

CLASSROOM ACTIVITIES

Table of Contents

Topic: Overview

- *Main Message and Vocabulary*..... 2
- Context Clues..... 3
- OCRRA Equations..... 4-5
- Persuasive Essay 6
- Word Bank: Fill in the Blanks 7-8
- *Test Questions and Answers* 9-10

Topic: Composting

- *Main Message and Vocabulary*..... 11-12
- Acrostic Poem..... 13
- Creative Writing..... 14-15
- Memory Match Vocabulary 16-17
- Persuasive Essay 18
- Word Bank: Fill in the Blanks 19-20
- *Test Questions and Answers* 21-22

Topic: Recycling

- *Main Message and Vocabulary*..... 23
- Acrostic Poem..... 24
- Journal Activity..... 25
- Persuasive Essay 26
- Sequencing..... 27-28
- Word Bank: Fill in the Blanks 29-30
- *Test Questions and Answers* 31-32

Topic: Reduction

- *Main Message and Vocabulary*..... 33
- Acrostic Poem..... 34
- Cloze Paragraph..... 35-36
- Persuasive Essay 37
- Word Bank: Fill in the Blanks 38-39
- *Test Questions and Answers* 40-41

Topic: Trash

- *Main Message and Vocabulary*..... 42-43
- Acrostic Poem..... 44
- Cloze Paragraph..... 45-46
- Persuasive Essay 47
- Word Bank: Fill in the Blanks 48-49
- *Test Questions and Answers* 50-51

Bonus Activities (apply to all topics)

- 3-2-1 Strategy Chart 52
- Graphic Organizer 53
- Haiku 54-55

Topic: OVERVIEW

MAIN MESSAGE: By making informed choices and working together, we can create less trash and help save the world a little each day.

VOCABULARY:

- 1) **New York State Department of Environmental Conservation (NYSDEC)** - The NYSDEC is the part of New York State government that is responsible for the conservation, improvement and protection of natural resources within the state.
- 2) **Waste** - A material that is thrown away or discarded.
- 3) **Dump** - A location site for depositing garbage with no special features to protect the environment.
- 4) **Reduction** - The act of making something smaller or less in size, amount or degree.
- 5) **Reuse** – To use an item more than once.
- 6) **Recycling** - The process of turning waste into reusable material.
- 7) **OCRRA** - Onondaga County Resource Recovery Agency. The organization that oversees what happens to the waste in communities throughout Onondaga County.
- 8) **Energy Recovery** - The process of turning trash into energy.
- 9) **Landfill** - A place where trash is buried in a safe way to prevent air and water pollution.
- 10) **Compact Fluorescent Bulb (CFL)** - A type of light bulb that uses less energy, but is difficult to dispose of safely because it contains mercury.
- 11) **Waste-to-Energy Facility** - A facility that burns trash to produce steam and electricity.
- 12) **Environment** - The natural world; the surroundings in which a person, animal or plant lives.
- 13) **Litter** - Trash that is left lying in an open or public space.

Name: _____

Date: _____

Overview: Context Clues

1. Electricity can be created in lots of ways, by burning coal or natural gas for example. By using trash instead we save these natural resources at the same time we are getting rid of trash.

In this passage *natural resource* refers to _____

2. Through composting, we can work together to turn leaves, grass, apples cores, half eaten sandwiches, leftovers and yard trimmings into something that helps the environment.

Composting uses only *organic materials* in its process. From the passage, what are three organic materials that can be used to compost?

3. Paper napkins are disposable products, they are meant to be thrown away after one use.

From the passage, what do you think *disposable* means?

4. To conserve energy you can turn off lights, computer, fan or any electronic device you aren't using.

From the passage, a synonym for *conserve* might be _____.

Name: _____

Date: _____

Overview: OCRRA Equations

Directions: Learn some OCRRA factoids by answering these math questions.

