



Why do I need to recycle?

Recycling Benefits Everyone

Lesson 1:

The earth has a limited amount of space with limited resources that must sustain us all. We cannot keep wasting our resources and polluting our land! Recycling is the answer. When we recycle our newspapers, bottles and cans, we are saving these materials for future use. When you waste these materials, you could be trashing your grandchildren's future!

Recycling conserves energy as well as resources. Recycling one ton of paper saves 4,100 kilowatts of electricity. There are also economical reasons for recycling. Recycling reduces waste disposal costs and creates employment opportunities.

What can Be Recycled?

These are just a FEW of the many things that can be recycled and/or reused:

			Yard waste
Aluminum			
Plastic		Paper	
Used Motor Oil		Computers	
			Tin
			





Recycling: It Conserves Energy Too!



Lesson 1:

We all know that people produce a lot waste and that it's necessary to recycle as much as we can to keep from filling up our nation's landfills too quickly. But did you also know that the simple act of recycling saves as much as 95 percent of energy?

Here are some quick facts about how much energy you save each time you recycle:

- Recycling **1** aluminum can saves enough energy to run a TV for **3 hours**.
- Recycling **1** glass container saves enough energy to light a 100-watt bulb for **4 hours**.
- Production of recycled paper saves **60** percent more energy than production of virgin paper.
- Production of recycled aluminum saves **95** percent more energy than virgin aluminum.
- Production of recycled glass saves **50** percent more energy than virgin glass.



Fast Fact: Virgin Products are those that are made with 100 percent new, raw materials and contain no recycled materials.

Preserving our planet's natural resources and promoting a healthy environment depend on our efforts to conserve energy. It's important that each of us does our part! Recycling is just one of the many things you can do to stay energy efficient.



EASTMAN
GOOD SPORTS ALWAYS RECYCLE.



Enrichment Activities

Lesson 1:

Get those creative juices flowing! Here's your chance to think like the makers of your favorite board games by creating a game based on a certain energy source.

Here's How It Works:

Break up your students into small groups of about 4-6 and assign each group an energy source. Ask them to gather as much information as they can about their particular energy source, using the references that have been provided as well as any additional references you might have. The information they find should answer the following questions:

- Where is the energy source found?
- How is it taken from its source to where it is needed?
- How is energy produced using this source?
- What impact does production, delivery, and use have on the environment?
- How could recycling benefit this source?

After they have gathered information, have your students select which information would be most important for their game. They will then use that information as the basis for their game. Have them come up with a game format they can use to teach their classmates about what they have learned and ask them to list what makes a good game for teaching about energy resources (i.e. a vocabulary game such as Scrabble, a Jeopardy-type game, etc.).

Once they have finished designing their game, it's time to pick a day when each group can play their game with the class. At the end, ask them how they think recycling contributes to the conservation of energy.

Reference List

American Coal Foundation
www.teachcoal.org

American Gas Association
www.aga.org

American Nuclear Society
www.ans.org

National Mining Association
www.nma.org

US Department of Energy
www.energy.gov





Material Facts



How long will litter last?

Lesson 1:

Aluminum cans	500 years
Glass bottles.	1,000,000 years
Plastic bags.	10 - 20 years
Plastic jug	1,000,000 years
Tin soup can.	80 - 100 years
Disposable diaper.	500 years
Rubber boot sole.	50 - 80 years
Leather.	50 years
Wool sock.	1 year
Orange and banana peels.	3 - 4 weeks
Cigarette butts.	1 - 5 years

Did You Know....

All steel products are 100 percent recyclable.
Recycling aluminum reduces energy use by 90 percent.
Recycling paper reduces air pollution by 74 percent.





What Do YOU Think About Recycling?

Fill in these blanks and share with the class what you do to help protect the environment.

Lesson 1:

I think...

