Name:	edHelper
How Doog Dooreling Holn the Forth?	

How Does Recycling Help the Earth?

By Cindy Grigg

Each person in the U.S. throws away about 1,500 pounds of garbage each year. With over 300 million people living in the U.S. today, that's a LOT of garbage! We can help solve this problem by recycling. Cans, bottles, plastic, and paper can all be recycled.

When garbage is recycled, it is made into new things. This saves precious resources. New newspaper can be made from old, recycled paper. This saves trees from being cut down to make new paper. Aluminum soft drink cans are recycled to make new cans. Less aluminum ore is needed to be mined from the Earth.

Making paper from trees uses more energy than making paper from old paper. When trees are cut, it takes many years to grow more of them. Making aluminum cans from new materials uses much more energy than making cans from recycled ones. In fact, 90 to 95 percent less energy is needed to make new cans from old ones!



When we throw something in the garbage, it goes to a landfill. More and more land is needed to store more and more garbage. When we recycle, we are saving space in landfills. We can use the land for other things than storing garbage. If every person recycles, our Earth would have less garbage and pollution.

How does recycling help? Recycling saves resources like trees and metal ore. Recycling saves more land from being used as landfills. Recycling saves energy used to make new things. Recycling cuts down on pollution. Recycling helps the Earth in many ways!

How Does Recycling Help the Earth?

1. When garbage is recycled, it	is
A. put into a landfillB. burnedC. made into new thingsD. all of the above	
2. Making aluminum cans from	uses much more energy than making cans from ones.

- 3. The purpose of this story is to _____.

 A. express the writer's feelings about garbage
 - B. entertain the reader with humor
 - C. persuade the reader to throw away more garbage
 - D. inform the reader with facts about recycling

- 4. Which of these is NOT a way that recycling helps the Earth?
 - A. saves resources like aluminum ore and trees
 - B. saves more land from being used as landfills
 - C. saves energy
 - D. saves time
- 5. Which of these is the main idea of the story?
 - A. When we recycle, we are saving space in landfills.
 - B. We can help the Earth by recycling our garbage.
 - C. New newspaper can be made from old, recycled paper.
 - D. When trees are cut, it takes many years to grow more of them.

You have a playdate in 240 minutes. How many hours is that?

Holly bought a pack of six waters. It cost \$3.72. How much did each water cost?

Write the greatest possible 5-digit number using only 4 different numbers.

What is the sum of 10 and 656?

9, 11, 13, 15, ____, 19,

21, 23, 25, 27

Find the product of 6 and 4.

12 x 7 =

___ ÷ 12 = 2

15, 20, 25, 30,

____, 40, 45, 50

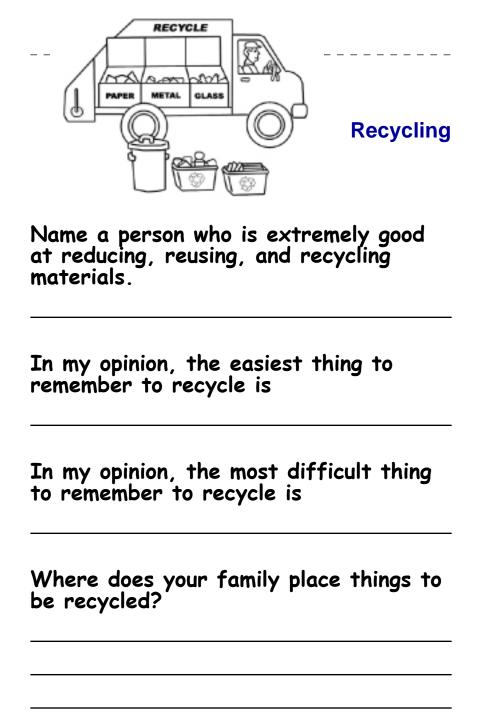
 $80 \div 8 = 10$

What is the sum of 3 and 69?

Round 786 to the nearest hundred.

My Name	:		

Think it. Draw it! This is a picture of a party for Earth. The other planets were invited to the party!



Samaona laft on ampty containen in

Earth Day Earth Day

be recycled.

Earth Day Come up with an Earth Day resolution for someone in your family. Who is the resolution for? What is the resolution?

