



The San Luis Obispo County Integrated Waste Management Authority (IWMA) is offering five class programs and a recycling field trip for the 2017-18 school year. All programs are FREE, presented by an experienced science educator, and correlated to the Next Generation Science Standards. Schedule soon for best availability! **For questions or scheduling, call 805-782-8424.**

INTRODUCTION TO RECYCLING

Grades K-8, 45 minutes, FREE

Students will learn about natural resources, what can be recycled, and how to reduce waste at home and school. Interactive and fun, it's a great program for any grade level. This program is a prerequisite for the landfill field trip. See inside for science correlations.

RECYCLING FIELD TRIP

Grades 3-12, FREE, Busses are paid for by IWMA

Visit the Cold Canyon Landfill and Recycling Facility to be both amazed and educated about what happens to our recyclables and trash. Students will see how their recyclables are sorted and processed by various trucks and machines. On this trip, students will also visit our very popular recycling education center, filled with hands-on exhibits and stimulating displays. Introduction to Recycling (above) is a prerequisite for this trip. Field trips are from 9:00-11:30 am. See inside for science correlations.

VERMICOMPOSTING

Grades K-12, 45 minutes, FREE

This hands-on program introduces students to the concepts and practices of composting food waste. Our staff will build and loan your class a worm bin. Students may add lunch scraps to the bin for a real interactive learning experience. See inside for science correlations.

THE TREMENDOUS PAPER TALE

Grades K-6, 45 minutes, FREE

This presentation explores the natural resources needed to make paper. Vivid models show the path from tree to finished paper products. Students will learn how paper is made. Your presenter will make a piece of paper in class. Students will also learn how many pounds of paper they use each year, and how this resource can be conserved. See inside for science correlations.

OIL AND BEYOND

Grades 2-8, 45 minutes, FREE

Oil and Beyond introduces students to various types of household hazardous waste and how they can be properly recycled or discarded. This program uses a large circle called the "oil loop," with eye-catching 3-D objects to illustrate each major concept. See inside for science correlations.

ZERO WASTE 101

Grades 4-8, 45 min., FREE, Prerequisite: Introduction to Recycling

This interactive slide program provides the next step in applying what students have learned from the Introduction to Recycling program. Students and teachers will be empowered to implement their understanding of waste reduction, composting and recycling! You'll have the option to turn your classroom into a zero waste zone for one week, one month, or the entire school year. See inside for science correlations.

SCHEDULE YOUR CLASS PRESENTATION & FIELD TRIP

ONLINE myIWMA.org

CALL 805-782-8424

EMAIL ScheduleMyProgram@gmail.com

FAX FORM TO 805-781-8343

CORRESPONDENCE

IWMA

870 Osos St.

San Luis Obispo, CA 93401

NAME			
SCHOOL			
SCHOOL PHONE	CELL PHONE		
BEST TIME TO CALL			
PRESENTATION(S) REQUESTED	DATE, 1ST CHOICE	DATE, 2ND CHOICE	TIME
INTRODUCTION TO RECYCLING			
VERMICOMPOSTING			
THE TREMENDOUS PAPER TALE			
OIL & BEYOND			
ZERO WASTE 101			
RECYCLING FIELD TRIP			9:00-11:30 am

TRY MYIWMA.ORG

You can...

- Schedule programs & field trips
- View fun videos about recycling
- Download chaperone letter for the field trip

And much more!

Next Generation Science Standards

For more details, visit myIWMA.org, under Class Programs see NGSS

- Science & Engineering Practices
- Disciplinary Core Ideas
- Crosscutting Concepts

