

# Week 2

3<sup>rd</sup>  
Grade

# Independent Study Packet

 Education.com

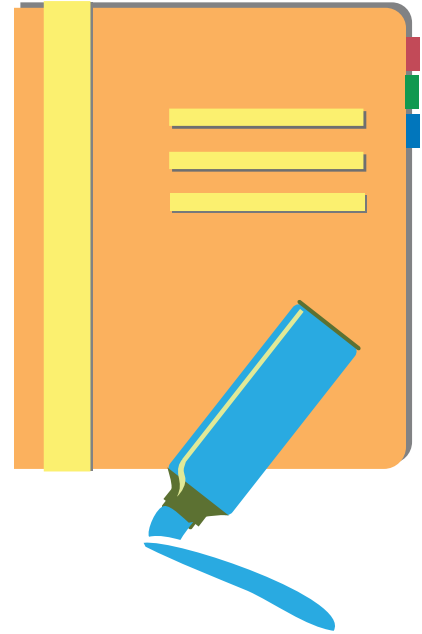


**5 MORE Days of  
Independent Activities in  
Reading, Writing,  
Math, Science, and Social Studies**

# Helpful Hints for Students and Families

## Materials You Will Need:

- Pencils
- Extra paper or a notebook/journal. (You may put everything into one notebook if you like.)
- Colored pencils, markers, or crayons for some of the activities
- Internet access for online research
- You will need different materials for the optional Design Challenge

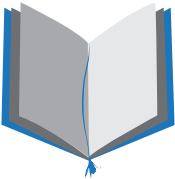







## Directions & Tips

- There is a schedule for each day. You may complete the activities in any order. Social studies and science activities may take you more than one day to complete.
- Make sure to plan your time so that you don't let things pile up at the end.
- Read the directions carefully before completing each activity.
- Check off each of the activities when you finish them on the activity menu.
- Make sure an adult signs the activity menu before you bring it back to school.



# Activity Menu

	Day 1	Day 2	Day 3	Day 4	Day 5
<b>Reading</b> 	Read for 20 minutes and answer three of the questions from the reading log on another piece of paper or in a journal. <b>Challenge:</b> Try not to repeat a question!				
	Introducing Mae Jemison, the Star	Who Am I? Women in Space	Why Does the Earth Spin?	Gemini 4	Solar System Quiz
<b>Writing</b> 	Two Truths and One Lie: Mae Jemison	Make a Planet	Definition of a Planet	Writing Science Fiction	If I Had a Million...
<b>Grammar Practice</b> 	Its or It's?	Great Grammar: Compound Sentences	Great Grammar: Possessive Pronouns	Possessive Nouns	There, Their, or They're
<b>Math</b> 	Solar Subscription Subtraction	Secret Code Math	Collecting Data	Follow the Instructions	Addition and Subtraction: Runaway Signs
<b>Social Studies</b> 	U.S. Maps and States				
<b>Science</b> 	The Solar System and Solar Energy				

Parent/Guardian Signature: \_\_\_\_\_

# Reading Log

1. Read a fiction or nonfiction book on your own or with a grown-up.
2. Put your name and the title of the book at the top of a new page.
3. Choose one of the prompts from the chart and write the letter at the top of the page in the title of the book.
4. Write 3–5 sentences about your book. Remember, not all of the questions make sense for every book!



a. What details in the text describe one of the characters? Draw a sketch of the character.	b. Which words in the book were tricky? What strategy did you use to help you understand them?	c. What lesson is the author trying to teach the reader? How do you know?
d. What is your favorite part of the text? Why?	e. What is the most important part of the story? Why?	f. What did the author want you to learn? How do you know?
g. How does the main character feel in this book? How do they change?	h. What is the most interesting part of the text? Why?	i. What are three facts you learned from reading this book?
j. How do the pictures in the text help you understand what you are reading? Give an example.	k. Where does the story take place (the setting)? How does the author describe it?	l. What information was surprising in the text? Why?
m. What is the character's main problem, and how did they solve it? How would you have solved it?	n. How is this book like another you have read? How is it different?	o. What was a major event in the story? Why was it important to the story?