1. OCRRA has been working since 1990 to keep our neighborhoods clean.

How many years has OCRRA been working? _____

Equation: _____

2. OCRRA burns waste to create enough energy to power 30,000 homes per year!

How many homes will it have created electricity for in 5 years? _____

Equation: _____

3. OCRRA repurposes about 400 tons of waste that it collects from Syracuse University each year.

How many pounds of waste is this? *Hint: 1 ton is 2,000 pounds.*

Equation: _____

4. The average person creates about 3 pounds of waste a day. **How much waste does YOUR family create:**

a. **Daily?** _____

b. **Weekly?** _____

c. **Monthly?** (based on 31 days) _____

Equation: _____

Equation: _____

Equation: _____

5. Did you know that five large soda bottles produces enough material to make an entire ski jacket?

How many soda bottles would we need to make a ski jacket for every student in the class?

Equation: _____

Overview: OCRRA Equations Answer Key

1. OCRRA has been working since 1990 to keep our neighborhoods clean.
How many years has OCRRA been working?

Equation: $2014 - 1990 = 24$ years

2. OCRRA burns waste to create enough energy to power 30,000 homes per year!
How many homes will it have created electricity for in 5 years?

Equation: $5 \times 30,000 = 150,000$ homes

3. OCRRA repurposes about 400 tons of waste that it collects from Syracuse University each year.
How many pounds of waste is this? *Hint: One ton is 2,000 pounds.*

Equation: $400 \times 2,000 = 800,000$ pounds

4. The average person creates about 3 pounds of waste a day. **How much waste does YOUR family create:** **(The answer below illustrates a four person family example)**

d. **Daily?** $4 \times 3 = 12$ pounds

e. **Weekly?** $7 \times 12 = 84$ pounds

f. **Monthly?** (based on 31 days) $31 \times 12 = 372$ pounds

5. Did you know that five large soda bottles produces enough material to make an entire ski jacket?
How many soda bottles would we need to make a ski jacket for every student in the class?

Equation: $\text{Number of students} \times 5 = \text{Number of ski jackets}$

Name: _____ Date: _____

Overview: Word Bank

Directions: Fill in the blanks using words from the word bank below.

1. We can _____ waste by using reusable containers.
2. Through _____ we turn items like newspapers, bottles and cans into new products.
3. The process of making trash into electricity at the Waste-to-Energy Facility is called energy _____.
4. Landfills are places where trash is _____.
5. _____ is an acronym that stands for Onondaga County Resource Recovery Agency.

WORD BANK		
Buried	Reduce	Recycling
OCRRA	Recovery	

Overview: Word Bank Answer Key

1. Reduce
2. Recycling
3. Recovery
4. Buried
5. OCRRA

Name: _____ Date: _____

Overview: Test

Directions: Answer the following questions after watching the Overview video.

1. Before reusing and recycling, people were worried that over time, town dumps would pose a threat to:
 - A. Drinking water
 - B. Clean air
 - C. Garbage trucks
 - D. Both A and B

2. In Onondaga County we recycle about _____% of our waste?
 - A. 20%
 - B. 40%
 - C. 60%
 - D. 80%

3. All of these items should be recycled in the blue bin EXCEPT:
 - A. Newspaper
 - B. Toxic household chemicals
 - C. Cans
 - D. Plastic bottles

4. OCRRA uses energy from burning trash to create electricity?
 - A. True
 - B. False

5. Everyone can help keep our community beautiful by remembering the three R's.
What are they?

R _____

R _____

R _____

Overview: Test Answer Key

1. D. Both A and B
2. C. 60%
3. B. Toxic household chemicals
4. A. True
5. Reduce; Reuse; Recycle

Topic: COMPOSTING

MAIN MESSAGE: Composting allows us to reduce our trash and help our community grow in a healthy, sustainable way.

VOCABULARY:

- 1) **Waste** - A material that is thrown away or discarded.
- 2) **Organism** - An individual living thing.
- 3) **Composting** - The process of breaking down organic materials into nutrient-rich compost that can be used as fertilizer for plants and flowers.
- 4) **Organic Materials** - Living things that come from the remains of dead plants and animals.
- 5) **Nutrient** - Something that plants, animals and people need to live and grow.
- 6) **Bulking Agent** - Bits of material that create space and thus, airflow, within a compost heap.
- 7) **Fertilizer** - A product that adds nutrients to soil, which helps grow healthy plants. Fertilizer comes in organic (compost) and inorganic (synthetic) versions. The inorganic type are produced using natural resources, which means their production is unsustainable and cannot be continued indefinitely.