These are ten things I can do to celebrate Earth Day.
Rank these activities from least important (1) to the one you think is the most important (10).

reduce waste
use less electricity
 reuse something old
 walk or ride my bike
recycle something
 learn about endangered animals
plant a tree or garden
start a compost pile
 pick up litter
 reduce mail

I'm going to tell these three people about Earth Day:

1.	
_ •	

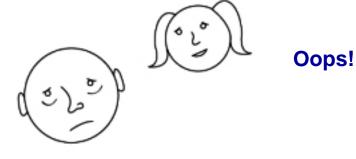
3. _____

Light Bulbs

How many light bulbs are in your room?

Which room in your house has the most light bulbs?

How many light bulbs are in that room?



Sometimes we don't think about the Earth or maybe we are in a rush. Write three things you have done that you would want to do differently.

there	ke trying to help the Earth, but is one thing I still don't plan to What is it and why don't you to do it?
ao." want	to do it?
want	to do it?
want	to do it?



Our School

What do you do with your school papers after your teacher has graded them and you have shown them to your parents? (circle one)

Throw them in the trash.
Place them in the recycle bin.
We keep all my papers.
other:
Ar. and Mrs. Fred Earth are coming to your class to talk about Earth Day. Write one question you'd like to ask them.

Circle all the things that your class does.

recycles paper

turns the classroom lights off when no one is in the room

uses a manual pencil sharper instead of an electric sharpener

keeps windows shut when the school's air conditioner or heater is running

recycles ink cartridges

recycles batteries

If we had to read one book for Earth Day from one of these topics, I would pick (circle one)

endangered animals global warming

national parks gardening

A large tree fell in the school yard. What do you think your school should do? (circle one)

Leave it alone.

Chop it up and use it as firewood.

Use it in the playground.

Call someone to come haul it away.

other:



Eight things that I've put into the trash this week:

1.	



Old Things

What do you do with the following things?

your old clothes	
batteries that no longer work	
a pen with no ink	

forgot could	ave a present for a birthday you are going to today, but you to buy wrapping paper. What you do?
Five t	hings in my house that we don't
need of throw	and we should consider how to
need (throw 1.	and we should consider how to out:
need (throw 1. 2.	and we should consider how to out:
need (throw 1. 2.	and we should consider how to out:
need (throw 1. 2. 3.	and we should consider how to out:
need (throw 1. 2. 3. 4.	and we should consider how to out:



Five things in my house that use electricity are:

1.	



Reduce your Mail

Who is sending mail to your family? Look at the mail your family received this week. Write the names of 10 different people or companies that sent your family mail.

1	

Earth Day 13 14 Earth Day

What could your family do to receive less mail? Talk to other members of your family and write down your ideas:						



Thermostat in your Home

We keep our home at

_____ degrees

Fahrenheit during the day and

_____ degrees

Fahrenheit while we sleep.

Name: ____

Ozone Confusion

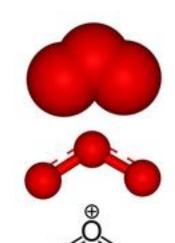
By Patti Hutchison

We often hear about "good" and "bad" ozone. What is ozone, and what makes it good or bad? People are often confused. Ozone is a gas. Good ozone is made of three oxygen atoms joined together. Likewise, bad ozone is made of three oxygen atoms joined together. Ozone can be good or bad according to where it is found. Good ozone is found high above the Earth in the stratosphere. Bad ozone is found close to the ground in the troposphere.

Good ozone is made by nature. It protects all life on Earth by absorbing harmful rays from the sun. This layer is being destroyed, however, by some man-made chemicals. You may have heard about thinning and even holes in the ozone layer. This is very dangerous.

Bad ozone is a form of pollution. When substances such as vehicle exhaust and gasoline vapors mix with sunlight, ozone is formed. Breathing in ozone can cause health problems for people. It can also cause damage to ecosystems and loss of crops.

Ozone is a part of our lives. Together we can help the environment and say, "Out with the bad ozone and in with the good."



Ozone Confusion

Questions

- 1. Three oxygen atoms joined make _____.
 - A. good ozone
 - B. bad ozone
 - C. both a and b
- ____ 2. Good ozone is found _____.
 - A. in the troposphere
 - B. high above the Earth
 - C. near the sun
 - 3. Bad ozone is a form of air pollution.
 - A. true
 - B. false
 - 4. How does good ozone help us?