# Day 1

<b>Reading</b>	Mae Jemison is a pioneer; she was the first African American female in outer space! This biography details her early life, education, and experience as an astronaut, as well as her life after NASA.
<b>Writing</b>	Use the worksheet to learn more about Mae Jemison and practice separating between facts and a lie.
<b>Grammar Practice</b>	Learn the difference between “it’s” and “its”. It’s important!
<b>Math</b>	Use your subtraction skill to solve the riddle.



# Introducing Mae Jemison, the Star

"It's part of the imagination. All of science, all of space exploration - everything we do in the world is about imagination and using your creativity to expand beyond your normal boundaries."

- Mae Jemison

## Introduction

Have you ever used your imagination to make something happen? Like, fly down the stairs to the dinner table, or wave a magic wand to clean your room? Well, you're not alone in using your imagination. Doctor Mae Jemison imagined herself in space as a child, and she is now famous for making that dream come true.



As an astronaut for NASA, Mae became the first African American female to fly into space. She was a mission specialist on the space shuttle *Endeavour* in 1992. Mae studied how living things act in space. She is also a doctor, researcher, teacher, and a businessperson.

## Early Life and Education

Mae was born in Decatur, Alabama on October 17, 1956. She lived there until she was three years old, when her family moved to Chicago, Illinois. Her mother was an elementary school teacher, and her father was a carpenter. She has two older siblings, a sister and a brother.

When Mae was younger, she liked dance and science. She liked astronomy. She loved science so much she would help her brother and sister with their science projects. She also read books at the public library, especially about stars. Mae wanted to go to space. She never had any doubt that she would get there.

Mae won a scholarship to Stanford University in California. She was only 16 years old, but she learned a lot in her studies in science and in the arts. She double majored in chemical engineering and Afro-American studies. While on campus, she planned and performed in dance performances. After graduating from Stanford in 1977, she went to Cornell University Medical College in New York. In 1981, Mae became a doctor.

# Introducing Mae Jemison, the Star

During summer breaks from school, Mae went to Cuba and Kenya to learn about medical care in other countries. Mae wanted to use her medical degree to help others. After her experiences abroad, she decided to join the Peace Corps in 1983. She served in the Peace Corps for two and a half years. During her time as a medical officer in the Peace Corps, she was able to use her knowledge of Swahili while working in West Africa. Not only does Mae speak English and Swahili, but she speaks Russian and Japanese as well.

## Launching Her Way into the History Books

Over the years, Mae continued to think about her dream to go to space, so she applied to be an astronaut for NASA. Even though Mae's first application was denied because NASA stopped taking on astronauts at the time, she didn't give up! She applied a second time. In 1987, Mae was one of fifteen people chosen to become an astronaut out of 2,000 applicants.

Five years later, Mae worked on the STS-47 mission to study life in space. NASA had a joint mission with Japan for this flight. On the same mission was the first Japanese national to fly in space, Mamoru Mahri. Mae studied in space for eight days. Her experience in space was so important that she wanted to encourage more space travel.

## Continuing Her Scientific Work

After leaving NASA, Mae started her own businesses. One business was a camp called "The Earth We Share." It started through the Dorothy Jemison Foundation for Excellence, named after Mae's mother in honor of her work as an educator. The camp helps kids learn more about science. Kids go to the camp from around the world. At the camp, young scientists get to use their imagination and share their ideas about future missions.

Mae currently lives in Houston, Texas. There she is leading the 100 Year Starship (100YSS) initiative through the United States Defense Advanced Research Projects Agency (DARPA). The goal of this DARPA program is to make sure human space travel to another solar system is possible within the next 100 years. In 2012, Mae's team won a grant to research how to travel to other stars.



# Introducing Mae Jemison, the Star

## Combining Arts and Science

All throughout her life, Mae had an artistic side. She is trained as a dancer, choreographer, and actor. Using her training, she has appeared on television over the years. When she was younger, she looked up to Uhura, a female officer in the television show Star Trek. Her real life blurred with her childhood imagination as she guest starred in the television show Star Trek: The Next Generation. Mae jumped at the chance to play Lt. Palmer in one episode. This was another example of her childhood dream coming true. It was also another experience that showed Mae the importance of the arts in expanding her imagination.

