

4-5 At-Home Learning Resources

(Blue Packet)

Week #11

The Richland School District cares deeply about the well-being of our students and families. We highly encourage our students and families to set a daily routine that includes the following:

For our elementary families:

- Read daily with your child
- Play family games (board games, cards, puzzles, charades, pictionary, etc.)
 - Engage in an outside activity
 - Cook/bake with your child
- Maintain relationships with your child's teacher

These supplemental activities, readings, and other resources are available to students and families to continue learning and exploring while schools are closed in response to the novel coronavirus.

Students are not required to complete and/or turn in any assignments nor will any of these materials be used to assess students academically. Please feel free to use these optional resources as needed. Additional resources are available at:

<https://www.rsd.edu/programs/at-home-learning/pre-k-elementary-resources>

IMAGINE YOUR STORY

SUMMER READING CHALLENGE

Featuring challenges, prizes, and more for every age!

Babies



Children




Middle & High Schoolers



Adults



June 1 - August 31, 2020

Register and log your reading online at
richland.beanstack.org and with the  Beanstack app
on your phone or tablet



**RICHLAND
PUBLIC LIBRARY**

For More Information, visit:
www.richland.lib.wa.us























collaborative
summer library program™



Can't log online? Get started on this log!

Each space in the grid counts as 30 minutes. Date each space as you read.





















Name _____ Are you a Child ____ Teen ____ or Adult ____

 _____	 _____	 _____	 _____	 _____
 _____	 _____	 _____	 _____	 _____
 _____	 _____	 _____	 _____	 _____
 _____	 _____	 _____	 _____	 _____

Is there another person in your family who wants to start logging reading minutes?

Use this grid:

Name _____ Child ____ Teen ____ Adult ____

 _____	 _____	 _____	 _____	 _____
 _____	 _____	 _____	 _____	 _____
 _____	 _____	 _____	 _____	 _____
 _____	 _____	 _____	 _____	 _____

Bring this sheet to the library to find out which prizes you are eligible for.



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V.029

Vocabulary

Word Analysis

Category Tag



Objective

The student will produce words for categories.



Materials

- ▶ Game board (Activity Master V.029.AM1a - V.029.AM1b)
- ▶ Number cube (Activity Master V.013.AM3)
- ▶ Game pieces (e.g., counters)

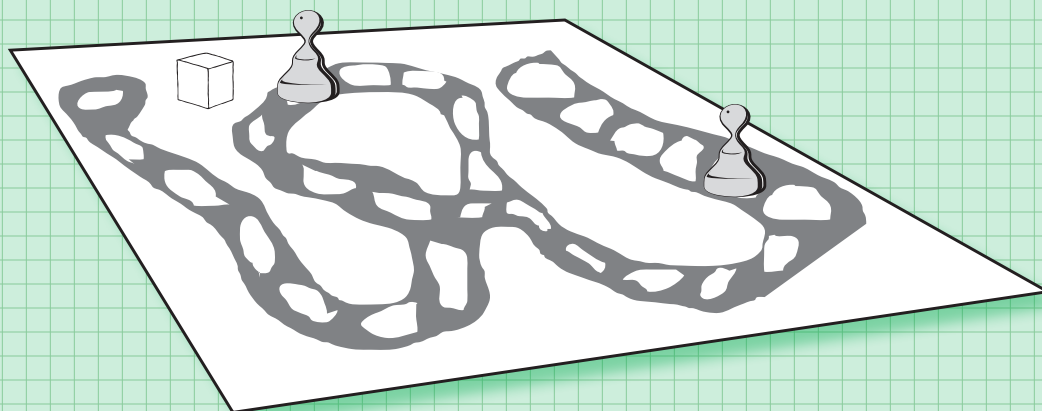


Activity

Students state words that correspond to categories by playing a board game.

1. Place game board, number cube, and game pieces on a flat surface.
2. Taking turns, students roll the number cube and move game piece the number of spaces shown.
3. Say category (e.g., space things).
4. State three or more words or phrases that correspond to the category (i.e., Mars, moon, and satellite).
5. If correct, leave game piece on the space. If incorrect, place game piece back on the previous space.
6. Continue until both students reach the end.
7. Peer evaluation

"I landed on 'space things.' Mars, moon, and satellite are examples of space things."