Name: ____

Multiply 5 and 4.

7 7 56 ÷ 7 =

9)63

Find the product of 9 and 11.

8)72

Find the product of 6 and 4.

<u>81</u> =

6)18

What is the greatest common factor of 4 and 18?

What is the greatest common factor of 8 and 4?

What is the least common multiple of 6 and 8?

What is the greatest common factor of 8 and 12?

What is the least common multiple of 2 and 8?

What is the least common multiple of 2 and 5?

	Give the Earth a Hand!
	Answer the following questions BEFORE you read this book. Write what you know. If you want to guess, you can. You will NOT be marked wrong!
•	Who should take care of our planet? Why?
) •••	Can kids help the Earth? If so, how?
3.	How does recycling help the planet? Explain your answer.

Name _____

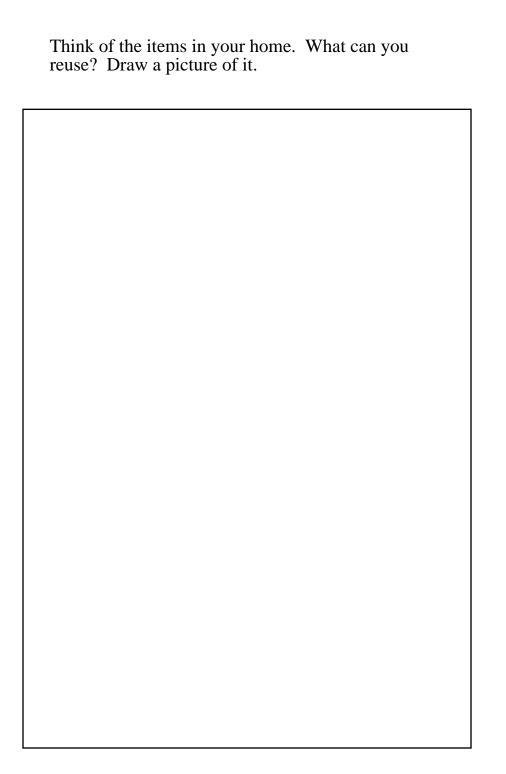
Look at one of your hands. Do you see a sign that says, "Help the Earth"? Probably not! But your five fingers can remind you of five ways that you can help our planet. Let's work together and give the Earth a hand.

Draw a picture of your hand.



Peek at your pointer finger. Let it remind you to **reduce.** Start using only what you need. If you are working on a project and need one piece of paper, don't take five. This helps to save resources. If you are washing dishes after dinner, turn off the faucet while you scrub the plates. This will help to save water.

Your next finger can remind you to **reuse.** Choose items that you can use over and over again. When you pack your lunch, don't use plastic sandwich bags that will be thrown away. Instead, use plastic containers that can be washed and used more than once. You can reuse other items too. Save gift bags and use them to wrap new presents. Turn lunch meat containers into crayon tubs. There are many things you can reuse.





Your ring finger can remind you to **recycle.** If you can't reuse it, take it to a plant so that someone else can! Recycling items like glass, paper, and plastic keeps trash out of our landfills. It also saves resources because new products can be made from old materials.



Let your pinkie finger remind you to **recharge.**When the batteries in your favorite toy die, what do you do? Many people throw them away. Then they put new batteries into the toy. Did you know that you can buy rechargeable batteries? These can be used over and over again. That's a pinkie promise!



Finally, your thumb can remind you to **remind others** that it is important to take care of our planet.

There are many ways that your friends, family, and classmates can care for the Earth. As you teach others to care for our world, imagine the planet giving you big thumbs up! She'll be thankful that you gave her a hand...and used your fingers to remind yourself (and others!) of some of the many ways you can help our beautiful world.

Name		

Give the Earth a Hand!

Answer the following questions **AFTER** you have completed this book.

- 1. In this book the author suggests five ways that we can help the planet. What are they?
 - 1. _____
 - 2. _____
 - 3. _____
 - 4.
 - 5. _____
- 2. Which of the following are true about recycling?

It keeps excess trash out of our landfills.

Only glass can be recycled.

It saves resources.

Recycled items can be turned into new products.