In her TED talk in 2002, Mae said, "We need to revitalize the arts and sciences right now in 2002." She says that understanding the arts can help young learners understand science better. Mae ended her TED talk by saying, "I like to think of ideas as potential energy. They're really wonderful, but nothing will happen until we risk putting them into action." She thinks it's time to act; it's time to teach the arts and science together.

There is no doubt that Mae used her imagination and worked hard to go beyond her normal boundaries. She is still trying to go beyond her earthly boundaries. The world, and maybe even a new star, is her oyster.

**Directions: Answer the questions using evidence from the text.**

1. What are some things Mae Jemison liked to do?

2. Why is Mae Jemison famous?



# Introducing Mae Jemison, the Star

3. What is a challenge Mae Jemison had in her life?
4. What does Mae Jemison mean when she says, "I like to think of ideas as potential energy. They're really wonderful, but nothing will happen until we risk putting them into action." Use information from the text to support your answer.
5. Reread the last section of the biography. Do you think teachers should teach arts and science together? Why or why not? Do outside research to support your answer.
6. In all of the journeys in her life, whether they were on earth or outer space, Mae Jemison used her scientific knowledge to help others. Write about a career you would like to try that can help people, too.

Name \_\_\_\_\_

Date \_\_\_\_\_

# Two Truths and One Lie: Mae Jemison



Read the three statements about Mae Jemison. Can you figure out which two statements are true and which one is false? Research using books, articles, or websites to confirm your answer. Circle the lie.

**1** Doctor Mae Jemison joined the Peace Corps after earning her medical degree from Cornell Medical School.

**2** When travelling on the space shuttle *Challenger*, Mae Jemison became the first African American female astronaut to enter space.

**3** Jemison grew up in Chicago, and that is where she continued her love of dance and studies in science.

Answer these questions after doing some research.

1. Fix the false statement so that it is now true.
2. Choose a fact about Mae Jemison you think is important.
3. Explain why you chose that fact to share.
4. On a separate sheet of paper, write a paragraph about Mae Jemison using more than two sources for information (like a website and an article).

# Its or It's?

Circle the correct word in each sentence.

**Its** is a **possessive** pronoun.

**It's** is a **contraction** that means it is.

The tiger licked **its** **it's** paw.

I wonder if **its** **it's** going to rain tomorrow.

**Its** **It's** time to go to school.



My cat and **its** **it's** kittens are taking a nap.

**Its** **It's** going to be a long walk to the train.

That dress is beautiful! **Its** **It's** color is perfect for you.

I'm glad **its** **it's** sunny outside today.

Your puppy is so cute, what's **its** **it's** name?

Hurry up and catch the train! **Its** **It's** coming!

Have you seen my toy? **Its** **It's** not in **its** **it's** box.

# Solar System Subtraction: The 6th Planet

What's the 6th planet from the sun? Find out by finding the difference, then using the letters to spell out the name.

**B**

$$\begin{array}{r} 94 \\ - 74 \\ \hline \end{array}$$

**G**

$$\begin{array}{r} 47 \\ - 21 \\ \hline \end{array}$$

**N**

$$\begin{array}{r} 78 \\ - 45 \\ \hline \end{array}$$

**R**

$$\begin{array}{r} 98 \\ - 12 \\ \hline \end{array}$$

**A**

$$\begin{array}{r} 49 \\ - 13 \\ \hline \end{array}$$

**U**

$$\begin{array}{r} 92 \\ - 70 \\ \hline \end{array}$$

**K**

$$\begin{array}{r} 98 \\ - 21 \\ \hline \end{array}$$

**T**

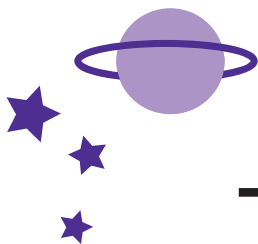
$$\begin{array}{r} 97 \\ - 55 \\ \hline \end{array}$$

**S**

$$\begin{array}{r} 53 \\ - 40 \\ \hline \end{array}$$

**C**

$$\begin{array}{r} 77 \\ - 61 \\ \hline \end{array}$$



\_\_\_\_\_

13    36    42    22    86    33

It has sixty one known moons. It is best known for its rings.