Extensions and Adaptations

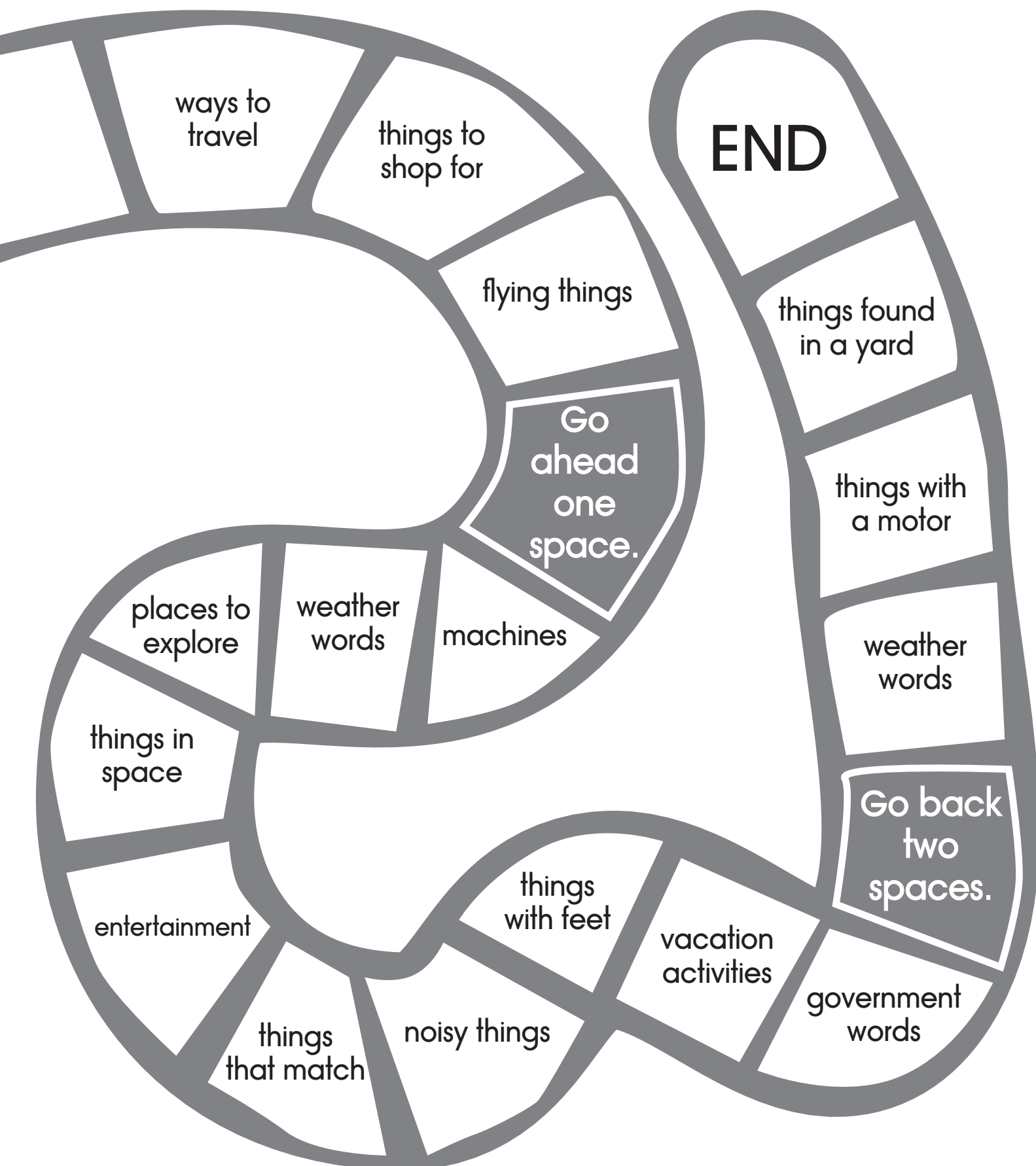
- ▶ Make games using other categories (Activity Master V.029.AM2a - V.029.AM2b).
- ▶ Cross out the word that does not belong and label (Activity Master V.029.SS).