INTRODUCTION TO RECYCLING

K	1st	2nd	3rd	4th	5th	6th
K-ESS2 Earth's Systems ESS2.C: Human Impacts on Earth Systems Things that people do to live comfortably can affect the world around them... K-ESS2 Earth and Human Activity ESS2.A: Natural Resources Humans use natural... (K-ESS2-1) Interdependence of Science, Engineering, and Technology People encounter... (K-ESS2-2) Influence of Engineering, Technology, and Science on Society and the Natural World People depend on... (K-ESS2-2) K-2 Engineering Design Ask questions based on observations... (K-2-ETS1-1) ESS1.A: Defining and Delimiting Engineering Problems A situation that people want to change... (K-2-ETS1-1)	1-LS1 From Molecules to Organisms: Structures and Processes Influence of Science, Engineering, and Technology on Society and the Natural World Every human-made product is designed... (1-LS1-1) K-2 Engineering Design Ask questions based on observations... (K-2-ETS1-1) ESS1.A: Defining and Delimiting Engineering Problems A situation that people want to change... (K-2-ETS1-1)	2-ESS2 Earth's Systems Stability may change slowly or rapidly. (2-ESS2-1) Influence of Engineering, Technology, and Science on Society and the Natural World Developing and using... (2-ESS2-1) 2-PS1 Matter and Its Interactions PS1.B: Chemical Reactions Heating or cooling a substance... (2-PS1-4) Influence of Engineering, Technology, and Science on Society and the Natural World Every human-made... (2-PS1-2) K-2 Engineering Design Ask questions based on observations... (K-2-ETS1-1)	3-LS4 Biological Evolution: Unity and Diversity ESS3.A: Natural Resources Energy and fuels that humans use are derived from natural sources... (4-ESS3-1) 3-ESS3 Earth and Human Activity Influence of Engineering, Technology, and Science on Society and the Natural World Engines improve existing technologies... (3-ESS3-1) 3-5-ETS1 Engineering Design Ask questions and Defining Problems... (3-5-ETS1-1)	4-ESS3 Earth and Human Activity ESS3.A: Natural Resources Energy and fuels that humans use are derived from natural sources... (4-ESS3-1) Influence of Engineering, Technology, and Science on Society and the Natural World Over time, people's needs and wants change... (4-ESS3-1) Engines improve existing technologies... (4-ESS3-2) 3-5-ETS1 Engineering Design Ask questions and Defining Problems... (3-5-ETS1-1)	5-ESS3 Earth and Human Activity ESS3.C: Human Impacts on Earth Systems Human activities in agriculture, industry... (5-ESS3-3) 3-5-ETS1 Engineering Design Ask questions and Defining Problems... (3-5-ETS1-1) Influence of Engineering, Technology, and Science on Society and the Natural World People's needs and wants change over time... (3-5-ETS1-1) Engines improve existing technologies... (3-5-ETS1-2)	MS-ESS3 Earth and Human Activity Ask questions and Defining Problems... (MS-ESS3-5) ESS3.C: Human Impacts on Earth Systems Human activities have altered... (MS-ESS3-3) ESS3.D: Global Climate Change Human activities, such as the release of greenhouse gases... (MS-ESS3-5) ESS3.E: Global Climate Change Human activities, such as the release of greenhouse gases... (MS-ESS3-5) Influence of Science, Engineering, and Technology on Society and the Natural World The uses of technologies... (MS-ESS3-9) MS-ETS1 Engineering Design Influence of Science, Engineering, and Technology on Society and the Natural World All human activity draws on natural resources... (MS-ETS1-1) The uses of technologies and innovations on their use... (MS-ETS1-1)

LANDFILL AND RECYCLING CENTER FIELD TRIP

3rd	4th	5th	6th
3-LS2 Ecosystems: Interactions, Energy, and Dynamics LS2.D: Social Interactions and Group Behavior Feeding of a group helps animals obtain food... (3-LS2-1) 3-PS2 Motion and Interactions: Forces and Interactions PS2.B: Types of Interactions Objects in contact exert forces on each other... (3-PS2-1) Electric and magnetic forces between a pair of objects... (3-PS2-3) Cause and Effect Cause and effect relationships are routinely identified... (3-PS2-1) Interdependence of Science, Engineering, and Technology Scientific discoveries about the natural world... (3-PS2-4) 3-5-ETS1 Engineering Design Ask questions and Defining Problems... (3-5-ETS1-1)	4-ESS3 Earth and Human Activity ESS3.A: Natural Resources Energy and fuels that humans use are derived from natural sources... (4-ESS3-1) 4-PS3 Energy PS3.D: Energy in Chemical Processes and Everyday Life The expression "produce energy"... (4-PS3-4) 3-5-ETS1 Engineering Design Ask questions and Defining Problems... (3-5-ETS1-1) Influence of Engineering, Technology, and Science on Society and the Natural World People's needs and wants change over time... (3-5-ETS1-1) Engines improve existing technologies... (3-5-ETS1-2)	5-LS2 Ecosystems: Interactions, Energy, and Dynamics LS2.A: Interdependent Relationships in Ecosystems The food of almost any kind of animal can be traced back to plants... (5-LS2-1) LS2.B: Cycles of Matter and Energy Transfer in Ecosystems Matter cycles between the air and soil... (5-LS2-1) 5-ESS3 Earth and Human Activity ESS3.C: Human Impacts on Earth Systems Human activities in agriculture, industry... (5-ESS3-3) 3-5-ETS1 Engineering Design Ask questions and Defining Problems... (3-5-ETS1-1) Influence of Engineering, Technology, and Science on Society and the Natural World People's needs and wants change over time... (3-5-ETS1-1) Engines improve existing technologies... (3-5-ETS1-2)	MS-ESS3 Earth and Human Activity ESS3.C: Human Impacts on Earth Systems Human activities have significantly altered the biosphere... (MS-ESS3-3) ESS3.D: Global Climate Change Human activities, such as the release of greenhouse gases... (MS-ESS3-5) MS-ETS1 Engineering Design Ask questions and Defining Problems... (MS-ETS1-1) Influence of Science, Engineering, and Technology on Society and the Natural World All human activity draws on natural resources... (MS-ETS1-1) The uses of technologies... (MS-ETS1-1)