# Day 2

<b>Reading</b>	Use your research skills to match each person to the correct description.
<b>Writing</b>	Dream big and design your very own planet.
<b>Grammar Practice</b>	Learn how compound sentences are connected and then practice joining together simple phrases.
<b>Math</b>	Find the sum to break the code.



# Who Am I? Women in Space

**Directions:** Read each description below. Then, use books and digital research tools to help you match the person to the description. Cut and paste the person's image and name to the correct description. Then, conduct further research using the instructions below.

Research Directions:

- Research one of the women online and/or by finding books at the library.
- Next, create a blog, piece of writing, poster, or artwork to teach others about what you learned.

<p>I was born in Boston and went to Harvard University for college. I am an American engineer and a NASA astronaut. I flew to space onboard three Space Shuttle missions. I'm the second African American female to go into space. I spent 42 days in space, which is the record for the most time any African American astronaut has spent in space.</p>	<p>Who am I?</p>
<p>I was born in California. As a student, I loved math and science. I also loved playing tennis. In 1977, I applied to be an astronaut at NASA and was hired. At first, I worked to support other space shuttle flights. I also helped develop the robotic arm that helps put satellites into space. In 1983, I became the first American woman in space.</p>	<p>Who am I?</p>
<p>I was born in Karnal, Haryana, India. As a kid, I loved to learn about airplanes and flying. I moved to the United States in 1982 after getting my degree in India. I began working at NASA in 1988 as a researcher to learn about takeoff and landing. My first space mission was in 1997, when I was the first Indian woman to fly in space.</p>	<p>Who am I?</p>
<p>I was born in Alabama, but grew up in Chicago. As a child, I loved dancing and science. I joined the Peace Corps after earning a medical degree from Cornell Medical School. I traveled on the space shuttle <i>Endeavour</i> as a mission specialist. That is when I became the first African American female astronaut to enter space.</p>	<p>Who am I?</p>



