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**Let's Learn More
Backpack—Grade 4**

This sample includes the following:

Let's Learn More Activity Book

- What Should Fourth Graders Know? (2 pages)
- Guiding Questions (1 page)
- Reading (4 pages)
- Spelling (1 page)
- Writing (2 pages)
- Mathematics (1 page)
- Problem Solving (1 page)
- Social Studies (1 page)
- Science (1 page)
- Game (1 page)
- Mindfulness (1 page)
- Technology (1 page)
- Hands-on Activities (1 page)
- Project-Based Learning (1 page)

Reader Sample (31 pages)

Additional backpack resources not included in this sample:

- Parent Tip Card
- Ebook Library Access Card

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What Should Fourth Graders Know?

What key literacy and mathematics concepts are covered in the *Let's Learn!* series?

Literacy

- ▶ **Read** and **answer questions** about **texts**.
- ▶ Determine the **themes** of **texts**.
- ▶ Compare and contrast **points of view**.
- ▶ Know and use various **text features**.
- ▶ Identify the **main topic** and **key details** of a text.
- ▶ Use **details** and **examples** from a text to **explain meaning**.
- ▶ Write **informative** and **opinion** paragraphs and **narratives**.
- ▶ Practice reading and writing **spelling words**.
- ▶ Use correct **capitalization** and **punctuation**.
- ▶ Identify and use **proper** and **common nouns**.
- ▶ Identify and use **verbs** and **adjectives**.
- ▶ Identify **prepositional phrases** and **articles**.



¿Qué deberían saber los estudiantes de cuarto grado?

¿Qué conceptos importantes de lectoescritura y matemáticas abarca la serie *¡Aprendamos!*?

Lectoescritura

- ▶ **Leer** y **responder preguntas** sobre **textos**.
- ▶ Determinar los **temas** de los **textos**.
- ▶ Comparar y contrastar **puntos de vista**.
- ▶ Conocer y usar distintas **características del texto**.
- ▶ Identificar el **tema principal** y los **detalles clave** de un texto.
- ▶ Usar **detalles** y **ejemplos** de un texto para **explicar** un **significado**.
- ▶ Escribir párrafos **informativos** y de **opinión**, y **narraciones**.
- ▶ Practicar **destrezas fundamentales**.
- ▶ Usar correctamente las **mayúsculas** y la **puntuación**.
- ▶ Identificar y usar **sustantivos propios** y **comunes**.
- ▶ Identificar y usar **verbos** y **adjetivos**.
- ▶ Identificar **frases preposicionales** y **artículos**.

Mathematics

- ▶ Write numbers in **standard**, **expanded**, and **word form**.
- ▶ Fluently **add**, **subtract**, **multiply**, and **divide**.
- ▶ Estimate and measure **liquid volume** and **lengths** of objects.
- ▶ Tell **time** to the nearest **minute**.
- ▶ Calculate **area** and **perimeter**.
- ▶ Express numbers as **fractions** and **decimals**.
- ▶ List **factors** of numbers.
- ▶ **Round** numbers to the **nearest 10**, **100**, and **1,000**.
- ▶ Use **strategies** to solve **word problems**.
- ▶ Use and interpret **charts** and **graphs**.
- ▶ Identify **lines of symmetry** in **polygons** and their **attributes**.
- ▶ Add fractions with **common denominators**.



Matemáticas

- ▶ Escribir números en **notación estándar**, **expandida**, y **en palabras**.
- ▶ **Sumar**, **restar**, **multiplicar**, y **dividir** de manera fluida.
- ▶ Calcular y medir **volumen** de un **líquido** y **longitud** de los objetos.
- ▶ Decir la **hora** al **minuto** más cercano.
- ▶ Calcular **área** y **perímetro**.
- ▶ Expresar números como **fracciones** y **decimales**.
- ▶ Hallar los **factores** de los números.
- ▶ **Redondear** números a la **decena**, la **centena** y el **millar más próximos**.
- ▶ Usar **estrategias** para resolver **problemas verbales**.
- ▶ Usar e interpretar **tablas** y **gráficos**.
- ▶ Identificar **ejes de simetría** en los **polígonos** y sus **atributos**.
- ▶ Sumar fracciones con **denominadores comunes**.

Guiding Questions

Unit 1: Going Green
How can we get energy from nature?

Unit 4: Making Decisions
How can we make good decisions?

Unit 2: Transportation through Time
How has transportation changed over time?

Unit 5: Habitats and Ecosystems
How do animals survive in their ecosystems?

Unit 3: Winter
What makes winter unique?

Unit 6: Myths and Fables
What can we learn from myths and fables?

Preguntas orientadoras

Unidad 1: Ser verdes
¿Cómo podemos obtener energía de la naturaleza?

Unidad 4: Tomar decisiones
¿De qué manera podemos tomar buenas decisiones?

Unidad 2: El transporte a través del tiempo
¿Cómo ha cambiado el transporte a través del tiempo?

Unidad 5: Hábitats y ecosistemas
¿Cómo sobreviven en sus hábitats los animales?

Unidad 3: Invierno
¿Qué características singulares tiene el invierno?

Unidad 6: Mitos y fábulas
¿Qué podemos aprender de los mitos y las fábulas?

Climate Change

by Shelly Buchanan

Earth is warming up. Earth's **average** temperature has risen one full degree. That might not sound like much, but it can affect Earth's oceans, land, plants, and animals. This is known as *climate change*.

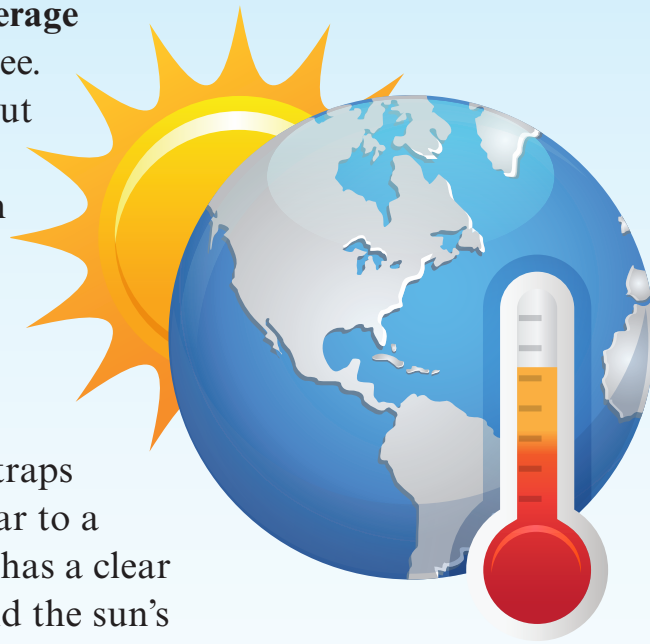
One reason Earth is heating up is the **greenhouse effect**. This is a process that happens in nature. Carbon dioxide in the **atmosphere** traps the sun's heat in a way that is similar to a garden greenhouse. A greenhouse has a clear roof and walls. Sunlight enters, and the sun's warmth gets trapped. This makes the air inside the greenhouse warmer than the air outside. Plants **thrive** in this warmth.