Paper cannot be recycled.

Many items can be recycled.

Turn your trash into treasure. Think

Turn your trash into treasure. Think about the items you have at home. What kind of creation could you make using only recycled objects? Draw a picture of your project.

.I can reduce. I will use less when I This will help the Earth.	
How can your family help the Earth? Think of at least five ways that you can reduce, reuse, recycle, or recharge at home. How can you remind others to do the same?	6. The planet needs our help. Your school can help. Right now cans, paper, and plastic are thrown away every day. You want to set up recycling bins around campus. You will need money for the bins. You will also need time to tell the student body about the new project. Persuade your teacher and principal to support this new project. Why is it a good idea? Why should they let you do this?

11

Name:						_	edHelper
^	•	-		-			

Operation: Destroy the Earth

By Brenda B. Covert

Cast of Characters

(all parts can be played by either boys or girls)

NARRATOR: this part may be read by a student or a teacher

NASTA: Sworn Enemy of Earth, dressed in black

FRIGGLE: Nasta's assistant

AIRAMESS: villain of air pollution, coughs a lot

AQUARIOT: (rhymes with chariot) villain of water pollution, hyper

LITTERUM: villain of land pollution, known for being lazy

ZOOBIE: messenger

Setting: a conference room featuring posters that promote pollution. NASTA, Sworn Enemy of Earth, is seated at the head of the table, prepared to conduct a meeting of his (or her) fellow villains.

NARRATOR. In the distant past, it was just another day on planet Earth. Ordinary people went about their ordinary business. However, in an unseen dimension, evil forces were at work. Nasta, the Sworn Enemy of Earth, hoped to destroy the planet and wipe out all living creatures. Nasta called all the important villains to a meeting to discuss an evil plot.

(FRIGGLE hands a file folder to NASTA)

NASTA. (Looking over papers in the file folder) Friggle, tell the others to get in here before I kick their --

FRIGGLE. (*Interrupting*) Here's Airamess now!

(AIRAMESS enters the room with a hacking cough)

Name: edHelper AIRAMESS. Nasta, sorry I'm late. (dropping into a chair) I was setting off a volcano. (heaving a sigh) Billowing smoke and ash put a smile on my face! (Coughs. FRIGGLE places a file in Airamess' hands.)
(AQUARIOT runs in with damp hair)
AQUARIOT. (Breathless) Am I late? Did I miss anything? I was right in the middle of polluting a well in a small village!
NASTA. Just one measly well? (watches AQUARIOT take a seat opposite AIRAMESS. FRIGGLE drops a file in front of AQUARIOT)
(LITTERUM swaggers in covered in smudges and trailing rags)
AIRAMESS. Hey there, Litterum! How's it going?
LITTERUM. (shrugging) I can't complain. (Slides into a seat beside AIRAMESS and accepts file from FRIGGLE)
NASTA. (Standing up with hands on the table) Enough of the small talk. Let's get down to business. I called you here to talk about Operation Destroy the Earth.
(NASTA, AIRAMESS, AQUARIOT, and LITTERUM put their heads close and appear to have an animated conversation. FRIGGLE hovers in the background with a pitcher of liquid)
NARRATOR. Nasta's plot to pollute Earth with the help of his/her vile cronies hasn't been moving along fast enough. What can they do to speed up the process? During their brainstorming session, Litterum comes up with a delightfully fiendish scheme.

FRIGGLE. (Setting out cups and pouring brackish water into each one) Why would they do that?

LITTERUM. Let's get the humans to do our dirty work for us. We can convince them to pollute their own environment!

Name:	edl	Helper

LITTERUM. (takes a sip) We'll lie to them, of course. We'll tell them a little trash never amounted to much.

AIRAMESS. (*Leaning forward*) Yes! We'll tell them that there will still be plenty of clean air to breathe -- (*coughs*)

AQUARIOT. (peering into cup) What's this floating in my drink? (Shows it to Friggle)

FRIGGLE. Pond scum. Or maybe a bit of cowpie. I collected this water from a cow pond. (*AQUARIOT nods looking pleased, and takes a sip*)

AQUARIOT. (Wiping mouth on sleeve) The Earth has so much water. We'll tell people that dumping crud into it won't hurt them.