Vocabulary

Category Tag

V.029.AM1a





Vocabulary

Category Tag

V.029.AM2a

START



The image features a large, winding path composed of connected squares, resembling a maze or a sequence of steps. The path starts at a square labeled 'START' at the top left and winds its way through the page, ending at a rectangular box in the upper center. The path is drawn with thick gray lines on a white background.

END

Name _____

Category Tag

V.029.SS

pulley	lever	hammer	screw	simple machines category
orbit	meteor	revolve	rotate	category
witty	nervous	tense	jumpy	category
friend	companion	stranger	partner	category
plate	stop sign	wheel	frisbee	category
governor	dentist	president	mayor	category
dogwood	sunflower	goldenrod	violet	category
monitor	surfboard	keyboard	mouse	category
multiplication	subtraction	division	musician	category
sun	rain	snow	hail	category



C.041

Comprehension

Monitoring for Understanding Strategies Game



Objective

The student will use multiple strategies to comprehend text.



Materials

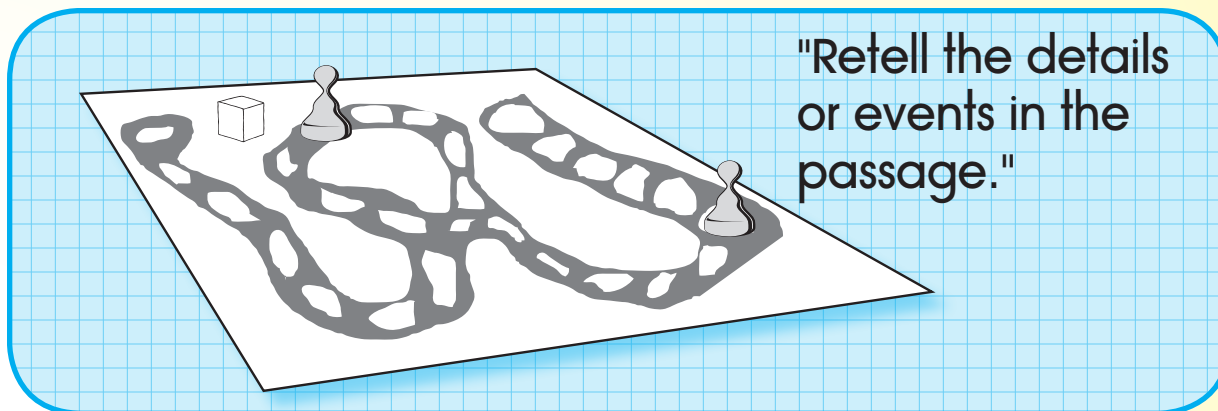
- ▶ Narrative or expository text
Choose text within students' instructional-independent reading level range.
- ▶ Game board (Activity Master C.041.AM1a - P.041.AM1b)
- ▶ Number cube (Activity Master C.026.AM3)
- ▶ Sticky notes
Place strategically throughout text to facilitate answering questions or completing tasks on game board.
- ▶ Game pieces (e.g., counters)



Activity

Students read text and use strategies to comprehend text by answering questions.

1. Place game board, game pieces, and number cube on a flat surface. Provide each student with a copy of the text that has been marked with sticky notes. Students place game pieces on space that reads, BEFORE READING.
2. Taking turns, students roll the number cube and move game piece that many spaces.
3. Read question or task and answer orally. Then move game piece to space that says, START READING.
4. Read text aloud and stop at the sticky note.
5. Roll number cube and move game piece that many spaces.
6. Read question or task and answer it as it relates to what has just been read. Note: If, at any time, there is a dispute about the answer given, students are encouraged to discuss it. If it can not be resolved, record question or task and answer, and discuss later with teacher.
7. Continue reading and answering questions or tasks until entire text is read. Note: If players reach END before text is completely read, go back to START READING and continue.
8. Peer evaluation



Extensions and Adaptations

- ▶ Record answers to selected questions (Activity Master C.041.SS).
- ▶ Read text with partner, stop periodically, select a card, and answer question or do task (Activity Master C.041.AM2a - C.041.AM2b).
- ▶ Write text-related questions on game board (Activity Master V.029.AM2a - V.029.AM2b).