Earth's atmosphere acts like the roof and walls of a greenhouse. The sun's rays stream through the atmosphere. They warm the land and oceans. Greenhouse gases in the atmosphere trap some of this heat. It's a good thing this happens. Otherwise, we would have temperatures similar to the moon. There, it can reach a boiling 123° Celsius (253° Fahrenheit) during the day and a frigid -153°C (-243°F) at night.

Lately, scientists have seen an increased greenhouse effect. If it gets too strong, then too much heat will get trapped in the atmosphere. This could make Earth's average temperature rise. Most scientists think that humans are to blame.

Making an Impact

There are things people can do to slow climate change. Many countries are starting to use **renewable** energy. It is much better for Earth. This energy is not made from fossil fuels, which release greenhouse gases into the atmosphere.



Continued

Climate Change *(cont.)*

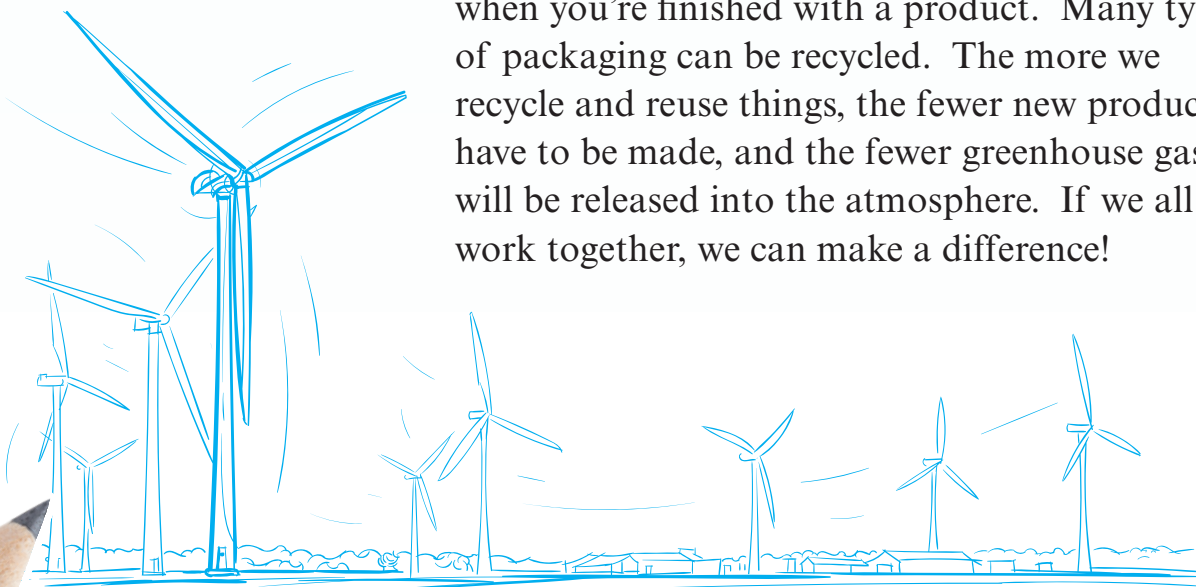
Wind power is one type of this energy. One wind turbine can power 1,000 homes. Solar power is also a great choice. Solar panels use the sun to power just about anything from cell phones to cars. Hydropower is another option. It uses moving water to make electricity. Scientists are working to create even more renewable energy sources.

But this doesn't mean that the rest of us can't help. Together, we can help cool the planet by reducing our **carbon footprints**. Think of all the ways you can save energy. Put on a sweatshirt instead of turning on the heater at home. Use energy-efficient lightbulbs. Recycle! Recycling can save about 450 kilograms (990 pounds) of carbon dioxide a year from entering the atmosphere. If everyone follows these simple steps, we can continue to move in the right direction.

Public transportation can also greatly cut carbon dioxide output. If more people ride subways or buses, then there will be fewer cars on the road and less carbon dioxide in the atmosphere. People can reduce their carbon footprints even further if they walk or ride bikes.

Factories use a lot of fossil fuels to make the things we buy. Some people are trying to use less of these goods. Some people are making things at home instead. Others are buying used goods. Some people are even choosing to buy things from companies that make things in environmentally friendly ways.

You can also reduce your carbon footprint when you're finished with a product. Many types of packaging can be recycled. The more we recycle and reuse things, the fewer new products have to be made, and the fewer greenhouse gases will be released into the atmosphere. If we all work together, we can make a difference!



Directions: Use the words in the Word Bank to complete the sentences.

Word Bank



- atmosphere
- carbon footprint
- renewable
- average
- greenhouse effect
- thrive

- 1 Wind power, solar power, and hydropower are all examples of _____ energy.
- 2 The _____ helps keep Earth at an even temperature.
- 3 The teacher told Isabelle that she did better than _____ on the test because she scored higher than most of the class.
- 4 He walks to work to try to reduce his _____.
- 5 Adam made sure his plant had plenty of water and sunlight so that it would _____ in his home.
- 6 Crowds gathered to watch the rocket escape the _____.