ZERO WASTE 101

4th	5th	6th
4-ESS2 Earth's Systems ESS2.E: Biogeology Living things affect the physical characteristics of their regions. (4-ESS2-1) 4-ESS3 Earth and Human Activity ESS3.A: Natural Resources Energy and fuels that humans use are derived from natural sources... (4-ESS3-1) 4-PS3 Energy PS3.D: Energy in Chemical Processes and Everyday Life The expression "produce energy"... (4-PS3-4) 3-5-ETS1 Engineering Design Ask questions and Defining Problems... (3-5-ETS1-1) Influence of Engineering, Technology, and Science on Society and the Natural World People's needs and wants change over time... (3-5-ETS1-1) Engines improve existing technologies... (3-5-ETS1-2)	5-LS2 Ecosystems: Interactions, Energy, and Dynamics LS2.A: Interdependent Relationships in Ecosystems The food of almost any kind of animal can be traced back to plants... (5-LS2-1) LS2.B: Cycles of Matter and Energy Transfer in Ecosystems Matter cycles between the air and soil... (5-LS2-1) 5-ESS3 Earth and Human Activity ESS3.C: Human Impacts on Earth Systems Human activities in agriculture, industry... (5-ESS3-3) PS1 Matter and Its Interactions PS1.B: Chemical Reactions When two or more different substances are mixed... (5-PS1-4) 5-PS3 Energy PS3.D: Energy in Chemical Processes and Everyday Life The energy released from food... (5-PS3-1) 3-5-ETS1 Engineering Design Influence of Engineering, Technology, and Science on Society and the Natural World People's needs and wants change over time... (3-5-ETS1-1)	MS-LS1 From Molecules to Organisms: Structures and Processes LS1.B: Growth and Development of Organisms Animals engage in characteristic behaviors... (MS-LS1-4) MS-ESS3 Earth and Human Activity ESS3.C: Human Impacts on Earth Systems Human activities have significantly altered the biosphere... (MS-ESS3-3) ESS3.D: Global Climate Change Human activities, such as the release of greenhouse gases from burning fossil fuels... (MS-ESS3-5) MS-ETS1 Engineering Design Ask questions and Defining Problems... (MS-ETS1-1) Influence of Science, Engineering, and Technology on Society and the Natural World All human activity draws on natural resources... (MS-ETS1-1) The uses of technologies... (MS-ETS1-1)