**Note to Teachers: We realize this definition might be a little too complex, but the aim is to underscore the negative impacts of synthetic fertilizers and help the kids understand that compost is a better alternative.*
- 8) **Vermicompost** - A process that uses worms to break down food scraps and recycle them into compost.
- 9) **Reduce** – To make smaller or less in amount, degree or size.
- 10) **Waste-to-Energy Facility** - A facility that burns trash to produce steam or electricity.
- 11) **Mulch** - Ground up trees and branches that are used in gardens and landscapes to conserve moisture, improve soil health and reduce weed growth.
- 12) **Food scraps** - Leftover bits of food that are uneaten, or that resulted from food preparation. These can come from your home or businesses such as grocery stores, restaurants and schools. Food scraps are an example of organic materials that can be composted.

Compost Vocabulary Continued –

- 13) **Microscopic** - Something that is too small to be seen by the unaided eye, but can be viewed under a microscope.
- 14) **Bacteria** - Tiny living beings, also called microorganisms. They are neither plants nor animals; they belong to a group all by themselves. Bacteria are tiny single-cell microorganisms, usually a few micrometers in length that normally exist together in millions.
- 15) **Decompose** - A process that means to break down or decay; to separate into components or basic elements.
- 16) **Ton** - A unit of weight equal to 2,000 pounds.
- 17) **Thrive** - To grow or develop well or vigorously.

Name: _____ Date: _____

Compost: Acrostic Poem

C _____

O _____

M _____

P _____

O _____

S _____

T _____

Name: _____ Date: _____

Compost: Creative Writing

Directions: Pretend you are an apple that has been eaten down to its core. The person who ate you puts you in their compost bin. Write about your composting experience.

Remember to write this report from the viewpoint of the apple core!

- First, a good resource for you to use is OCRRA.org.
- Next, take notes on this form to help you remember the composting steps.
- Be factual, but add humor and voice to make your writing lively.
- Good luck and have fun!

First, _____

Next, _____

Then, _____

After that, _____

Finally, _____

Great job! The hard part is done. Now it is time to organize your writing and prepare your final copy!

Name: _____ Date: _____

Compost: Memory Match Vocabulary

Directions: Draw a line to match the **bold** vocabulary word with its definition.

Organic Materials	the process of turning what you may think is waste into reusable material	Breaking down of organic materials into nutrient-rich compost
to break down	Vermicomposting	Decompose
Composting	ground-up trees and branches used for gardens and landscapes	food scraps and yard trimmings
composting with a special kind of worm that digests food quickly	Recycling	Mulch

Compost: Memory Match Vocabulary Answer Key

Organic Materials	the process of turning what you may think is waste into reusable material	Breaking down of organic materials into nutrient-rich compost
to break down	Vermicomposting	Decompose
Composting	ground-up trees and branches used for gardens and landscapes	food scraps and yard trimmings
composting with a special kind of worm that digests food quickly	Recycling	Mulch

Name: _____ Date: _____

Compost: Word Bank

Directions: Fill in the blanks using words from the word bank.

1. Food scraps and yard trimmings are called organic _____.
2. _____ refers to the breaking down of organic material into nutrient rich compost.
3. We can add _____ to soil to increase its ability to grow big and beautiful plants.
4. Composting is something you can do at _____.
5. If you don't have space inside to compost you can create a compost bin indoors with a little help from some unlikely friends called _____.

Word Bank		
Fertilizer	Worms	Materials
Home		Composting

Compost: Word Bank Answer Key

1. Materials
2. Composting
3. Fertilizer
4. Home
5. Worms

Name: _____ Date: _____

Compost: Test

Directions: Answer the following questions after watching the Compost video.