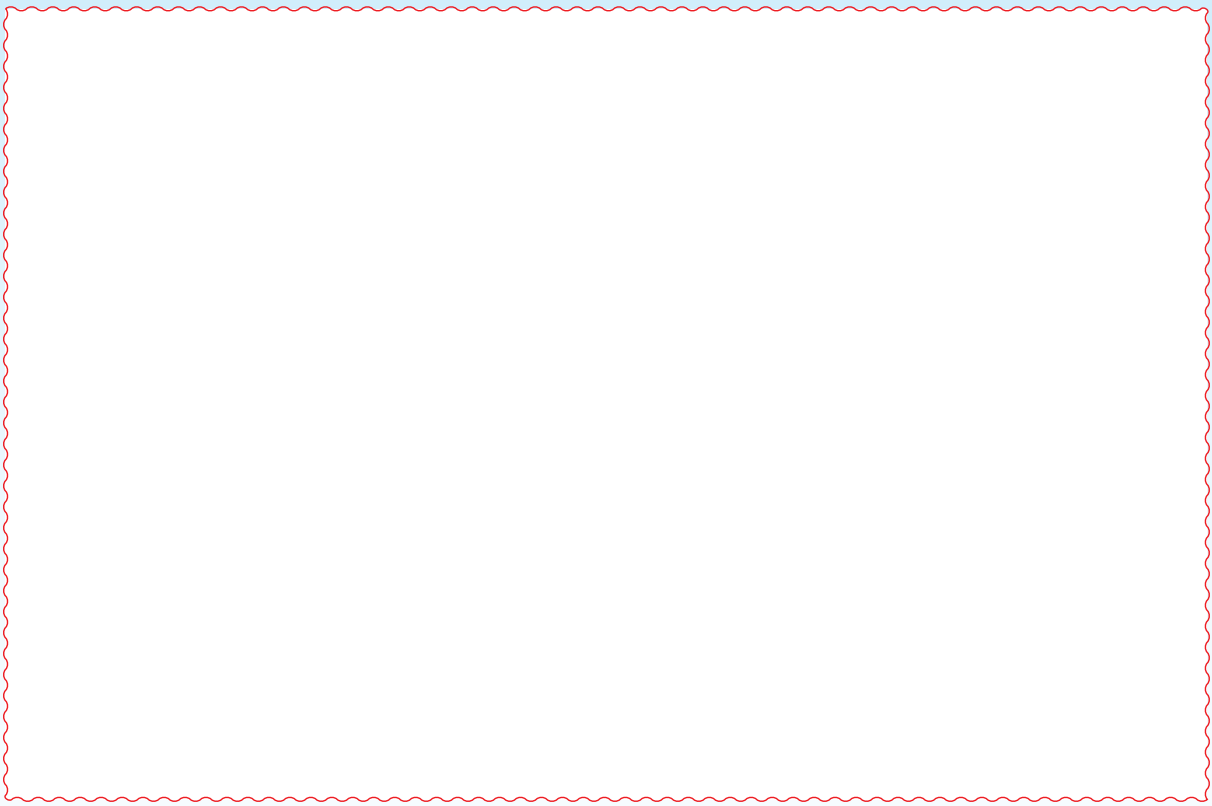
Directions: Choose two different words from the text on pages 13–14. Write a sentence using each of the words.

- 1 _____

- 2 _____



Directions: Draw a diagram to show how the greenhouse effect works.



Directions: Answer the questions.

1 Explain your diagram.

2 Why is climate change an important issue?

Name _____ Date _____

Directions: Write a poem using as many of the spelling words as you can. Then, draw a picture to go with your poem.



Spelling Words

- slay
- holiday
- stain
- sprain
- aim
- stray
- Monday
- faith
- plain
- afraid

Directions: Wind turbines can harness the wind’s energy. Read the notes about using wind turbines. Decide whether each note is an advantage or a disadvantage, and write it in the table.

- no wind, no energy
- do not take up much land
- noisy for nearby homes and businesses
- birds can be killed by turbine blades
- wind is free
- do not create pollution or greenhouse gases
- clutter land, which some people say is ugly
- good for remote areas without access to electricity

Advantages	Disadvantages



Directions: Do you think wind turbines should be used to collect wind energy? Write your opinion and why you feel the way you do. Use the table from page 23 to help you.



Writing



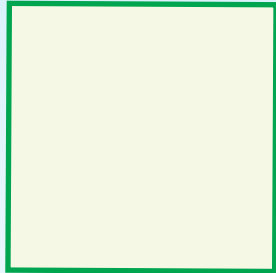
Edit and Revise

A strong opinion paragraph includes:

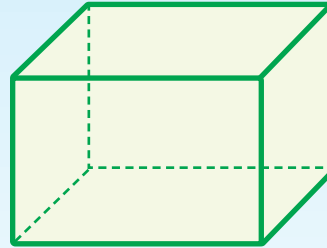
- an introductory sentence that states your opinion.
- details to support your ideas.
- a concluding sentence.

Directions: Solve each problem.

- 1 Draw at least one line of symmetry.

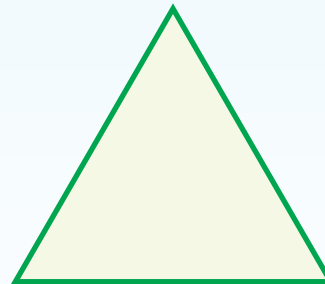


- 5 Name the shape of the solid's base.

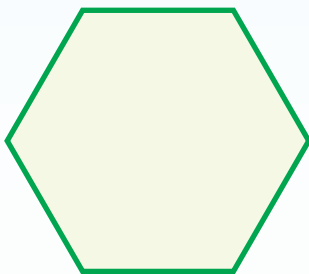


- 2 How many lines of symmetry does a regular pentagon have?

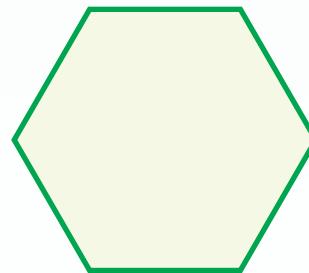
- 6 Draw at least one line of symmetry.



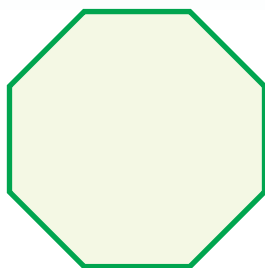
- 3 Draw at least one line of symmetry.



- 7 Name this shape.



- 4 Draw at least one line of symmetry.





Directions: Read and solve the problem.

Gloria is making a necklace with beads in the shapes of stars, suns, and moons. She begins by placing one sun, two moons, and two stars on the necklace. If she continues this pattern, what will be the 100th bead on the necklace?