VERMICOMPOSTING

K	1st	2nd	3rd	4th	5th	6th
K-LS1 From Molecules to Organisms: Structures and Processes LS1.C: Organization for Matter and Energy Flow in Organisms All animals need food in order to live... (K-LS1-1) K-ESS2 Earth's Systems ESS2.E: Biogeology Plants and animals can change... (K-ESS2-2) K-ESS3 Earth and Human Activity ESS3.A: Natural Resources Living things need water... (K-ESS3-1) ESS3.C: Human Impacts on Earth Systems Things that people do to live comfortably... (K-ESS3-3) Interdependence of Science, Engineering, and Technology People encounter questions about the natural world every day... (K-ESS3-2)	1-LS1 From Molecules to Organisms: Structures and Processes LS1.A: Structure and Function All organisms have external parts... (1-LS1-1) LS1.B: Growth and Development of Organisms Adult plants and animals can have young... (1-LS1-2) LS1.D: Information Processing Animals have body parts... (1-LS1-1) K-2 Engineering Design Ask questions and Defining Problems... (K-2-ETS1-1) ESS1.A: Defining and Delimiting Engineering Problems A situation that people want to change... (K-2-ETS1-1) K-2 Engineering Design Ask questions... (K-2-ETS1-1) ESS1.A: Defining and Delimiting Engineering Problems A situation that people want to change... (K-2-ETS1-1)	2-LS2 Ecosystems: Interactions, Energy, and Dynamics LS2.A: Interdependent Relationships in Ecosystems Plants depend on water and light to grow... (2-LS2-1) K-2 Engineering Design Ask questions and Defining Problems... (K-2-ETS1-1) ESS1.A: Defining and Delimiting Engineering Problems A situation that people want to change... (K-2-ETS1-1) 2-PS1 Matter and Its Interactions PS1.B: Chemical Reactions Heating or cooling a substance... (2-PS1-4) Influence of Engineering, Technology, and Science on Society and the Natural World Every human-made product is designed... (2-PS1-2) K-2 Engineering Design Ask questions... (K-2-ETS1-1) ESS1.A: Defining and Delimiting Engineering Problems A situation that people want to change... (K-2-ETS1-1)	3-LS1 From Molecules to Organisms: Structures and Processes Developing and Using Models Modeling in 3-5 builds on... (3-LS1-1) LS1.B: Growth and Development of Organisms Reproduction is essential... (3-LS1-1) 3-LS4 Biological Evolution: Unity and Diversity ESS3.A: Natural Resources Energy and fuels that humans use are derived from natural sources... (4-ESS3-1) 3-ESS3 Earth and Human Activity Influence of Engineering, Technology, and Science on Society and the Natural World Engines improve existing technologies... (3-5-ETS1-2)	4-ESS2 Earth's Systems ESS2.E: Biogeology Living things affect the physical characteristics of their regions... (4-ESS2-1) 3-5-ETS1 Engineering Design Ask questions and Defining Problems... (3-5-ETS1-1) Influence of Engineering, Technology, and Science on Society and the Natural World Over time, people's needs and wants change... (4-ESS2-1) Engines improve existing technologies... (4-ESS2-2) 4-PS4 Waves and their Applications in Technologies for Information Transfer Developing and Using Models Modeling in 3-5 builds on... (4-PS4-1)	5-LS2 Ecosystems: Interactions, Energy, and Dynamics Developing and Using Models Modeling in 3-5 builds on... (5-LS2-1) LS2.A: Interdependent Relationships in Ecosystems The food of almost any kind of animal can be traced back to plants... (5-LS2-1) LS2.B: Cycles of Matter and Energy Transfer in Ecosystems Matter cycles between the air and soil... (5-LS2-1) Systems and System Models A system can be described... (5-LS2-1) 5-ESS3 Earth and Human Activity ESS3.C: Human Impacts on Earth Systems Human activities in agriculture, industry... (5-ESS3-3) 3-5-ETS1 Engineering Design Ask questions and Defining Problems... (3-5-ETS1-1)	MS-LS1 From Molecules to Organisms: Structures and Processes LS1.B: Growth and Development of Organisms Animals engage in characteristic behaviors... (MS-LS1-4) MS-ESS3 Earth and Human Activity ESS3.C: Human Impacts on Earth Systems Human activities have significantly altered the biosphere... (MS-ESS3-3) ESS3.D: Global Climate Change Human activities, such as the release of greenhouse gases from burning fossil fuels... (MS-ESS3-5) MS-ETS1 Engineering Design Ask questions and Defining Problems... (MS-ETS1-1) Influence of Science, Engineering, and Technology on Society and the Natural World All human activity draws on natural resources... (MS-ETS1-1) The uses of technologies and innovations on their use... (MS-ETS1-1)

THE TREMENDOUS PAPER TALE

K	1st	2nd	3rd	4th	5th	6th
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OIL AND BEYOND