1. What effect does composting have on our soil?
 - A. None at all
 - B. Fertilizes the plants
 - C. Makes the soil smell good
 - D. All of the above

2. What causes the food scraps and yard waste to decompose?
 - A. More food scraps
 - B. Fluorescent lights
 - C. Microscopic bugs and bacteria
 - D. None of the above

3. What effect does a special kind of worm have on your compost pile?
 - A. Breaks down your food
 - B. Breaks down your yard waste
 - C. Turns it into compost
 - D. All of the above

4. What effect does OCRRA have on our local businesses?
 - A. Will compost their food scraps
 - B. Will clean their garbage pails
 - C. Will plant their flowers
 - D. All of the above

5. What can cause our plants to thrive and be beautiful?
 - A. Bicycle tires
 - B. Compost
 - C. Garbage
 - D. Snow

Compost: Test Answer Key

1. B. Fertilizes the plants
2. C. Microscopic bugs and bacteria
3. D. All of the above
4. A. Will compost their food scraps
5. B. Compost

Topic: RECYCLING

MAIN MESSAGE: Our community does an excellent job of recycling, thanks to everyone's individual participation. You contribute to this success, so do your part by recycling what you can.

VOCABULARY:

- 1) **Recycle** - The process of turning what you may think is waste into reusable material.
- 2) **Blue Bin** - The container Onondaga County residents put their recyclables in when they put them near the road for their hauler to pick up. OCRRA gives these containers out to residents for free. All types of recyclables can be mixed together in one container. There is no need to separate papers from bottles and cans.
- 3) **Waste** - A material that is thrown away or discarded.
- 4) **Compact Fluorescent Bulb (CFL)** - A type of light bulb that uses less energy but is difficult to dispose of because it contains mercury.
- 5) **Material Recovery Facility (MRF)** - A plant that sorts recyclable materials into separate piles and sells them to other companies who make new products out of them.
- 6) **Sorting** - A process of arranging items according to a certain sequence or in different sets.
- 7) **Conveyor** - A piece of machinery that moves materials from one place to another.
- 8) **Magnet** - Something that creates a magnetic field, which pulls on metals, such as iron.
- 9) **Natural Resources** - Materials like water, oil and trees that occur in nature and have value.
- 10) **Bale** - A large bundle of materials. Once sorted, recyclable materials are packed into separate bales of newspapers, cardboard, plastics and metal.
- 11) **Impact** - To have a strong effect on something.

Name: _____

Date: _____

Recycling: Acrostic Poem

R _____

E _____

C _____

Y _____

C _____

L _____

E _____

Name: _____ Date: _____

Recycling: Journal

Directions: Track your recycling at home. For one week, keep a journal where you list all the items you help your family recycle.

Sunday: _____

Monday: _____

Tuesday: _____

Wednesday: _____

Thursday: _____

Friday: _____

Saturday: _____

Name: _____ Date: _____

Recycling: Sequencing

Directions: Please cut out, reorder, and paste the recycling steps below into the correct order on the following page.

A new product made from recycled material is ready for use!

Materials are packed into separate bales of newspaper, cardboard, plastic materials and metal cans.

Once they're in bales, the recyclables are sold to other companies to start their new life as something new.

Recyclables are sorted by people and machinery including conveyers, magnets and even light sensors.

The truck takes them to a MRF, that's a material recovery facility.

Name: _____ Date: _____

Recycling: Sequencing

Name: _____ Date: _____

Recycling: Word Bank

Directions: Fill in the blanks using words from the word bank below.

1. The process of turning what you may think is waste into reusable material is called _____.
2. We can put items that can be recycled in the _____.
3. _____, newspapers, magazines and other papers can be recycled.
4. Plastic _____ with the number 1 or 2 on the bottom can be recycled.
5. One of the best things about recycling is that it helps to save _____ and preserves our natural resources.

Word Bank		
Energy	Blue Bin	Bottles
Recycling	Cardboard	

Recycling: Word Bank Answer Key

1. Recycling
2. Blue Bin
3. Cardboard
4. Bottles
5. Energy

Name: _____ Date: _____

Recycling: Test

Directions: Answer the following questions after watching the Recycling video.

1. True or False: Batteries can go in the blue bin.
 - A. True
 - B. False
2. The following items can go in the blue bin **except**...
 - A. Newspapers
 - B. Plastic bags
 - C. Cereal boxes
 - D. Plastic bottles
3. You can go to the OCRRA website to find out how to recycle things like:
 - A. TVs
 - B. Batteries
 - C. Computers
 - D. All of the above
4. Recycled plastic can be made into things such as:
 - A. Ski jackets
 - B. Fencing
 - C. Carpet
 - D. All of the above
5. Identify the statement that is **true**:
 - A. Recycling wastes energy.
 - B. It is okay to only recycle at home.
 - C. Recycling has a big impact on our future.
 - D. It is very hard to recycle.