Comprehension

Strategies Game

C.041.AM1a

BEFORE READING

What do you
know about the
topic or title?

What do you think
the text will be
about?

Why are you
reading this?

What do you
wonder about
the text?

START READING

Summarize
what you
just read.

What do you
think will
happen next?

What did the
author mean?

What is the
main idea?

Was what you
just read
stated clearly?
How could it have
been stated more
clearly?

Retell the details
or events in the
passage.

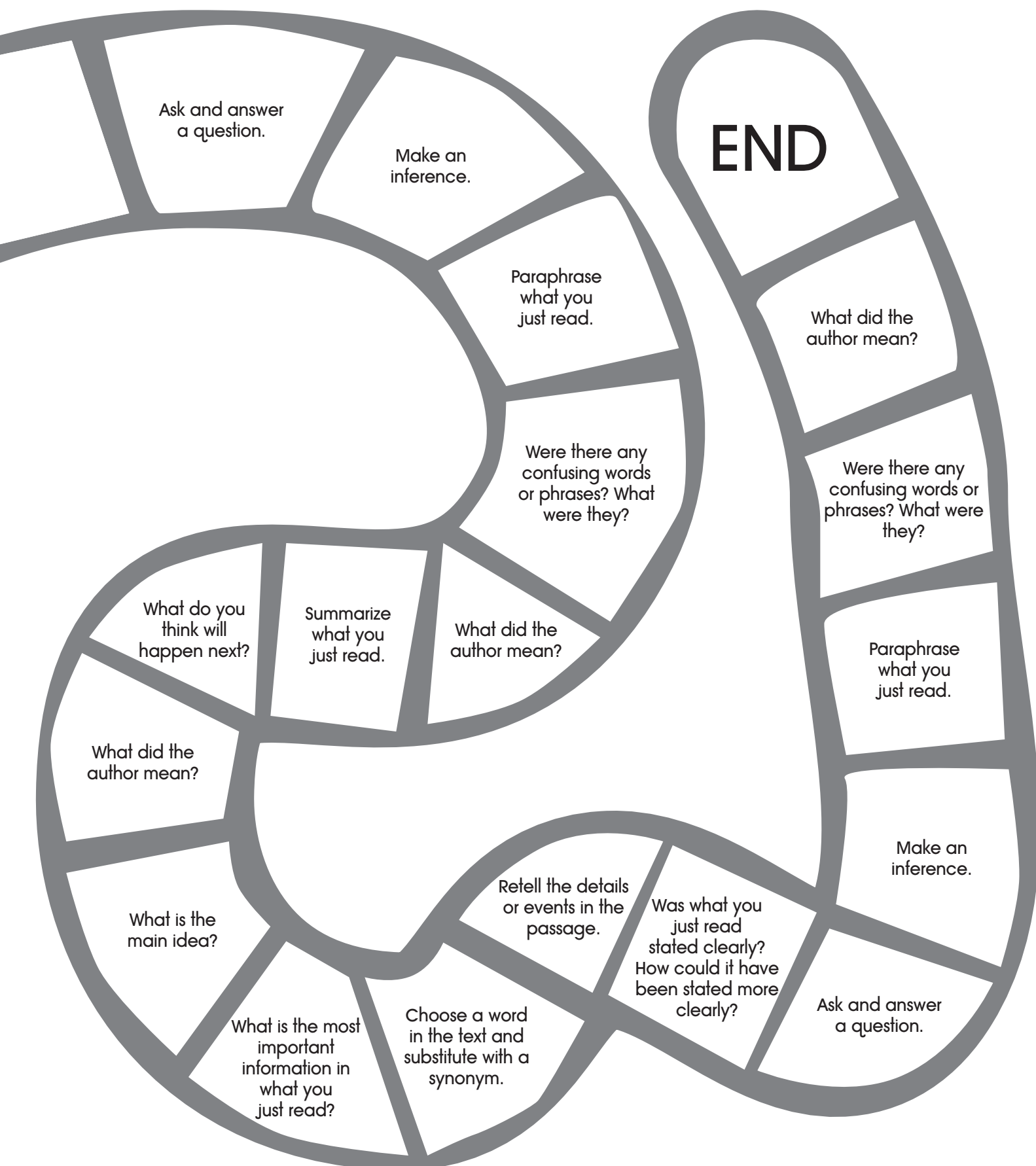
Choose a word
in the text and
substitute with a
synonym.

