

# Anoka County

## Waste Reduction Classroom Presentations

Our classroom presentations provide students with information on the following topics:

- the benefits of diverting waste from landfills and incinerators
- ways to reduce waste
- the importance of sorting recycling and organics correctly at school

There are additional lessons that delve deeper into specific topic areas, such as composting, landfills, groundwater, recycling markets, etc. All presentations are meant for individual classes. If you are interested in presentations at your school, contact Katie Stelzner at [katie.stelzner@co.anoka.mn.us](mailto:katie.stelzner@co.anoka.mn.us) or 763-324-3485.

### CLASSROOM PRESENTATIONS BY GRADE LEVEL:

#### Elementary

K – 2 <sup>nd</sup> Grade	3 <sup>rd</sup> – 5 <sup>th</sup> Grade
World Helpers (K) Recycling Champions (1st) Caring for the Earth (2nd)	Caring for the Earth II: The Lorax (3rd) Fossil Fuels and Energy (4th) Decomposition and Compost (5th)

#### Middle & High School

6 <sup>th</sup> – 8 <sup>th</sup> Grade	9 <sup>th</sup> -12 <sup>th</sup> Grade
Landfills and Alternatives (6th) Resource Scarcity (7th) The Commons (8th)	Landfills Recycling Markets Compost, Soil, and Groundwater

#### *Presentation:* **World Helpers**

*Presentation Length:* 30 minutes

In this presentation, students will learn about the importance of taking care of the things on our planet, including the Earth itself. We'll explore how recycling and composting are ways we can take care of the Earth every day. We will sing a song as a reminder to protect the Earth. To wrap up, students will engage in a practice sort to reiterate which items can be recycled, which can be composted and which need to be placed in the trash.

#### Standards Reinforced

*Science:* KE.1.1.1.2,

KP.2.1.1.1

*Social Studies:* 0.1.4.7.1,

0.3.1.1.2

This lesson requires a projector and internet access, as well as a table to lay out recycling/trash items

*Presentation:* **Recycling Champions**

*Presentation Length:* 30 minutes

Students will learn about how common classroom items are made, and how they can be repurposed or reused. They will then play a school-wide recycling game, and learn how to be advocates for recycling amongst their peers.

*Standards Reinforced*

*Science:* 1E.4.1.1.1,  
1E.4.2.1.1

*Social Studies:* 1.1.1.1.1

This lesson requires staff participation.

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*Presentation:* **Caring for the Earth**

*Presentation Length:* 35 minutes

Students will learn about the different animals that live in the world's forests and how they depend on trees for shelter, food, protection from predators, shade and oxygen. We'll explore what the impact on the forest community when trees are cut down. To contrast this, we'll look at all the forest products we use on a daily basis, such as paper, building materials and food. Students will brainstorm ways we can balance taking care of our forests while still acquiring the materials we needed, wrapping up with a discussion about reduce, reuse and recycle.

*Standards Reinforced*

*Social Studies:* 3.2.4.5.1

This lesson requires a projector and computer.

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*Presentation:* **Caring for the Earth II**

*Presentation Length:* 35 minutes

The class will read Dr. Seuss' The Lorax together, and use the story to discuss how industry can have an effect on the environment. The Lorax will be tied back to natural, capital, and human resources. Then the students will do an art project, based upon the story, to remember the lessons they learned from the Lorax.

*Standards Reinforced*

*Science:* 4E.2.1.1

*Social Studies:* 4.3.4.9.1

This lesson requires staff participation and a white/Smart board.

*Presentation: **Fossil Fuels and Energy***

*Presentation Length: 45-50 minutes*

In this presentation, students will learn about our resource dilemma and the problems associated with fossil fuels, and how they can help reduce our reliance on fossil fuels. To begin, students will learn where fossil fuels come from and the different types of both non-renewable and renewable resources. As an alternative to fossil fuels, we'll explore renewable resources. Students will learn to reduce their use of fossil fuels through recycling and reuse, and share stories about how they've reused items.

*Standards Reinforced*

*Science: 4E.2.1.1*

*Social Studies: 4.3.4.9.1*

This lesson requires a white/Smart board.