1. The best thing about recycling is

2. I recycle

3. I wish I could recycle

4. Throwing away recyclables is

5. Learning about recycling is

6. My favorite thing to recycle is

7. My school recycles

8. Sometimes recycling is hard because

9. I promise not to litter because

10. Other things I do to help my environment are



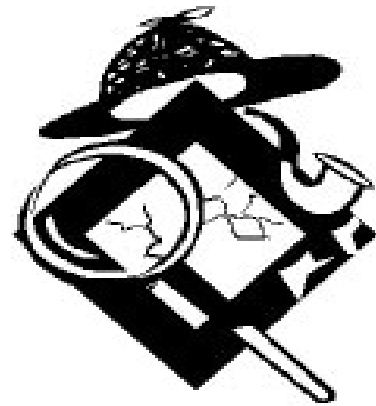


Can You Decode This Message ?

Lesson 1:

- 24 + 34 = _____ i
- 16 + 16 = _____ k
- 33 + 32 = _____ n
- 19 + 3 = _____ o
- 42 + 21 = _____ c
- 11 + 7 = _____ f
- 17 + 22 = _____ g
- 53 + 39 = _____ t
- 47 + 26 = _____ u
- 53 - 38 = _____ l
- 91 - 39 = _____ d
- 77 - 65 = _____ e
- 91 - 15 = _____ p
- 34 - 15 = _____ r
- 88 - 41 = _____ s
- 52 - 25 = _____ a
- 72 - 31 = _____ b
- 28 - 12 = _____ y

Solve the following math problems then find the letter in the key that matches the answer and solve the coded message.



52 22 65 92 18 22 19 39 12 92 92 22

41 73 16 19 12 63 16 63 15 12 52

76 19 22 52 73 63 92 47 !!!!!!!





Word Jumble

Can you figure out what recycling words are hidden in each line?

Lesson 1:

DECUER _____

NMLUIUAMACN _____

STOOMCP _____

ULOTNIOPL _____

LCYREEC _____

TCPASLI _____

EUSRE _____

NTVENIROMNE _____

LMATE _____

YBU DECCLEYR _____

LNLFIADL _____





Can You Find These Words?

All the materials listed below are just a few of many recyclable materials. Find these words in the puzzle. They may appear forward, backward, horizontally, vertically or diagonally.

Lesson 1:

ALUMINUM CANS	IRON	PAPER
ASPHALT	JARS	PLASTICS
BRASS	LEAD	RAGS
CARS	LEAVES	STEEL
CONCRETE	METALS	TIN CANS
COPPER	MOTOR OIL	TIRES
GLASS	NEWSPAPER	WOOD
GOLD	OFFICE PAPER	ZINC

DEAGNCONCRETEPT
RMOTOROILSFOSIC
UWFZKLUOTNXSRHO
VLFZCJZDGWAIETDR
RTINCANSLCSIAAR
ESCOPPERNMMBCEU
PHEGXOZOWUEVLLG
ADPAPERSQNTATLA
PLASTICSWIAJLZT
STPIZUHTOMLMAWE
WBECUBDEOUSIHRD
EGRAGSTEDLNDPZS
NFDAWAOLEAVES PQ
CEOXSUHAJCHCARS
ECTASSALGFYZINC





Test Your Knowledge!

In this lesson you have learned about some of the basic concepts of recycling. See if you can answer the following questions.

Lesson 1:

1. Name six things that can be recycled.

2. Define these three terms in your own words: Recycle, Reduce, Reuse

3. What are some good reasons to recycle?

4. How much garbage do we throw away every day?

5. Define a virgin product.

6. Draw a line from the material to the time you think it will last before decomposing.

ALUMINUM CAN	3 - 4 WEEKS
CIGARETTE BUTTS	1 YEAR
TIN CAN	1- 5 YEARS
BANANA PEEL	50 YEARS
GLASS BOTTLE	50 - 80 YEARS
LEATHER	80 - 100 YEARS
RUBBER BOOT SOLE	500 YEARS
WOOL SOCK	500 YEARS
DISPOSABLE DIAPERS	1,000,000 YEARS