What is the most
important
information in
what you
just read?

Comprehension

C.041.AM1b

Strategies Game



Name _____

Strategies Game

C.04I.SS

1.	Ask and answer a question.
2.	Make an inference.
3.	What do you think will happen next?
4.	What is the most important information in what you just read?
5.	Summarize what you just read.
6.	Were there any confusing words or phrases? What were they?
7.	What is the main idea?
8.	Choose a word in the text and substitute with a synonym.

Comprehension

C.041.AM2a

Strategies Game

Paraphrase what
you just read.

What did the
author mean?

Were there any
confusing words
or phrases? What
were they?

What do you think
will happen next?

Was what you
just read stated
clearly?
How could it
have been stated
more clearly?

Summarize what
you just read.

question and task cards



Comprehension

Strategies Game

C.04I.AM2b

Retell the details
or events in the
passage.

Ask and answer
a question.

Choose a word
in the text and
substitute with a
synonym.

What is the
most important
information in
what you just
read?

What is the
main idea?

Make an
inference.

question and task cards



Questions to Ask Before, During, and After Reading

These are questions to help engage students in discussions and conversations about reading. These questions are just suggestions and other questions can be added to this list based upon the type of reading students are involved in.

Before Reading

- What is the title of the book or text?
- What does this title make you think about?
- What do you think you are going to read about? (Make a Prediction)
- Does this remind you of anything?
- Are you wondering about the text or do you have any questions before reading?
- Skim through the article. Do any pictures, key words, and/or text features stand out to you?

During Reading

- What is happening so far?
- What does the word _____ mean on this page?
- What do you think the author is trying to communicate in this part?
- What do you think was important in this section? Why do you think it was important?
- What can you infer from this part of the text?
- Where is the story taking place?
- Who are the characters so far?
- What do you think will happen next?
- What does this part make you think about?
- What questions do you have?
- What words help you visualize what the author is saying?
- Is there a word that you struggled with? What is the word? Let's break the word into parts and look at context clues.

After Reading

- What was this text about?
- What was the main idea? What details from the text helped you determine the main idea?
- What did you learn from this text?
- How did the author communicate his/her ideas?
- What does this text remind you of?
- What was your favorite part and why?
- Did this text have a problem? If so, what was the problem and what was the solution?
- What is your opinion about this text? What are some parts that helped you make that opinion?
- What are some questions you still have about the text?
- Does this text remind you of other texts you have read? How are they alike and/or different?
- What is a cause and effect from the text you read?

Measuring Temperature

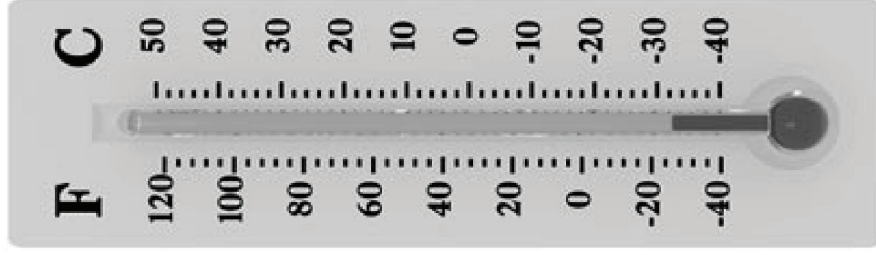
Cross-Curricular Focus: Physical Science

The thermometer is the most common tool for measuring **temperature**. Many thermometers use two different temperature scales: Fahrenheit and Celsius. You may have wondered how they relate to each other. Both scales were invented in the 1700's and are named after their inventors.