1 Sketch the first 10 beads in the necklace.

2 How can your sketch help you determine the 100th bead? Solve the problem, and justify your solution.

3 Using the star, sun, and moon beads, draw a necklace pattern of your own. Determine what the 100th bead on your necklace will be.

Directions: In the 1800s, Americans began moving west. Before the end of the century, they had spread all the way to the Pacific Ocean. Research westward expansion during that time. Then, answer the questions.

1 Why did people want to move west in the 1800s?

2 Describe the journeys of pioneers moving west.

3 What was life like for pioneers once they reached the frontier?

4 How did westward expansion affect American Indian tribes?



Directions: Follow the steps in this experiment to discover what happens to chalk in vinegar.

What You Need

- three clear plastic cups
- three pieces of chalk
- lemon juice
- vinegar
- water

What to Do

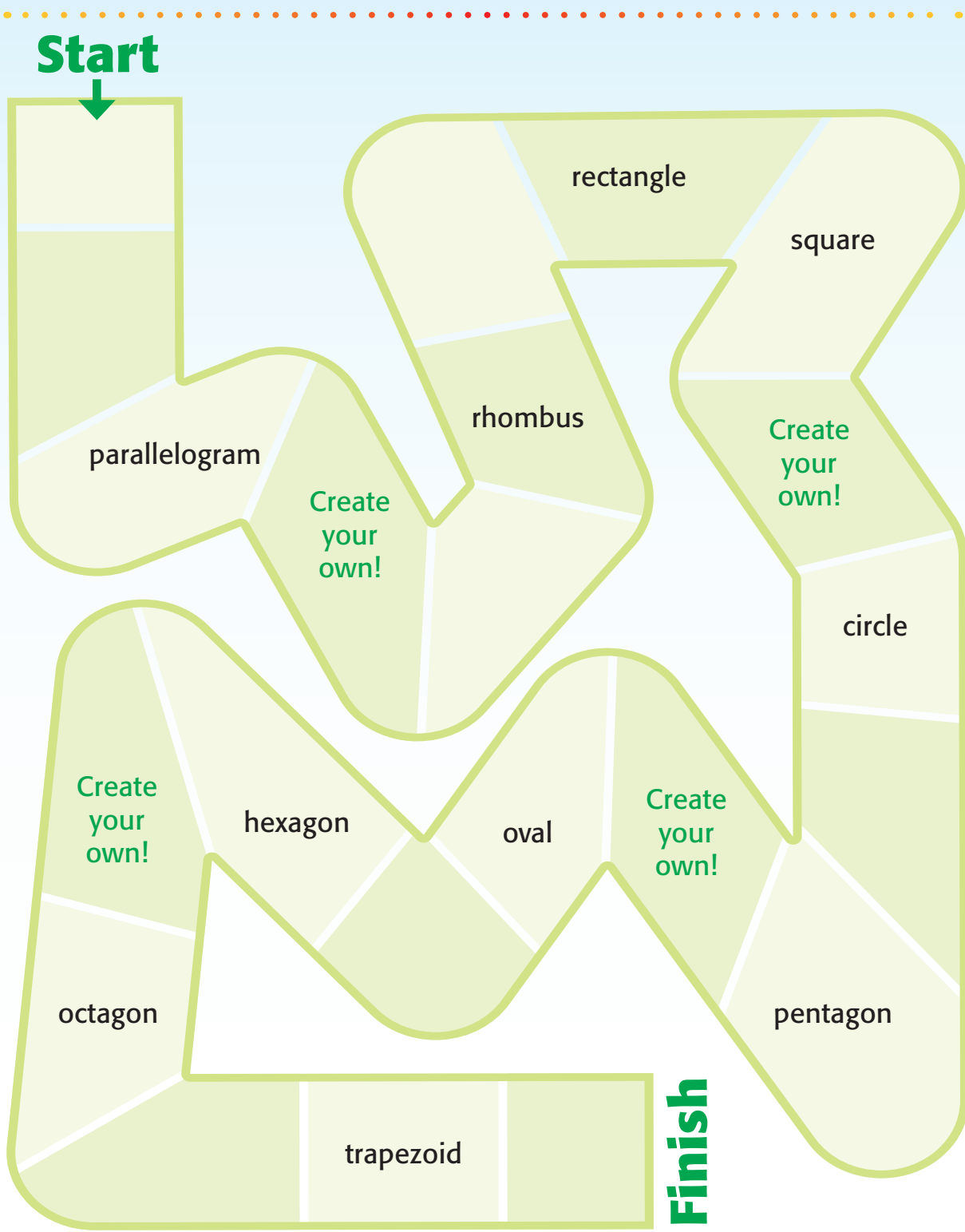
- 1 Fill each cup halfway—one with lemon juice, one with vinegar, and one with water.
- 2 Place one piece of chalk in each cup. Leave the cups in a safe place.
- 3 Make a prediction. What will happen in the different cups?

- 4 Observe the cups each day for three days. Draw and label diagrams to record what you see.





Directions: Work with a partner. Use small objects to mark your spots on the game board. Take turns rolling a number cube. Move the number of spaces that you roll. If you land on a space with words, draw that shape on a sheet of paper. Add one line of symmetry to your shape. Some spaces let you create your own shape. Just remember, it needs at least one line of symmetry. The first person to reach the finish line wins.



Directions: Think about a way you might waste energy, such as not turning off lights. Use words and drawings to show what you may be thinking when you waste energy and what you may be thinking when you work to conserve energy.

Waste Energy	Conserve Energy



CHALLENGE

How can you help others be mindful about conserving energy?

Directions: Go to the *Alliant Energy Kids* website. Read about renewable energy.

.....

What Is Renewable Energy?

tcmpub.digital/LLM/4/unit1

- 1 Scroll down and click on one of the types of energy to learn more about it.
- 2 Compare and contrast two types of energy.
- 3 Make a table or Venn diagram to show your comparison. Use Google Slides or another presentation app.
- 4 Share your work with a family member. Explain what you learned about renewable energy.



Directions: Focus on your well-being with these hands-on activities. Choose at least two to complete.

Staying Healthy

Research to find out where your family can buy local produce. Grocery stores or farmers markets are great places to start. If possible, support your local farmers.