Name: _____ Date: _____

Recycling: Test Answer Key

1. B. False
2. B. Plastic bags
3. D. All of the above
4. D. All of the above
5. C. Recycling has a big impact on our future.

Topic: REDUCTION

MAIN MESSAGE: When we each take small steps to reduce our waste, it has a big impact on the environment.

VOCABULARY:

- 1) **Waste** - A material that is thrown away or discarded.
- 2) **Disposable** - Something that is meant to be thrown out after only a few uses.
- 3) **Natural Resources** - Materials like water, oil and trees that occur in nature and have value.
- 4) **Environment** - The natural world; the surroundings in which a person, animal or plant lives.
- 5) **Reduction** - The act of making something smaller or less in size, amount or degree.
- 6) **Conserve** - To protect something so it does not run out.
- 7) **Energy** - Power that comes from heat or electricity.
- 8) **Litter** - Trash that is left lying in an open or public space.
- 9) **Environmental Preservation** - The act of protecting the environment from pollution or destruction.
- 10) **Single-Use** - A product that is designed to be used one time and then be thrown away.
- 11) **Bulk** - A large quantity of an item, such as a big tub of yogurt or a large jar of applesauce, which has less packaging than individual serving sizes.
- 12) **Packaging** - Materials used to wrap products.
- 13) **Electronics** - Personal gadgets that are intended for everyday use. A device with many small components, especially microchips and transistors, which control and direct an electric current.
- 14) **Impact** - To have a strong effect on something.

Name: _____ Date: _____

Reduction: Acrostic Poem

R _____

E _____

D _____

U _____

C _____

E _____

Name: _____ Date: _____

Reduction: Cloze Paragraph

<i>anywhere</i>	<i>community</i>	<i>conserve</i>	<i>electronic</i>	<i>energy</i>
<i>natural resources</i>	<i>reduce</i>	<i>reducing</i>	<i>shopping bags</i>	<i>waste</i>

We create _____ every day. If we create less waste, fewer _____ are used. Preserving natural resources is very important, and we can all help by taking simple steps to cut down on the amount we throw away. This will help keep our _____ clean for children in future generations. _____ your waste is something you can do _____. We can reduce waste by using reusable containers, both sides of a sheet of paper, real dishes instead of paper products, and reusable _____. It's important to remember that not all waste is something you can hold in your hands. Conserving _____ and water, is just as important to our environment. Here are a few ways to _____ energy: Turn off the water while brushing your teeth; turn off all _____ devices when not in use. By taking these small steps to _____ waste, you can make a really big impact in preserving our world.

Name: _____ Date: _____

Reduction: Cloze Paragraph

Answer Key

<i>anywhere</i>	<i>community</i>	<i>conserve</i>	<i>electronic</i>	<i>energy</i>
<i>natural resources</i>	<i>reduce</i>	<i>reducing</i>	<i>shopping bags</i>	<i>waste</i>

We create **waste** every day. If we create less waste, fewer **natural resources** are used. Preserving natural resources is very important, and we can all help by taking simple steps to cut down on the amount we throw away. This will help keep our **community** clean for children in future generations. **Reducing** your waste is something you can do **anywhere**. We can reduce waste by using reusable containers, both sides of a sheet of paper, real dishes instead of paper products, and reusable **shopping bags**. It's important to remember that not all waste is something you can hold in your hands. Conserving **energy** and water, is just as important to our environment. Here are a few ways to **conserve** energy: Turn off the water while brushing your teeth; turn off all **electronic** devices when not in use. By taking these small steps to **reduce** waste, you can make a really big impact in preserving our world.

Name: _____ Date: _____

Reduction: Word Bank

Directions: Fill in the blanks using words from the word bank below.

1. Something that is meant to be thrown out is _____.
2. _____ are materials like water, oil and trees that occur in nature and have value.
3. Help reduce waste by using a _____ container instead of single use plastic bags when packing your lunch.
4. You are _____ energy if you remember to turn the lights off when you leave a room.
5. We can help our community by picking up _____ and throwing it in the trash can.