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*Presentation: **Decomposition and Compost***

*Presentation Length: Part 1 - 15 minutes, Part 2 - 45 minutes*

This is a two part presentation which will involve two different visits to the classroom about a month or two apart. In Part 1, students will learn what decomposition is and how outside factors can affect the rate of decomposition. Before the end of the presentation, students will hypothesize how quickly 4-5 items will decompose. In Part 2, students will learn whether their hypotheses were correct. They will discuss why and how decomposition occurred, which will lead into a discussion of organics and composting. Students will participate in an activity comparing soil and dirt to learn about the importance of composting. The presentation will end with a discussion about composting at home or school (depending on school policy).

*Standards Reinforced*

*Science: 5L.3.1.1.3*

This lesson requires a projector, internet access and speakers. It will also require staff participation. Part 2 will require table space for soil activity.

*Presentation: **Landfill Alternatives***

*Presentation Length: 45 minutes*

In this presentation, students will learn about our solid waste dilemma and the problems associated with landfills and incinerators. As an alternative to these, we'll explore recycling, composting, and waste to energy. Organics recycling will be covered and we'll talk about the composting process. To wrap up, students will engage in a discussion regarding the best way to handle waste in our communities.

*Standards Reinforced*

*Science: 6ESS.1.1.1.3*

*Social Studies: 6.1.1.1.1,  
6.1.1.1.3*

This lesson requires students to work in small groups and a white/Smart board.

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*Presentation: **Resource Scarcity***

*Presentation Length: 45 minutes*

Students will explore the Industrial Revolution and how it still affects us today. The presentation will begin with some background on the Industrial Revolution and then move into modern consumption patterns. We will discuss energy usage, both during the Industrial Revolution and today, including renewable resources. The lessons on energy usage and fossil fuels will lead into a discussion on resource scarcity. The presentation will end with a group discussion on how we can utilize the 3 R's to combat resource scarcity.

*Standards Reinforced*

*Science: 7LS.4.1.2.2*

*Social Studies: 7.2.1.1.1,  
7.1.1.1.1, 7.2.3.3.1,  
7.4.4.20.1*

This lesson requires students to work in small groups and a white/Smart board.

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*Presentation: **The Commons***

*Presentation Length: 45 minutes*

In this presentation, students will engage in a simulation of the democratic process and its relation to natural resource use. This simulation will divide the students into four groups which will serve as four different municipalities with a shared forest resource. The groups will have to work together to decide what to do with the forest, and then receive approval from the "state." This activity will allow students to learn about the democratic process as well as the different uses for natural resources.

*Standards Reinforced:*

*Science: 8PS.4.2.1.1*

*Social Studies: 8.1.1.1.1,  
8.2.1.1.1*

This lesson requires students to work in small groups, a white/Smart board, and staff participation.

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*Presentation:* **Landfills**

*Presentation Length:* 45 minutes

In this presentation, students will learn about our solid waste dilemma and the problems associated with landfills and incinerators. As an alternative to these, we'll explore the 3 R's. Students will learn to reduce waste by choosing products with less packaging and share stories about how they've reused items. The benefits of recycling will be explored and we'll discuss closing the loop. To wrap up, students will engage in a discussion of interconnectedness and work together to come up with solutions to our solid waste dilemma.

*Standards Reinforced:*

*Science:*

9-12ESS.3.2.2.1,

9-12C.1.1.1.1

*Social Studies:* 9.3.4.9.1

This lesson requires a projector, internet access and speakers.

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*Presentation:* **Recycling Markets**

*Presentation Length:* 45 minutes

In this presentation, students will learn about markets and the economic forces that shape them, using plastic and fuel markets as examples. We will then discuss the idea of a circular economy and how market forces would play out in this alternative system.

*Standards Reinforced:*

*Social Studies:* 9.2.4.5.1,

9.2.4.5.2, 9.2.4.5.3,

9.3.4.10.1

This lesson requires a projector and internet access

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*Presentation:* **Compost, Soil, and Groundwater**

*Presentation Length:* 45 minutes

In this presentation, students will learn the difference between dirt, soil, and compost. They will learn and discuss how soil affects groundwater, and why groundwater is important to everyday life. There will be a hands-on activity that will help students learn about groundwater contamination. To finish, there will be a discussion of how compost can help groundwater, and a reminder of how and why to compost at school.

*Standards Reinforced:*

*Science:* 9-12ESS.1.2.1.2,

9-12ESS.4.2.1.1

This lesson requires a projector, internet access, speakers, and staff participation.