The Fahrenheit scale was invented by Gabriel Fahrenheit. He set the boiling point for water at 212°, and the freezing point at 32°. Temperatures are measured all along the scale, much like a number line or ruler. The unit of measurement for temperature is a degree, instead of an inch on a ruler.

Anders Celsius invented the Celsius scale after the Fahrenheit scale. He kept Fahrenheit's anchor points. The anchor points are the temperatures at which water would freeze or boil. Celsius however, changed the numbers of his temperature scale. Under the Celsius scale, water freezes at 0° and boils at 100°. This numbering scale has been adopted for most scientific purposes. It works well with the metric system.

Many thermometers work because liquid changes its volume, or the amount of space it takes up, based on its temperature. When a liquid is cold, it takes up less space than it does when it is warm. Many of the changes in temperature are very small. Thermometers use a large bulb filled with liquid and a very narrow tube to show the changes. The markings on the thermometer are based on the freezing point and boiling point of water. Why? Because Gabriel Fahrenheit chose them as conditions that are easy to recreate. Anders Celsius agreed. Sometimes, inventors set the standard for everyone.



Name: _____

Answer the following questions based on the reading passage. Don't forget to go back to the passage whenever necessary to find or confirm your answers.

1) Which scale came first: Fahrenheit or Celsius?

2) Why do scientists use the Celsius scale?

3) Why do many thermometers use liquid?

4) What is the unit of measurement for temperature?

5) Which temperature would be more comfortable for most people: 80° Fahrenheit or 80° Celsius?

Dear King George

Cross-Curricular Focus: History/Social Sciences



In the late 1700s the American colonists were unhappy with King George III of England. They didn't think he was doing what a good leader should do. He charged unfair taxes, would not allow trade with other countries and made colonists open their homes for soldiers to live with them. Colonists felt very far away from their king. Something needed to change. The colonists began to **rebel**.

The Second Continental Congress formed in 1775 after fighting began in the American Revolution. Made up of delegates from the 13 American colonies, the Congress met in Philadelphia to lead the colonies toward independence. In 1776, a committee of the Congress selected Thomas Jefferson to write a letter to King George III. Jefferson had already proven himself to be an honorable and knowledgeable man. He was also an excellent writer.

The letter was a dangerous thing, because it would be considered treason by the king. The Congress was opposing their lawful ruler. People who were associated with this letter could be imprisoned or killed for saying they wanted to be independent from the king.

Jefferson's historic letter became known as the Declaration of Independence. It listed all the reasons that the colonists thought the king was not a very good king. It said that the king and the colonists should break their relationship with each other, and each should go their own way.

Congress approved the Declaration of Independence on July 4, 1776. All the members of the Second Continental Congress signed it at the bottom. One of the men would become famous for his signature. John Hancock, president of the Second Continental Congress, signed in large, bold letters. His name has become a synonym for signature.

Name: _____

Answer the following questions based on the reading passage. Don't forget to go back to the passage whenever necessary to find or confirm your answers.

1) Who wrote the Declaration of Independence?

2) What was the Second Continental Congress?

3) Why would sending the letter be considered treason?

4) Name one thing King George was doing that the colonists considered unfair.

5) What was John Hancock's position in the Second Continental Congress?

Peter Pan

by J.M Barrie

The novel Peter Pan began as a play in 1904. The author of the play, J.M. Barrie, turned it into a novel in 1911. "Peter Pan" is the story of three English children: Wendy, John and Michael Darling. They meet the amazing Peter Pan, a boy who lives in magical Neverland. In this passage, the reader is introduced to Nana, the Darling children's nurse and nanny, who happens to be a dog.