Word Bank		
Disposable	Litter	Natural Resources
Conserving	Reusable	

Reduction: Word Bank Answer Key

1. Disposable
2. Natural Resources
3. Reusable
4. Conserving
5. Litter

Name: _____ Date: _____

Reduction: Test

Directions: Answer the following questions after watching the Reduction video.

1. How many pounds per day of waste does each person typically create?
 - A. 1
 - B. 3
 - C. 5
 - D. 10

2. All of these are natural resources **except**...
 - A. Plastic
 - B. Water
 - C. Trees
 - D. Oil

3. What are some ways to create a waste free lunch?
 - A. Use a reusable container for your sandwich
 - B. Pack your lunch in a lunch box
 - C. Fill a reusable water bottle
 - D. All of the above

4. It is important to remember that not all waste is something that you can hold in your hands.
 - A. True
 - B. False

5. These are all ways to conserve energy **except**...
 - A. Turn off lights when you leave the room
 - B. Leave the water running while you brush your teeth
 - C. Keep a pitcher of water in the fridge instead of running the tap to get cold water
 - D. Shut down computers when not in use

Reduction: Test Answer Key

1. B. 3
2. A. Plastic
3. D. All of the above
4. A. True
5. B. Leave the water running while you brush your teeth

Topic: TRASH

MAIN MESSAGE: When managed properly, our trash can be useful. By turning trash into electricity, we are able to save natural resources while also getting rid of unwanted items.

VOCABULARY:

- 1) **Trash** - Items that are no longer wanted and are thrown away, also known as municipal solid waste (MSW).
- 2) **Litter** - Trash that is left lying in an open or public space.
- 3) **Waste** - A material that is thrown away or discarded.
- 4) **Energy** - Power made from physical or chemical resources, often used to provide light or heat or to work machines.
- 5) **Hauler** - A person or company that collects and transports trash, recycling or other materials.
- 6) **Waste-to-Energy Facility** - A facility that burns trash to produce steam or electricity.
- 7) **Boiler** - A huge furnace surrounded by tubes of water.
- 8) **Turbine** - A machine that uses the energy from fast-moving steam, water or air to spin fan blades.
- 9) **Generator** - A machine that converts mechanical energy, like the energy in spinning fan blades, into electricity.
- 10) **Electricity** - A form of energy that is produced by the flow of electrons; it provides power for lighting, appliances and other electric devices in our home and school.
- 11) **Environment** - The natural world or the surroundings in which a person, animal or plant lives.
- 12) **Ash** - The powdery residue that is left after something is burned.
- 13) **Exhaust** - Waste gases expelled from an engine, turbine or other machine during its operation.
- 14) **Non-hazardous** - Materials that are not dangerous or potentially harmful to our health or to the environment.
- 15) **Landfill** - A place where trash is buried in a safe way to prevent air and water pollution.

Trash Vocabulary Continued -

- 16) **Transfer Station** - A place where trash is taken off small trucks and loaded onto larger trucks for more efficient shipment.
- 17) **Natural Resources** - Materials like water, oil and trees that occur in nature and have value.
- 18) **Greenhouse Gasses** - Gasses in the atmosphere that trap heat from the sun and contribute to global warming (e.g., water vapor, carbon dioxide, nitrous oxide and methane).

Name: _____ Date: _____

Trash: Acrostic Poem

T _____

R _____

A _____

S _____

H _____

Name: _____ Date: _____

Trash: Cloze Paragraph

<i>mixed</i>	<i>hopper</i>	<i>turbine</i>	<i>pit</i>	<i>steam</i>	<i>electricity</i>
<i>garbage</i>	<i>30,000</i>	<i>furnace</i>	<i>water tubes</i>	<i>energy</i>	

When the trash arrives at the Waste to Energy Facility, it is dumped into the _____ . Here, the garbage is _____ by the crane. The crane operator loads the garbage into the _____ . The next stop for the garbage is the _____ . The _____ is burned at 2,500 degrees Fahrenheit. As the garbage burns, it heats the water in the boilers' _____ . As water is heated, it changes from water into _____ . There is a lot of _____ in the steam. Finally, the steam energy turns the blades of the _____ . As the turbine spins, it causes a magnet to turn around a coil of wires and produces _____ . The plant produces enough electricity to light _____ homes.