NASTA. (Rubbing both hands gleefully) Yes. Yes! We will convince humans that there is no need to worry about pollution. (Slaps hands on the table) How's this for an idea? We invent machines that make disposable goods. We make sure everyone has more than enough stuff.

AIRAMESS. (Coughing) Why?

NASTA. (*Grinning widely*) The more they have, the more they will throw away! They will have city dumps and landfills. They will pollute the soil, the water, and the air with their discarded stuff.

LITTERUM. (*Nodding and leaning back*) Great plan! Why should we do all the work when we can convince people to do it for us?

(ALL laugh and nod. Pantomime more animated conversation and note taking)

NARRATOR: What a wicked scheme -- tricking humans into polluting their own environment! Will this be the end of the Earth and all creatures that live there? Will Operation Destroy the Earth be a success? Nasta believes so. The meeting draws to a close.

NASTA. Then we're all in agreement. (*Raises hand in a gesture of dismissal*) It's time to put our plan into action. Sworn enemies of the Earth, unite! (*AIRAMESS, AOUARIOT, and LITTERUM stand and raise their fists*)

Name: edHelp
Name:edHelp eport back here in a few hundred years if it takes that long.
(The THREE bow and leave. FRIGGLE clears the table of cups and pitcher as NASTA leans back and gives a vil laugh. Then both NASTA and FRIGGLE freeze in place.)
NARRATOR. Several hundred years have passed. Huge cities have been built up. Huge factories have been uilt. Humans have more possessions than ever. The city dumps and landfills are full of junk. Cars, trucks, trains, and planes are everywhere, and the fumes can be overwhelming. Nasta's evil plot seems to be working. A meeting as been called to check the progress.
(AIRAMESS, AQUARIOT, and LITTERUM enter together. AIRAMESS looks smoky and wears a filter mask over his/her nose and mouth. AQUARIOT is streaked with oil. LITTERUM's clothes are stuffed with crumpled paper and crushed soda cans. A necklace made from plastic six-pack soda can holders completes the outfit.)
NASTA. (Standing and waving them to the table) Welcome, my friends! Come in! Have a seat! It's been a ong time. How's it going?
(FRIGGLE supplies drinks in the form of soda cans. These should be empty. Characters will pantomime drinking from them.)
AIRAMESS. (Removing filter mask. The skin under the mask is still clean) It's going great! The air is full of moke and smog! Car exhaust is everywhere. People are getting allergies left and right! And don't get me started a acid rain. It's more than I could have hoped for! (Coughs. AQUARIOT pats his/her back)

LITTERUM. Your idea about disposable goods was right on target. The invention of paper opened up a whole new world! People drop it everywhere! (Pulls out some paper trash to show his/her friends) They read newspapers and magazines, and then they throw them away. They even make plates and cups of paper - use them once, and then they're garbage! (Laughs)

AQUARIOT. (*To LITTERUM*) Tell Nasta about plastics!

LITTERUM. (Standing up to pace) Humans invented plastic. They make everything out of it! They use plastic forks and spoons with their paper plates. One use, then throw it away! Most of their plastic stuff isn't biodegradable, so when it breaks or they get tired of it, it just lies wherever they pitched it. Dumps are full of the stuff!

Name:	edHelper
AQUARIOT. (Nodding) They even throw this stuff in streams and rivers. It's wild! Fish get caugh can die.	nt in it and
LITTERUM. Animals sometimes get tangled up in plastic loops and cords. They may lick the cut aluminum cans and hurt their tongues. Trash is very harmful to wildlife. (Sinks into chair as if very tired	
NASTA. (Wiping away a fake tear) Oh, that is so sad NOT!	
AQUARIOT. Man discovered oil and began pumping it out of the ground. But they aren't always with it. Oops! Suddenly an oil spill pollutes oceans, rivers, and other water sources. Birds and fish die f does an incredible amount of damage. I never thought humans could do so much to destroy their own environment! (Smashes soda can and tosses it on the floor)	
FRIGGLE. That's too funny!	
(Suddenly a knock sounds at the door. FRIGGLE goes to answer it. ZOOBIE, a messenger, enters.)	
ZOOBIE. (To FRIGGLE) I have to talk to Nasta!	
FRIGGLE. (blocking ZOOBIE's way) He's in a conference right now.	
NASTA. (Rolling eyes) Knock it off, Friggle. What is it, Zoobie?	
ZOOBIE. (Approaches and bows while Friggle scowls) Bad news, your disgrace. The humans have discovered your plot.	ve
NASTA. (Loudly, in disbelief) What?!! (he stands)	
AIRAMESS. (Rising) No!	