Kalpana Chawla



Mae Jemison



Sally Ride



Stephanie Wilson



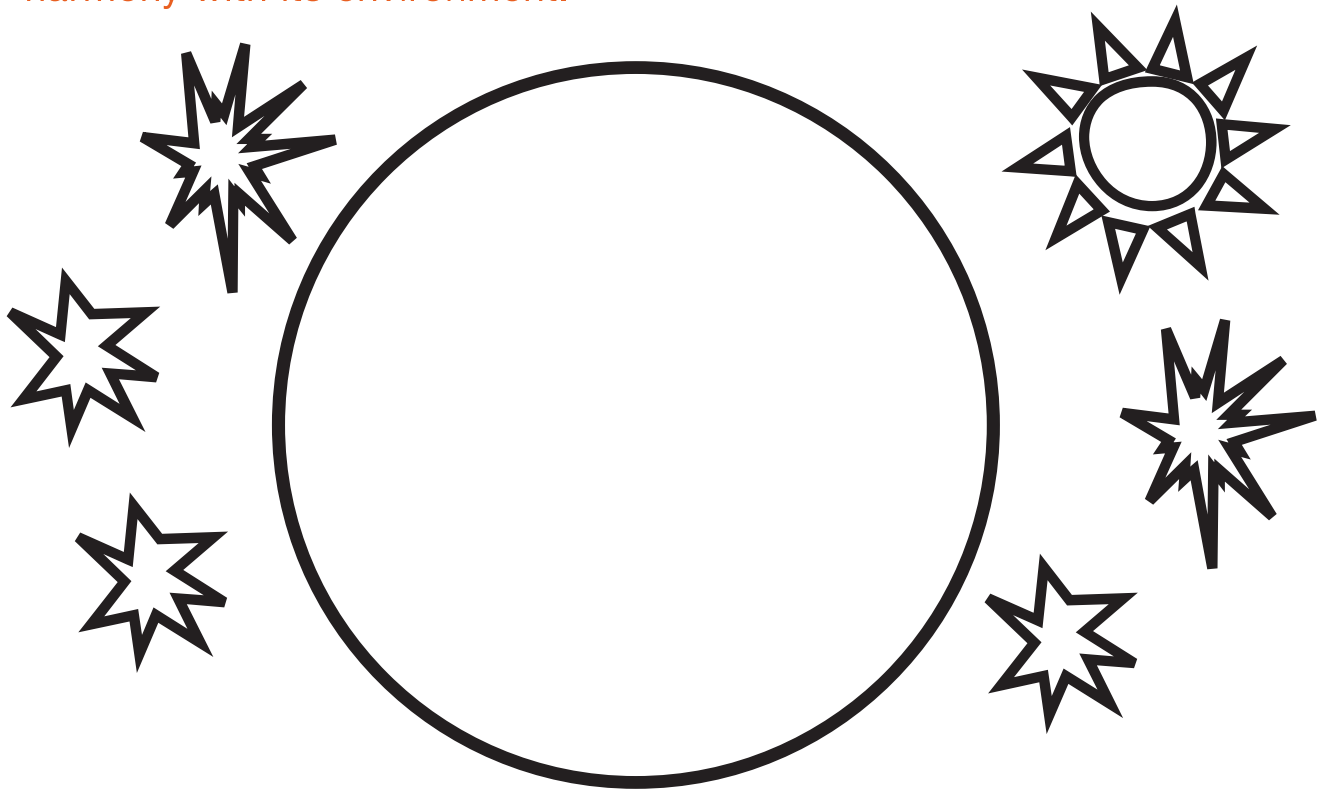
Name \_\_\_\_\_

Date \_\_\_\_\_

# MAKE A PLANET

Billions and billions of stars thrive in our universe, and many more planets orbit around those very stars. Astronomers and space enthusiasts hope that one day we will find a planet like Earth and work towards inhabiting it.

Scientists have just discovered a new planet. Draw a picture of it and come up with ways that humans can live on this planet in harmony with its environment.



**What is the name of your planet?** \_\_\_\_\_

**How will people be able to live there?** \_\_\_\_\_

\_\_\_\_\_

**What steps will you take to protect the planet's environment?**

\_\_\_\_\_

\_\_\_\_\_

# Compound Sentences

A **compound sentence** is made up of two or more complete sentences connected by a conjunction ( a joining word ) such as **and**, **but**, or **so**.

Tom walked through the haunted house, but he wasn't scared at all.

Create your own compound sentences on the lines below by combining a sentence from column A with one from column B and connecting them with a conjunction. You can use sentences more than once.

**A**

**B**

Jan went to the carnival.

She had a great time.

Jan wanted to ride the roller coaster.

She rode on all the rides.

She didn't have enough money.

Jan played arcade games.

She didn't stay for long.

She stood in a long line.

Jan tried to win a stuffed bear.

It started to rain.

Jan started to get hungry.

She won a kewpie doll.

She bought a hot dog.

example Jan went to the carnival, but she didn't stay for long.

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_



# SECRET CODE MATH

Hello! I'm Ninja Aki. I've coded these addition problems. Decode the numbers using the chart below and solve, regroup if needed.