Amazing Art

Make a miniature wind turbine—a pinwheel! You will need paper, scissors, glue, a pin, and a straw. Look online for directions on how to make this simple craft. Use any recycled materials you can.

Making Music

Many people enjoy listening to recordings of nature. Listen to waves on a beach, a rainstorm, or a forest at night. Why do you think people like to listen to these sounds? Do you?

Getting Active

Walk around a local park or your neighborhood. Pick up trash along the way. Then, recycle what you can, and properly dispose of the rest.



Build a Winter Ecosystem

Overview

Guiding Question: How do animals survive in winter?

Directions: Follow the steps to help others learn about a winter or cold-weather ecosystem.

1 Think about a winter or cold-weather ecosystem. Use these questions to help you get started. Write your initial ideas on the lines.

- Where is the ecosystem located?
- What plants live there?
- What animals live there?
- Which animals are predators? Which animals are prey?
- What nonliving things are there?
- What decomposers are there?
- What is the weather like?
- What geographical features (landforms) are there?

2 Complete the activities on each page.

3 Build a 3-D model of the ecosystem.

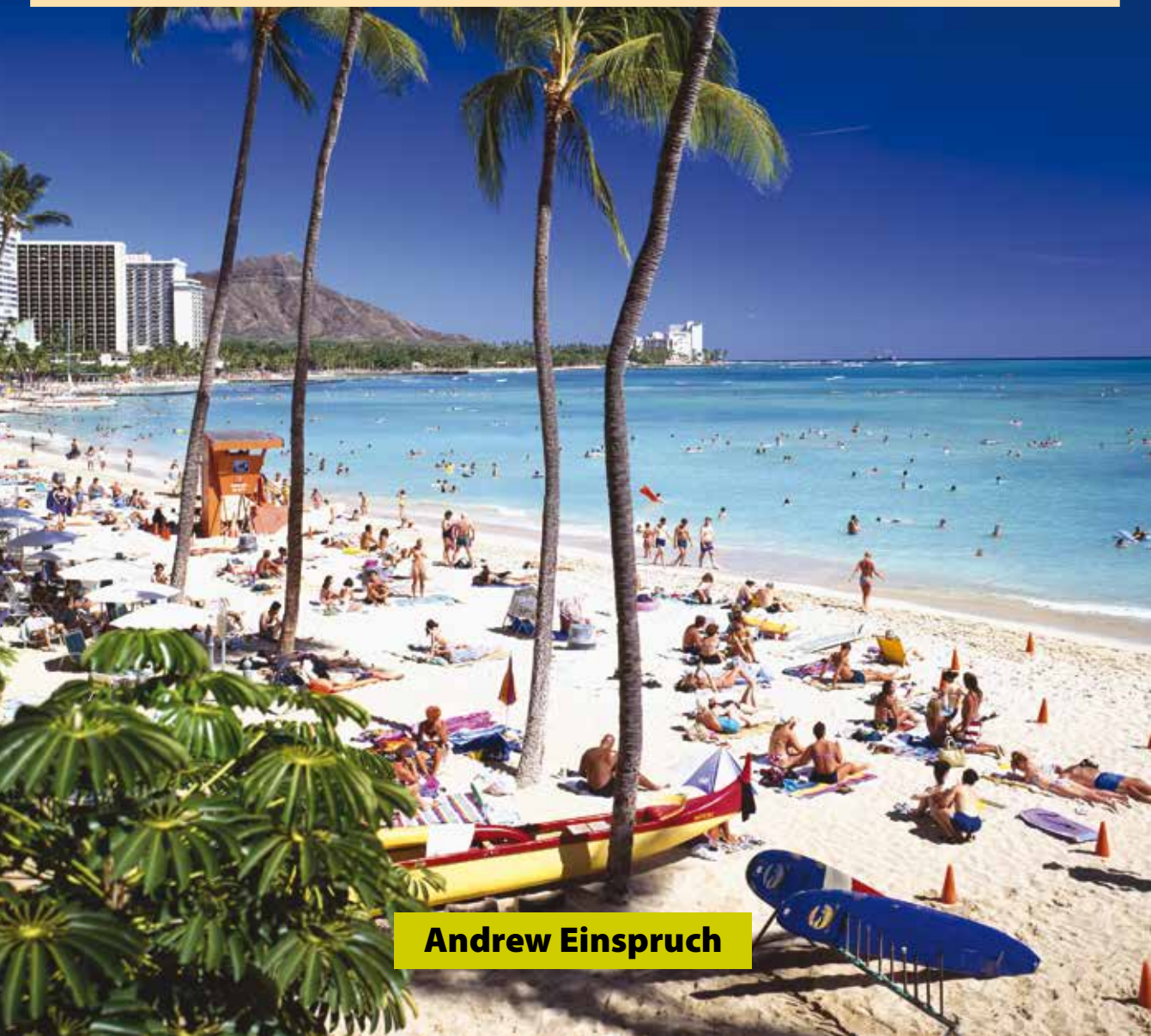
4 Make a video presentation for a nature show about the ecosystem.





Our Vacation Budget

Working with Decimals



Andrew Einspruch

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To the Beach

Mom and Dad said we are going to the beach in 8 weeks for a vacation. Cool! There will be so much to do. My sister, Keandra, and I can't wait!



Mom has made a vacation **budget**. The budget is a plan that will help Mom and Dad figure out how much the vacation will cost. It will also help them figure out how much money to save to pay for it.

LET'S EXPLORE MATH

Money can be shown in **decimal** (DES-uh-muhl) form. A decimal point separates dollars and cents. Dollars are shown to the left of a decimal point. Cents are shown to the right.

There are 100 cents in a dollar. The numbers to the right of the decimal point show the part (or fraction) of 100 cents, or part of 1 dollar. The 2 place values after the decimal point are the tenths and hundredths places.

So, $\$1.15 = 1$ dollar and 15 cents or 1 and 15 hundredths of a dollar.

$\$22.05 = 22$ dollars and 05 cents or 22 and 5 hundredths of a dollar.

$\$100.00 = 100$ dollars and no cents.

Hundreds	Tens	Ones	Decimal Point	Tenths	Hundredths
		1	.	1	5
	2	2	.	0	5
1	0	0	.	0	0

Draw a table like the one above. Then show:

- a.** $\$1.05$ **b.** $\$78.40$ **c.** $\$125.00$

8 Weeks to Go

Mom showed me what she thinks things will cost. These are called our **expenses** (ex-PEN-suhz). They include money for gas and food. The beach house costs money, too. Mom also plans for fun stuff. She calls it **entertainment**.