Name: edHelp	eı
AQUARIOT. (Rising) It can't be!	
LITTERUM. (rising) That's impossible!	
ZOOBIE. (Arms swinging wide) It's true! They have discovered the damage that air, water, and land lution are doing to their environment.	
NARRATOR. The room seems to spin. Nasta feels his power start to slip away. No one had imagined that ir evil plot could be foiled. But Nasta is not willing to give up so easily.	
NASTA. They've discovered our plot. So what? (<i>Shrug</i>) What can they do about it? The damage has already en done.	
ZOOBIE. (Shaking his or her head) They've started recycling programs. They take used paper, plastics, ss, and even soda cans (picking up a soda can to illustrate) and turn them into new items.	
LITTERUM. (Clutching at heart, staggering backwards) No! Oh no! This isn't happening!	
ZOOBIE. They've made air and water filters to clean the air and water.	
AIRAMESS & AQUARIOT. (Grabbing each other by the shoulders, eye to eye) They can't do that to us!	
ZOOBIE. And worst of all, they are passing laws against littering, air pollution, and water pollution.	
(AIRAMESS, AQUARIOT, and LITTERUM moan and wail.)	
NASTA. (<i>To A, A, & L</i>) Enough! (<i>Rubbing his/her chin</i>) These humans aren't as dumb as they look. Hmmm. ybe we can still salvage this plan.	,

FRIGGLE. How? It looks like they've completely thwarted you.

NASTA. (<i>Giving FRIGGLE a dirty look</i>) Listen, I know a thing or two about humans. They aren't sheep. They make their own choices. They don't all agree on everything.
LITTERUM. So?
NASTA. So we find the ones that don't care, that don't think pollution is a problem.
ZOOBIE. Do you think you can?
NASTA. (Firmly) I'm sure of it. We will recruit the careless and the rebels to our cause!
AIRAMESS, AQUARIOT, LITTERUM, FRIGGLE. Yeah! (AIRAMESS coughs)
NASTA. We'll tell them that they have better things to do.
LITTERUM. No recycling for them!
NASTA. We'll tell them clean water and air are someone else's problem!
AQUARIOT & AIRAMESS. (High five) Yeah!
NASTA. We'll tell them that rules are made to be broken!
ALL. (Fists in the air) Sworn enemies of Earth, unite! (ALL freeze in place)
NARRATOR. And there you have it. Some of us understand the problems that pollution causes. We do out part to keep our Earth clean. And some of us well, some of us have gone over to the dirty side. The battle is raging. (<i>Point to the audience</i>) Which side are you on?

edHelper

Nam	ne:
Operati	on: Destroy the Earth
Ques	stions
	1. How is a play different from a story?
	A. People don't like a play as much as a story.B. One is not true, but the other is.C. It has more characters than a story.D. It is made to be acted out.
	2. The leader in Operation: <i>Destroy the Earth</i> was
	A. AquariotB. AiramessC. NastaD. Litterum
	3. What lesson was taught in the play?
	A. That bad guys have more funB. That humans aren't as dumb as they lookC. That Earth has enemiesD. That we need to take care of our environment
	4. Where is the setting of the play?
	A. in a conference roomB. on EarthC. on a volcanoD. in a classroom
	5. Which character would be most likely to dump chemicals in a river?
	A. NastaB. AiramessC. LitterumD. Aquariot
	6. Which character would most likely burn plastic and rubber?
	A. LitterumB. AquariotC. AiramessD. Nasta
	7. Which character would drop a gum wrapper on the ground?
	A. AquariotB. LitterumC. NastaD. Airamess
	8. Which character had the smallest part?
	A. NastaB. FriggleC. ZoobieD. Airamess

edHelper

Name:

The fourth grade students invited their parents to come to their classroom on Alexander Graham Bell Day to see their projects. Emma was making nametags for the parents. She needs 42 nametags. If she makes 4 nametags each day, how many days will it take her to make all the tags?