0	1	2	3	4	5	6	7	8	9
🎯	△	⚡	Ω		∩	♄	⚙	✓	∪

<p>CODE NUMBERS</p> $  \begin{array}{r}  \text{⚡} \text{🎯} \text{⚙} \text{Ω} \\  + \text{∩} \text{  } \text{  } \text{⚙} \\  \hline  \text{⚙} \text{∩} \text{⚡} \text{🎯}  \end{array}  $	<p>REGULAR NUMBERS</p> $  \begin{array}{r}  \overset{1}{2} \overset{1}{0} 7 3 \\  + 5 4 4 7 \\  \hline  7 5 2 0  \end{array}  $	<p>CODE NUMBERS</p> $  \begin{array}{r}  \text{△} \text{∩} \text{Ω} \text{🎯} \\  + \text{  } \text{▲} \text{⚙} \text{🎯} \\  \hline  \end{array}  $	<p>REGULAR NUMBERS</p> $  \begin{array}{r}  \\  + \\  \hline  \end{array}  $
<p>CODE NUMBERS</p> $  \begin{array}{r}  \text{⚙} \text{  } \text{⚡} \text{△} \\  + \text{△} \text{∩} \text{⚙} \text{△} \\  \hline  \end{array}  $	<p>REGULAR NUMBERS</p> $  \begin{array}{r}  \\  + \\  \hline  \end{array}  $	<p>CODE NUMBERS</p> $  \begin{array}{r}  \text{✓} \text{Ω} \text{∩} \text{✓} \\  + \text{⚡} \text{∪} \text{♄} \text{△} \\  \hline  \end{array}  $	<p>REGULAR NUMBERS</p> $  \begin{array}{r}  \\  + \\  \hline  \end{array}  $
<p>CODE NUMBERS</p> $  \begin{array}{r}  \text{⚙} \text{∪} \text{⚡} \text{🎯} \\  + \text{Ω} \text{♄} \text{  } \text{✓} \\  \hline  \end{array}  $	<p>REGULAR NUMBERS</p> $  \begin{array}{r}  \\  + \\  \hline  \end{array}  $	<p>CODE NUMBERS</p> $  \begin{array}{r}  \text{✓} \text{Ω} \text{Ω} \text{⚙} \\  + \text{⚙} \text{∩} \text{  } \text{🎯} \\  \hline  \end{array}  $	<p>REGULAR NUMBERS</p> $  \begin{array}{r}  \\  + \\  \hline  \end{array}  $
<p>CODE NUMBERS</p> $  \begin{array}{r}  \text{  } \text{⚡} \text{△} \text{♄} \\  + \text{∪} \text{∩} \text{✓} \text{⚡} \\  \hline  \end{array}  $	<p>REGULAR NUMBERS</p> $  \begin{array}{r}  \\  + \\  \hline  \end{array}  $	<p>CODE NUMBERS</p> $  \begin{array}{r}  \text{Ω} \text{∩} \text{∩} \text{⚙} \\  + \text{✓} \text{🎯} \text{∪} \text{♄} \\  \hline  \end{array}  $	<p>REGULAR NUMBERS</p> $  \begin{array}{r}  \\  + \\  \hline  \end{array}  $

# Day 3

<b>Reading</b>	Right now the Earth is spinning, even though we can't feel it. Do you know why?
<b>Writing</b>	Would you rather travel through time or travel through space?
<b>Grammar Practice</b>	Use these possessive pronouns to rewrite sentences, making them shorter and cleaner.
<b>Math</b>	Collect data around the house for this graph.



# Why does the earth spin?

The Earth spins because there is nothing in its way to stop it!

Long before our planet was a solid sphere, there was just a mass of dust and gas. Earth was formed when all this matter began to spin. That's how most planets and stars are formed!

Thousands of years later, the spinning cloud of dust and gas became our planet, and thanks to our position in the Solar System, neither the sun nor the moon had the power to slow Earth's rotation enough to halt it completely.

## QUESTION & ANSWER:

What was Earth before it became a solid sphere?

.....

.....

How was Earth formed?

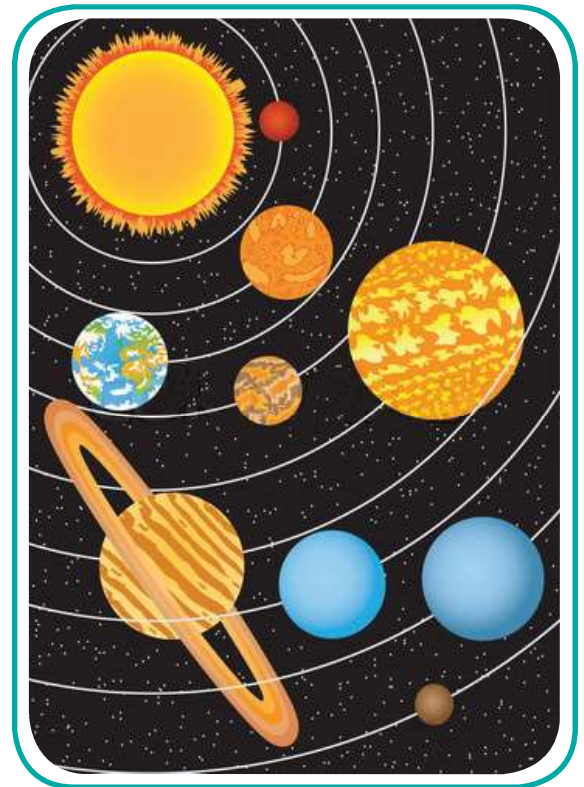
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Can the sun and the moon stop Earth from spinning?