The budget even has money for **unexpected** expenses. Mom says it's for "just in case!"



Our Vacation Expenses

<i>Gas for car</i>	<i>\$150.00</i>
<i>Beach house rental</i>	<i>\$600.00</i>
<i>Food</i>	<i>\$300.00</i>
<i>Unexpected expenses</i>	<i>\$100.00</i>

LET'S EXPLORE MATH

Look at the list of expenses above. Add up the money for vacation expenses listed. *Hint:* When you add decimals, always line up the decimal points one under the other.

Mom's giving Keandra and me \$25.00 each! She says we can spend it on vacation. Mom says the whole vacation will cost \$1,500.00.



Our Vacation Expenses

<i>Gas for car</i>	<i>\$150.00</i>
<i>Beach house rental</i>	<i>\$600.00</i>
<i>Food</i>	<i>\$300.00</i>
<i>Unexpected expenses</i>	<i>\$100.00</i>
<i>Beach things (sunscreen, umbrella, beach towels, beach ball, beach chairs, beach bags, sunhats)</i>	<i>\$200.00</i>
<i>Keandra's spending money</i>	<i>\$25.00</i>
<i>Jimar's spending money</i>	<i>\$25.00</i>
<i>Family entertainment</i>	<i>\$100.00</i>
<i>Total</i>	<i>\$1,500.00</i>

Will We Have Enough Money?

Expenses are only part of Mom's budget. Saving money is also part of the budget. Mom and Dad have already saved \$1,100.00.

A photograph of an American Savings Bank building with a blue sign above the entrance and a blue sign in the foreground. The building has a brick facade and arched windows. There are trees and bushes in front of the building.

Mom and Dad have their savings in the bank.

$\$1,500.00$ expenses
 $-\$1,100.00$ savings

 $\$400.00$ still needed

Mom and Dad plan to save \$50.00 per week between now and the vacation. The vacation is only 8 weeks away.



April

					1	2
3	4	5	6	7	\$50	9
10	11	12	13	14	\$50	16
17	18	19	20	21	\$50	23
24	25	26	27	28	\$50	30

May

1	2	3	4	5	\$50	7
8	9	10	11	12	\$50	14
15	16	17	18	19	\$50	21
22	23	24	25	26	\$50	28
29	30	31				

LET'S EXPLORE MATH

Mom and Dad are saving \$50.00 for the next 8 weeks.

- How much money will they save?
- Draw the table below and write your answer in the correct columns.

Hundreds	Tens	Ones	Decimal Point	Tenths	Hundredths
			.		

What About Keandra and Me?

I will need more than \$25.00 to pay for the things I want to do at the beach. Keandra thinks she will need more, too.



Mom told us to make a list of our vacation expenses. This will help us work out how much money we will need. We'll definitely need more money!

My (Jimar's) Vacation Expenses

Miniature golf	\$12.65
New goggles	\$7.35
Food and drinks	\$22.00
Movie ticket	\$9.00
DVD rental	\$5.50
Souvenirs	\$12.50

Keandra's Vacation Expenses

New swimsuit	\$30.00
New sandals	\$19.50
Food and drinks at the mall	\$27.95
Movie tickets (2 movies)	\$18.00
T-shirt	\$12.60
Sunglasses	\$20.75



LET'S EXPLORE MATH

Use Jimar's expenses above to answer the questions.

- Work out the total amount Jimar will spend on "Food and drinks" and a "Movie ticket."
- Order Jimar's expenses from the greatest amount to the least amount.

Keandra and I will have to make a budget! That way, we can plan how much money we will be able to save. First, we work out our **income**. I get \$5.50 per week **allowance** (au-LAU-uhns). If I save it all for the next 8 weeks, and then add it to the \$25.00 vacation spending money, how much will I have?



$$\begin{array}{r} \$5.50 \text{ per week} \\ \times \quad 8 \text{ weeks to go} \\ \hline = \$44.00 \text{ savings} \\ + \$25.00 \text{ from Mom and Dad} \\ \hline = \$69.00 \text{ total income} \end{array}$$

That is enough to cover my expenses!



Keandra has much more money than I do! She also gets \$5.50 allowance. Then, she earns \$15.75 per week babysitting. *And* she's already got \$20.40 in savings.

Keandra's Income

$$\begin{array}{r} \$15.75 \text{ earned at work} \\ + \quad \$5.50 \text{ allowance} \\ \hline = \$21.25 \text{ income each week} \\ \times \quad \quad \quad 8 \text{ weeks to go} \\ \hline = \$170.00 \text{ total income} \end{array}$$

$$\begin{array}{r} \$20.40 \text{ saved} \\ + \quad \$25.00 \text{ from Mom and Dad} \\ + \quad \$170.00 \text{ income} \\ \hline = \$215.40 \text{ spending money} \end{array}$$



Keandra earns money from babysitting.

4 Weeks to Go

We have all been saving for our vacation. But yesterday our refrigerator broke! It was fixed, but it cost \$400.00. This will come out of the vacation savings. Ouch!

Our Vacation Savings

$$\begin{array}{r} \$50.00 \text{ saved per week} \\ \times \quad 4 \text{ weeks} \\ \hline \$200.00 \text{ saved} \\ \\ \$1,100.00 \text{ already saved} \\ + \quad 200.00 \\ \hline = \quad \$1,300.00 \text{ total savings} \\ \\ \$1,300.00 \text{ saved} \\ - \quad \$400.00 \text{ repairs} \\ \hline = \quad \$900.00 \text{ total savings} \end{array}$$



Mom and Dad's New Budget

Mom and Dad changed the budget to cover the cost of fixing the refrigerator. They will save \$100.00 per week for the next 4 weeks.

Mom and Dad had to be clever to save extra money. They saved some money by looking out for **discounts** at the store.



But, the vacation is supposed to cost \$1,500.00! Mom and Dad are going to have to cut some vacation expenses. They will not be able to cut the cost of things like the beach house rental or the gas for the car. Which expenses can they cut?



LET'S EXPLORE MATH

Jimar's mom and dad will save \$100.00 each week for the next 4 weeks. They have already saved \$900.00 for the vacation.