2nd	3rd	4th	5th	6th
2-ESS1 Earth's Place in the Universe ESS1.C: The History of Planet Earth Some events happen very quickly... (2-ESS1-1) 2-ESS2 Earth's Systems Influence of Engineering, Technology, and Science on Society and the Natural World Developing and using... (2-ESS2-1) 2-PS1 Matter and Its Interactions PS1.B: Chemical Reactions Heating or cooling a substance... (2-PS1-4) Influence of Engineering, Technology, and Science on Society and the Natural World Every human-made product is designed... (2-PS1-2) K-2 Engineering Design Ask questions... (K-2-ETS1-1)	3-LS4 Biological Evolution: Unity and Diversity ESS3.A: Natural Resources Energy and fuels that humans use are derived from natural sources... (4-ESS3-1) 4-PS3 Energy PS3.D: Energy in Chemical Processes and Everyday Life The expression "produce energy"... (4-PS3-4) 3-5-ETS1 Engineering Design Ask questions and Defining Problems... (3-5-ETS1-1) Influence of Engineering, Technology, and Science on Society and the Natural World People's needs and wants change over time... (3-5-ETS1-1) Engines improve existing technologies... (3-5-ETS1-2)	4-ESS3 Earth and Human Activity ESS3.A: Natural Resources Energy and fuels that humans use are derived from natural sources... (4-ESS3-1) 4-PS3 Energy PS3.D: Energy in Chemical Processes and Everyday Life The energy released from food... (5-PS3-1) 3-5-ETS1 Engineering Design Ask questions and Defining Problems... (3-5-ETS1-1) Influence of Engineering, Technology, and Science on Society and the Natural World People's needs and wants change over time... (3-5-ETS1-1)	5-ESS3 Earth and Human Activity ESS3.C: Human Impacts on Earth Systems Human activities in agriculture, industry... (5-ESS3-3) 5-PS1 Matter and Its Interactions PS1.B: Chemical Reactions When two or more different substances are mixed... (5-PS1-4) 5-PS3 Energy PS3.D: Energy in Chemical Processes and Everyday Life The energy released from food... (5-PS3-1) 3-5-ETS1 Engineering Design Ask questions and Defining Problems... (3-5-ETS1-1) Influence of Engineering, Technology, and Science on Society and the Natural World People's needs and wants change over time... (3-5-ETS1-1)	MS D: Global Climate Change Human activities, such as the release of greenhouse gases... (MS-ESS3-5) MS H: Human Impacts ESS3.C: Human Impacts on Earth Systems Human activities have significantly altered... (MS-ESS3-3) Influence of Science, Engineering, and Technology on Society and the Natural World The uses of technologies and innovations... (MS-ESS3-9) MS Engineering Design Ask questions... (MS-ETS1-1) Influence of Science, Engineering, and Technology on Society and the Natural World All human activity draws on natural resources... (MS-ETS1-1) The uses of technologies... (MS-ETS1-1)

EDUCATION TEAM

LYNNE HALEY has worked in the education field for over 35 years. She has a teaching credential and a Masters in Education. Her scope of work includes a wide variety of projects including water education, leading landfill/recycling field trips, and curriculum development. Lynne enjoys the challenge of developing creative ways to relate science and natural history topics to students of all ages. This is her 13th year assisting in the education program.

STACEY SMITH is beginning her tenth year as a school educator. She has a BS in education from Eastern Michigan University, and a California teaching credential. Stacey has received many accolades from kindergarten and first grade teachers. In addition to her classroom work, Stacey coordinates scheduling class programs and general office operations.

TOBY HARBISON graduated with a Bachelor of Arts Cum Laude in American Studies from the College of William and Mary. Toby's experience in teaching environmental education came from working at a non-profit where she taught grades K-8 in both classroom and outdoor settings. Toby leads field trips and class programs.

ANDE FIEBER holds a Bachelor of Science, magna cum laude, in Environmental Management and Protection from Cal Poly San Luis Obispo. Her teaching experience includes work as an Interpretive Specialist with California State Parks. Ande is the newest member of our education team.

MIKE DI MILO has a degree in Natural Resources Management. He leads field trips and is involved in coordinating the recycling education program activities. Mike has over twenty years of experience in developing and administering school education programs.

COMPOST YOUR FOOD WASTE... Our Staff Can Help!

Many schools around the county use worm bins to compost some or all of their lunch waste...are you one of them?

If you need help with your current composting program, or would like to start one, our friendly IWMA staff would be delighted to get you set up or provide technical help and materials for your program. For more information call 805-782-8424.