Name: _____

Date: _____

Trash: Cloze Paragraph Answer Key

<i>mixed</i>	<i>hopper</i>	<i>turbine</i>	<i>pit</i>	<i>steam</i>	<i>electricity</i>
<i>garbage</i>	<i>30,000</i>	<i>furnace</i>	<i>water tubes</i>	<i>energy</i>	

When the trash arrives at the Waste to Energy Facility, it is dumped into the *pit*. Here, the garbage is *mixed* by the crane. The crane operator loads the garbage into the *hopper*. The next stop for the garbage is the *furnace*. The *garbage* is burned at 2,500 degrees Fahrenheit. As the garbage burns, it heats the water in the boilers' *water tubes*. As water is heated, it changes from water into *steam*. There is a lot of *energy* in the steam. Finally, the steam energy turns the blades of the *turbine*. As the turbine spins, it causes a magnet to turn around a coil of wires and produces *electricity*. The plant produces enough electricity to light *30,000* homes.

Name: _____ Date: _____

Trash: Word Bank

Directions: Fill in the blanks using words from the word bank below.

1. Our _____ can go on to be transformed into something that brightens a dark room, keeps ice cream cold or even turns on a TV.
2. We can turn waste into_____.
3. A _____ is a huge container surrounded by tubes of water.
4. Our school could be running on _____ created by our trash.
5. _____ gases are elements that go into the air and can be harmful to our environment.

Word Bank		
Boiler	Energy	Greenhouse
Trash	Power	

Trash: Word Bank Answer Key

1. Trash
2. Energy
3. Boiler
4. Power
5. Greenhouse

Name: _____ Date: _____

Trash: Test

Directions: Answer the following questions after watching the Trash video.

1. Trash can be turned into energy and help save our natural resources. What are two natural resources we use for electricity?

2. Waste-to-Energy keeps more than 325,000 tons of trash out of landfills each year. This is enough to fill which Syracuse landmark?

- A. Clinton Square Ice Rink
- B. NBT Bank Stadium
- C. Destiny USA
- D. Carrier Dome

3. The Waste-to-Energy Facility recovers about 9,000 tons of metal for recycling. How many pounds is this?

- A. 9,000
- B. 18,000,000
- C. 18,000
- D. 1,800

4. At what step of the waste-to-energy process is electricity created?

- A. When the turbine blades spin and rotate a magnet in the generator
- B. When the super hot boiler turns water into steam
- C. When the garbage is picked up by a garbage truck
- D. When the metal is recovered from the ash

5. What is one way you can *save the world a little each day*?

- A. Reusing materials
- B. Recycling things
- C. Composting food scraps
- D. Picking up litter
- E. All of the above

Trash: Test Answer Key

1. Various answers are acceptable. For example: Coal and natural gas
2. D. Carrier Dome
3. B. 18,000,000
4. A. When the turbine blades spin and rotate a magnet in the generator
5. E. All of the above

Name: _____ Date: _____

Bonus: 3-2-1 Strategy Chart

Topic of Video: _____

3 interesting things you discovered

1.	_____

2.	_____

3.	_____

2 WOW facts

1.	_____

2.	_____

1 question you still have

1.	_____

Name: _____ Date: _____

Bonus: Graphic Organizer

Directions: After viewing the video, please complete the graphic organizer.

Video Topic:
Main Idea

Detail 1	Detail 2	Detail 3
----------	----------	----------

Name: _____ Date: _____

Bonus: Haiku Poetry

Directions: Haiku is a form of Japanese poetry. Haiku poems do not rhyme, they follow a pattern. The pattern for haiku is the following:

Line 1: 5 syllables

Line 2: 7 syllables

Line 3: 5 syllables

How to write your haiku:

1. Pick a topic and brainstorm words that are about your topic
2. Choose the words that you like from this list.
3. Count the syllables (parts) of the words.
4. Put them together using the pattern above.
5. Draw a picture to go with your haiku.

Topic: _____

Brainstorming words:

Haiku

By _____

Title _____