Sarah found some beautiful red and gold autumn leaves. She wanted to put them in a vase for her mother. She went to a store that had many vases. She chose one that cost \$4.35. She gave the storekeeper four one-dollar bills and two quarters. How much change will the clerk give her?

Connect coin groups to make 90 cents. How many groups can you make?

1 quarter 20 pennies 70 pennies

2 quarters 5 pennies 65 pennies

4 nickels 15 pennies 3 quarters

Mary needs to buy water for the cafeteria.

"Can you please pick up 28 quarts of water?" asked the principal.

When Mary got to the store, they only sold water in gallon containers. How many gallons should she buy? (Hint: 1 gallon = 4 quarts)

Name: ______ edHelper

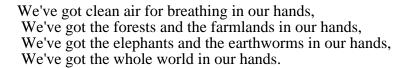
An Earth Day Song

By Cindy Grigg

Sing to "He's Got the Whole World in His Hands" (Teachers, for little ones, you might just repeat the first line throughout each verse.)

We've got the whole world in our hands, We've got the whole, wide world in our hands, We've got the whole world in our hands, We've got the whole world in our hands.

We've got clean water for drinking in our hands, We've got the rivers and the oceans in our hands, We've got the whales and the fishes in our hands, We've got the whole world in our hands.



Let's recycle our newspapers and our cans. Let's recycle glass and plastic, everything that we can. Let's clean up the Earth; it's in our hands. We've got the whole world in our hands.

Reduce, reuse, recycle; that's the best plan.
Reduce, reuse, recycle, everything that we can.
Reduce, reuse, recycle; don't throw it in the trashcan.
We've got the whole world in our hands.

We've got the whole world in our hands, We've got the whole, wide world in our hands, We've got the whole world in our hands, We've got the whole world in our hands.



Name:		edHelper
An Earth Day Song		
Questions		
 1. Why do you think the author sa A. The world is getting smalle B. We can hold the world like C. It's up to each of us to take 2. Why did the author name whale A. They both live in water. B. They are the largest and sn C. The author meant that all a water clean. 3. Why did the author name elephs 	e a ball. c care of the world. es and fishes? mallest animals in water. animals, from the largest to the smallest ones, ants and earthworms? animals, from the largest to the smallest ones, animals. espapers? eing cut to make paper. om going into the trash.	depend on us to keep their
A. We should all try to throw B. We should all go on a diet C. We should all stay small.	away less trash.	
Do parallel lines intersect?	Which is smaller, $\frac{3}{4}$ or $\frac{2}{4}$?	Color in <u>1</u> . 2
What are 10 equal to?	The factors of 15 are 3 5	
Write a fraction to represent who	at is shaded. 9 7 - 1 2 Is 72 small	aller than 27?