- a. What is the total amount of money they will save in the next 4 weeks?
- b. Add this amount to the \$900.00 they already saved. What will be the total amount saved?

Mom and Dad can save money in other ways. There will be less money for entertainment. We will not get new beach things, like beach towels or a beach ball.



And they are cutting my spending money! Keandra's too! We will now get \$20.00 each.



Our Vacation Expenses

	<i>Old Expenses</i>	<i>New Expenses</i>
<i>Gas for the car</i>	<i>\$150.00</i>	<i>\$150.00</i>
<i>Beach house rental</i>	<i>\$600.00</i>	<i>\$600.00</i>
<i>Food</i>	<i>\$300.00</i>	<i>\$275.00</i>
<i>Beach things</i> <i>(sunscreen, umbrella, beach chairs</i> <i>beach towels, beach ball,</i> <i>beach bags, sun hats)</i>	<i>\$200.00</i>	<i>\$100.00</i>
<i>Keandra and Jimar's spending money</i>	<i>\$50.00</i>	<i>\$40.00</i>
<i>Entertainment for the family</i>	<i>\$100.00</i>	<i>\$75.00</i>
<i>Unexpected expenses</i>	<i>\$100.00</i>	<i>\$60.00</i>
<i>Total</i>	<i>\$1,500.00</i>	<i>\$1,300.00</i>

My New Budget

I got a library fine today! That means even less money to spend at the beach. I will have to change my budget.

My (Jimar's) New Vacation Budget

Income (Revised)

I planned to have \$69.00 in income and \$69.00 in expenses. That is \$44.00 saved from my allowance, plus \$25.00 from Mom and Dad.

But now I am only going to get \$20.00 from Mom and Dad.

$$\begin{array}{r} \$44.00 \text{ savings} \\ + \$20.00 \text{ from Mom and Dad} \\ \hline = \$64.00 \text{ to spend} \end{array}$$

And I have to subtract the money for my library fine.

$$\begin{array}{r} \$64.00 \text{ savings} \\ - \$5.00 \text{ library fine} \\ \hline = \$59.00 \text{ total income} \end{array}$$

So now I need to reduce my expenses.



	My (Jimar's) Old Expenses	My (Jimar's) New Expenses
Miniature golf	\$12.65	\$12.65
New goggles	\$7.35	\$7.35
Food and drinks	\$22.00	\$16.50
Movie ticket	\$9.00	\$9.00
DVD rental	\$5.50	\$5.50
Souvenirs	\$12.50	\$8.00
Total	\$69.00	\$59.00

I will not be able to do as many things as I planned.
But at least I will **break even!**

LET'S EXPLORE MATH

Look at Jimar's *Old Expenses* and *New Expenses* above.

- How much less money will Jimar spend on souvenirs?
- How much less money will Jimar spend in total?

2 Weeks to Go

Keandra *thought* she had plenty of spare money. So she bought a dress for \$65.00. But then she got sick. She missed 2 weeks of babysitting work! So she will lose \$31.50 in pay! It is her turn to change her budget.



Keandra's Income (Revised)

	\$ 215.40 original spending money
-	\$ 5.00 less from Mom and Dad
-	\$ 65.00 dress
-	\$ 31.50 lost babysitting income
	<hr/>
	\$ 113.90 total income

\$65.00

Keandra's Vacation Expenses (Revised)

Old Expenses		New Expenses	
New swimsuit	\$30.00	New swimsuit	\$30.00
New sandals	\$19.50	New sandals	\$15.50
Food and drinks	\$27.95	Food and drinks	\$22.70
Movie tickets (2 movies)	\$18.00	Movie ticket (1 movie)	\$9.00
T-shirt	\$12.60	T-shirt	\$12.60
Sunglasses	\$20.75	Sunglasses	\$14.10
Old total	\$128.80	New total	\$103.90

Plus, Keandra will have \$10.00 left for unexpected expenses.

LET'S EXPLORE MATH

Look at Keandra's *Old Expenses* and *New Expenses* above. How much less money will Keandra spend on:

- food and drinks?
- movie tickets?
- sunglasses?

1 Week to Go

We just found out the beach has **scuba diving** lessons! Keandra and I have to try that! The lessons cost \$20.00. So we need to change our budgets again.

Keandra has \$10.00 for unexpected expenses. She can put that toward the scuba lessons. But we both still need to save money by cutting our expenses once more.



My (Jimar's) Budget

Total Income: \$59.00

	Old Expenses	New Expenses
Miniature golf	\$12.65	\$12.65
New goggles	\$7.35	\$0.00
Food and drinks	\$16.50	\$12.35
Movie ticket	\$9.00	\$9.00
DVD rental	\$5.50	\$0.00
Souvenirs	\$8.00	\$5.00
Scuba lessons	—	\$20.00
Total	<u>\$59.00</u>	<u>\$59.00</u>