.....

.....



Imagine the Earth did not spin.  
How would this affect your life?

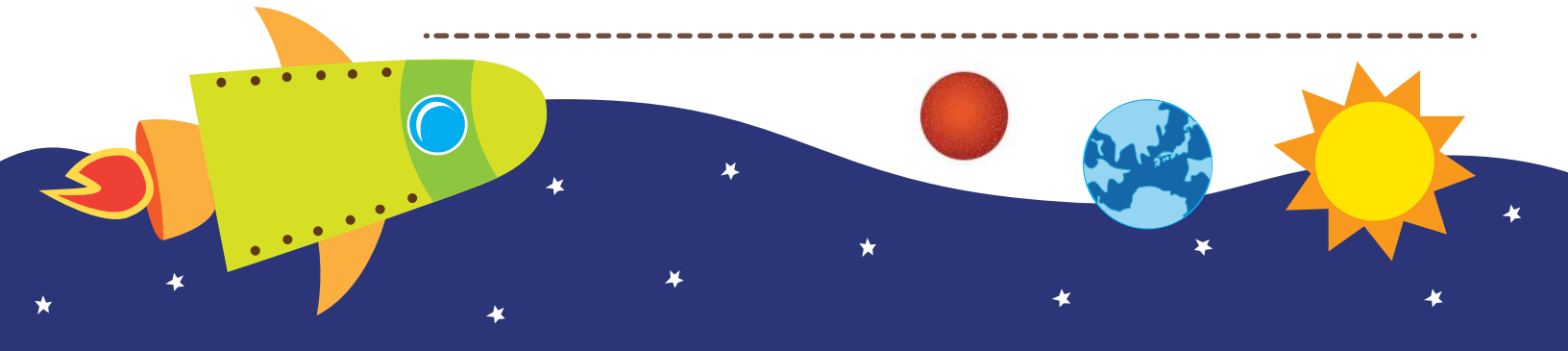
★ Remember that the Earth's rotation is responsible for the sun rising and setting. If the Earth did not spin, parts of our planet would spend half a year in darkness and another half a year in full sunlight.

## CREATIVE WRITING

Would you rather...  
Travel through time, or travel through outer space?



A series of horizontal dashed lines for writing.





# Collecting Data Sets

Collecting data is an important part of math and science. For practice, let's use the home or classroom as an investigative environment. Fill in the chart below by counting up the items that you see in your home or classroom.

desks									
books									
windows									
chairs									
lamps									
pictures on walls									
shelves									

1      2      3      4      5      6      7      8      9

The data collection process is more than just counting. For example, the set of desks in a classroom will likely include a large number of student desks, but it will also include the teacher's desk and maybe other desks or tables.

How do you record the teacher's desk? It's not a "student" desk, but it still belongs in the set of desks. How do you record the difference?

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In the set of shelves, other choices will have to be made. What if some of your shelves are attached to the walls, and some are not? They all belong in the set of shelves, but how will you record the difference?

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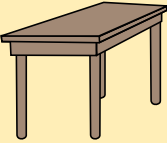

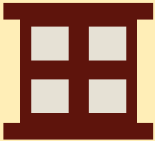



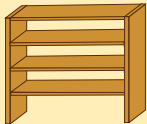
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# Collecting Data Sets

Think of different ways to organize each set into categories. Some sets may have only two categories, but others may have a lot. Record the number of items in each category using tally marks.

# Day 4

<b>Reading</b>	Gemini 4 set the scene for later space triumphs for the United States.
<b>Writing</b>	Learn about what makes a planet, a planet.
<b>Grammar Practice</b>	Learn all about apostrophes in possessives.
<b>Math</b>	Follow the directions to add, subtract or multiply.