Name: _____

	3
X	4

	2	9	4
X			5
	L L L L L		

	6	2	0
X			2

	4	5	2
X			9

	6	1	1	8
X				4

	7	4	6	2
X				3

	7	7	8	9	1
X					3

	6	3	4	0	3
X					2

	8	5	6	7	1
X					7

Name: _____

	9	9	3	1	9	1
X						8

	5	0	0	1	6	2
X						5

X 3

5X 6

X 7

7 X 2 5X 6

X 3

X 7

5 5 X 2

X 6

8 9 X 9

X 5

X 9

	8	9	4	
X			4	

	4	5	7
X			9
	1 1 1 1 1 1		

	4	7	6
X			8
	L L L L L L		

	3	4	7
X			5

	9	4	7	9
X				2

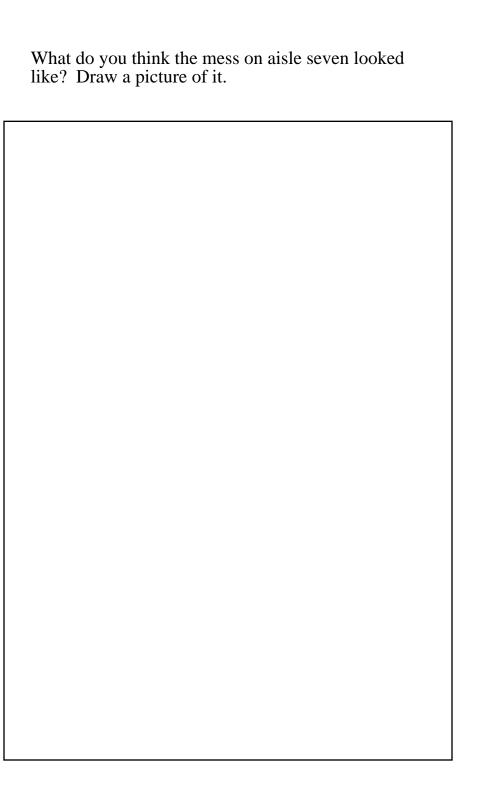
	4	7	1	8
X				7

	4	7	7	9
X				6

	Cleanup in the Gulf
	Answer the following questions BEFORE you read this book. Write what you know. If you want to guess, you can. You will NOT be marked wrong!
1.	Have you ever spilled something at home? What happened? How did you clean it up?
2.	Do you think that cleaning up an oil spill in nature is as easy as cleaning up a spill in your home? Why or why not?
3.	Is it possible to <i>completely</i> clean up an oil spill in the ocean? Why or why not?

Name.

"Cleanup on aisle seven!" the loud voice boomed over the grocery store's crackling speakers. Just moments before I'd heard the glass shatter, the young child cry, and the mom gasp. Yep, another jar of spaghetti sauce had bit the dust. I heard a sigh as the young store clerk in his wrinkled apron grabbed the mop and the CAUTION WET FLOOR sign before making his way to the messy aisle.





If only he knew how easy his job was! He had some cleaning up to do, but in a matter of moments, aisle seven would be back to normal. The workers at the Gulf Coast who were cleaning up after the latest oil spill could only wish they had it so easy.



In April 2010, the Deepwater Horizon oil drilling rig exploded and sank. This caused more than four million barrels of oil to leak into the ocean. While officials were eventually able to stop the leak and kill the well, the mess left behind was disastrous.



British Petroleum, or BP, the company in charge of the rig, tried to fight the oil spill as soon as it began. They first used chemicals known as dispersants. The dispersants broke the oil down into smaller drops so it would do less damage in the water.



Special boats known as skimming boats also began working to clean up the spill. These boats use brushes, belts, and machines to separate oil from the water. They skim the oil off the water's surface and collect it.



Crews also used long pieces of plastic called booms to contain the oil on the surface. Booms were used to trap oil and prevent it from washing up on shore. Workers placed millions of feet of booms along the coasts of the Gulf of Mexico.

Berms were also built to keep oil out. A berm is a large mound of sand built up from the ocean's floor. Oil cannot flow under a berm, so these mounds kept a lot of oil from reaching the Louisiana coastline. Draw a picture of a berm.



Cleanup crews also burned some of the oil off the water's surface. These controlled burns slowed down the spread of the oil but could not be used to clean up all that spilled.



While scientists agree that cleanup efforts in the Gulf were important, some think that most of the oil spill will be taken care of by Mother Nature. Oil in the water will eventually break down and be eaten by bacteria. Oil on the surface will be broken up by waves and eventually evaporate into the air. Unfortunately, none of these things can happen overnight. It will take a *long* time to clean up the mess left by the tragic accident.



Unlike a spilled jar of sauce at the grocery store, oil spills are very harmful to living things. They cannot be cleaned up easily or quickly. Perhaps the best way to clean up an oil spill is to try to prevent it from spilling in the first place.

Name 1		
Cleanup in the Gulf		
Answer the following questions AFTER you have completed this book.		

What else could experts have done to try to clean up the oil spilled in the Gulf? Draw a picture of your answer.

following did expe	book, which of the erts use to try to clean in the Gulf? Circle your	4. Which cleanup technique do you think was the most effective? Rank the following from 1-5, with 1 being the technique that you think cleaned up the oil best.
paper towels	chemicals	controlled burns
gauze	controlled burns	berms
building berms	booms	booms
vacuums	skim boats	Mother Nature
3. Do you wish that you could have been a part of the cleanup crew that worked in the Gulf? Why or why not?		5. You have a new idea for BP. You think you can help clean up a future oil spill. What is your idea? Why should the company try your plan? Persuade them to try your new idea.
	_	

Compare and contrast two of the cleanup methods used on the spilled oil. How are they alike? How are they different?	
they alike? How are they different?	