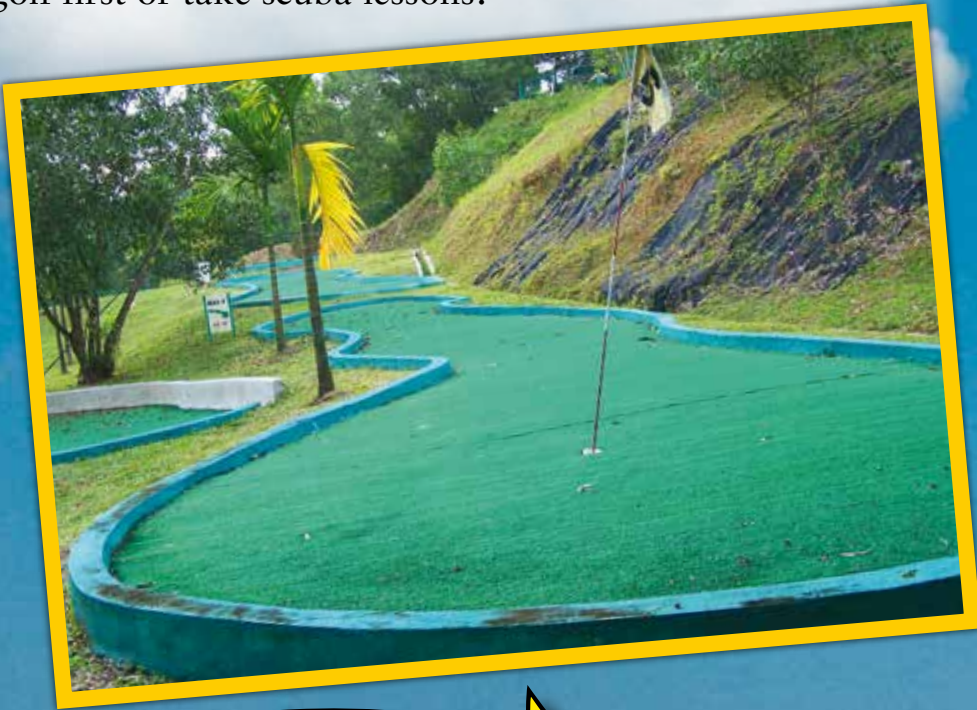
Keandra's Budget

Total Income: \$113.90

	Old Expenses	New Expenses
New swimsuit	\$30.00	\$28.00
New sandals	\$15.50	\$10.50
Food and drinks	\$22.70	\$19.70
Movie ticket (1 movie)	\$9.00	\$9.00
T-shirt	\$12.60	\$12.60
Sunglasses	\$14.10	\$14.10
Unexpected expenses	\$10.00	\$0.00
Scuba lessons	—	\$20.00
Total	<u>\$113.90</u>	<u>\$113.90</u>

Vacation Time!

Waves and sun, here we come! Mom and Dad saved \$1,300.00, and Keandra and I have our money, too. It's going to be a great week! Now, do I play mini golf first or take scuba lessons?



LET'S EXPLORE MATH

Jimar's family is finally on vacation. How much money did the family save in total for their trip? *Hint:* Make sure you look at Jimar and Keandra's final budgets on page 25, and Mom and Dad's budget on page 19.



PROBLEM-SOLVING ACTIVITY

Hot Dog Heaven

Chris plays on a local basketball team. The team needs new uniforms, but the club does not have any money. New uniforms cost \$5.00 each. Chris wants to help in any way he can. He has decided to raise some money by setting up a hot dog stand at his school fair. He wants to sell 100 hot dogs. He works out the cost of the ingredients. These are his expenses.

50 hot dogs = \$100.00

50 hot dog buns = \$25.00

4 bottles of ketchup = \$14.00

4 jars of mustard = \$16.00

Solve It!

- If Chris sells all 100 hot dogs for \$3.50 each, how much money will he earn? This is his income.
- How much money did Chris make after paying for his expenses? This is his profit.
- How many uniforms will the club be able to buy?



Use the steps below to help you solve the problems.

Step 1: Find the cost of 100 hot dogs, 100 hot dog buns, 8 bottles of ketchup, and 8 jars of mustard.

Hint: Double the costs listed on page 28.

Step 2: Add up all the expenses.

Step 3: Find the income from the sale of 100 hot dogs.

Step 4: Subtract the cost of expenses from the income from the sales. The money left over is the profit. Chris can use the profit to buy the uniforms.

Step 5: Divide the profit by \$5.00.



Glossary

allowance—a fixed amount of pocket money

break even—being able to spend as much money as you earn, and no more

budget—a plan to work out how much money you earn and spend over a period of time

decimal—a number based on 10

discounts—sale prices that are lower than the original amounts of items

entertainment—things that people do for fun, not for work

expenses—things that people spend money on

income—an amount of money earned

scuba diving—underwater swimming done with a portable air tank

unexpected—not predicted or planned for

Index

allowance, 13–14, 20

decimal, 5, 7, 10

expenses, 6–8, 9, 12–13, 19, 20–21, 23, 24–25, 29

income, 13–14, 20, 22, 28, 29

money, 5, 6–8, 9–10, 12–14, 16, 18–19, 20–21, 22–23,
24, 26, 28–29

profit, 29

savings, 5, 9–10, 15–18, 20, 24, 26

ANSWER KEY

Let's Explore Math

Page 5:

Hundreds	Tens	Ones	Decimal Point	Tenths	Hundredths
		1	.	0	5
	7	8	.	4	0
1	2	5	.	0	0

Page 7:

\$1,150.00

Page 10:

- a. Mom and Dad will save \$400.00
b.

Hundreds	Tens	Ones	Decimal Point	Tenths	Hundredths
4	0	0	.	0	0

Page 12:

- a. Food and drinks \$22.00
+ Movie ticket \$9.00
Total \$31.00
- b. My (Jimar's) Vacation Expenses
Food and drinks \$22.00
Miniature golf \$12.65
Souvenirs \$12.50
Movie ticket \$9.00
New goggles \$7.35
DVD rental \$5.50

Page 17:

- a. $\$100.00 \times 4 \text{ weeks} = \400.00
b. $\$400.00 + \$900.00 = \$1,300.00$ saved

Page 21:

- a. Jimar will spend \$4.50 less on souvenirs.
($\$12.50 - \$8.00 = \$4.50$)
b. Jimar will spend \$10.00 less in total.
($\$69.00 - \$59.00 = \$10.00$)

Page 23:

- a. Keandra will spend \$5.25 less on food and drinks. ($\$27.95 - \$22.70 = \$5.25$)
b. Keandra will spend \$9.00 less on movie tickets. ($\$18.00 - \$9.00 = \$9.00$)
c. Keandra will spend \$6.65 less on sunglasses. ($\$20.75 - \$14.10 = \$6.65$)

Page 26:

Jimar's family saved a total of \$1,472.90.
($\$1,300.00 + \$59.00 + \$113.90 = \$1,472.90$)

Problem-Solving Activity

50 hot dogs = \$100.00. So 100 hot dogs:

$$\$100.00 \times 2 = \$200.00$$

50 hot dog buns = \$25.00. So 100 hot dog

$$\text{buns: } \$25.00 \times 2 = \$50.00$$

8 bottles of ketchup = \$28.00

8 jars of mustard = \$32.00

Expenses

\$200.00

\$50.00

\$28.00

\$32.00

Total: \$310.00

- a. Chris will earn \$350.00
b. $\$350.00 \text{ income} - \$310.00 \text{ expenses} = \40.00 profit
c. The club will be able to buy
8 uniforms.
 $\$40.00 \text{ profit} \div \$5.00 \text{ cost of uniform} = 8 \text{ uniforms}$