landfilling waste.
- E. Look at the logo and slogan samples on the following page and create your own recycling logo for your town or school.

Name: \_\_\_\_\_ Date: \_\_\_\_\_



Give your trash a second chance. Recycle.

Give a bottle a decent break. Recycle.

Save a can from a life on the street. Recycle.

Turn your old paper into good news. Recycle.

Give your dirty oil a clean start. Recycle.

Send your leaves to a mulch better place. Recycle.