Mrs. Darling loved to have everything just so, and Mr. Darling had a passion for being exactly like his neighbours; so, of course, they had a nurse. As they were poor, this nurse was a prim Newfoundland dog, called Nana, who had belonged to no one in particular until the Darlings engaged her. She had always thought children important, however, and the Darlings had become acquainted with her in Kensington Gardens, where she spent most of her spare time peeping into perambulators, and was much hated by careless nursemaids, whom she followed to their homes and complained of to their mistresses. She proved to be quite a treasure of a nurse. How thorough she was at bath-time, and up at any moment of the night if one of her charges made the slightest cry. Of course her kennel was in the nursery. She had a genius for knowing when a cough is a thing to have no patience with and when it needs stocking around your throat. She believed to her last day in old-fashioned remedies like rhubarb leaf, and made sounds of contempt over all this new-fangled talk about germs, and so on. It was a lesson in propriety to see her escorting the children to school, walking sedately by their side when they were well behaved, and butting them back into line if they strayed. On John's footer [in England soccer was called football, "footer" for short] days she never once forgot his sweater,



and she usually carried an umbrella in her mouth in case of rain. There is a room in the basement of Miss Fulsom's school where the nurses wait. They sat on forms, while Nana lay on the floor, but that was the only difference. They affected to ignore her as of an inferior social status to themselves, and she despised their light talk. She resented visits to the nursery from Mrs. Darling's friends, but if they did come she first whipped off Michael's pinafore and put him into the one with blue braiding, and smoothed out Wendy and made a dash at John's hair.

No nursery could possibly have been conducted more correctly, and Mr. Darling knew it, yet he sometimes wondered uneasily whether the neighbours talked.

He had his position in the city to consider.

Nana also troubled him in another way. He had sometimes a feeling that she did not admire him. "I know she admires you tremendously, George," Mrs. Darling would assure him, and then she would sign to the children to be specially nice to father. Lovely dances followed, in which the only other servant, Liza, was sometimes allowed to join. The gaiety of those romps! And gayest of all was Mrs. Darling, who would pirouette so wildly that all you could see of her was the kiss, and then if you had dashed at her you might have got it. There never was a simpler happier family until the coming of Peter Pan.

Understanding “Peter Pan”

I. Character Match

Match the characters to the phrase that best describes them by writing the letter of the phrase in the blank.



- | | |
|-----------------------|---------------------------------------|
| 1. _____ Mr. Darling | A. The other servant in the household |
| 2. _____ Mrs. Darling | B. Played “footer” |
| 3. _____ Nana | C. Liked everything “just so” |
| 4. _____ Liza | D. The daughter in the Darling home |
| 5. _____ John | E. He thought Nana didn’t admire him. |
| 6. _____ Wendy | F. A Newfoundland dog |

II. Multiple Choice

Circle the correct answer to each question.

- | | |
|---|---|
| 1. How did the other nurses feel about Nana?
A. They liked her very much.
B. They thought she was below than them.
C. They were afraid she would bite them.
D. They thought she danced funny. | 4. How did Mr. Darling feel about the neighbors (neighbours)?
A. He ignored them.
B. He wanted to be just like them.
C. He thought they were silly.
D. He hated them. |
| 2. Who had Nana belong to before the Darlings?
A. no one
B. Miss Fulsom
C. Liza
D. the other nurses | 5. Who gave the children baths?
A. Mrs. Darling
B. Wendy
C. Liza
D. Nana |
| 3. Where was Nana’s kennel?
A. In the basement of Miss Fulsom’s school
B. In the stable
C. In the garden
D. In the nursery | 6. What was the Darling family like?
A. Rich and happy
B. Unhappy
C. Poor but happy
D. The largest in the neighborhood |

Use of Language in “Peter Pan”

I. Differences in British and American English

British English and American English words are sometimes different. Below are some British English words used in the “Peter Pan” passage and their American English equivalent. Write the correct letter for the American English word in the blank next to the British English word.

- | | |
|------------------------|-------------------|
| 1. _____ neighbours | A. apron |
| 2. _____ perambulators | B. neighbors |
| 3. _____ footer | C. benches |
| 4. _____ pinafore | D. soccer |
| 5. _____ sweater | E. baby carriages |
| 6. _____ forms | F. jersey |



II. Using Context to Understand Vocabulary

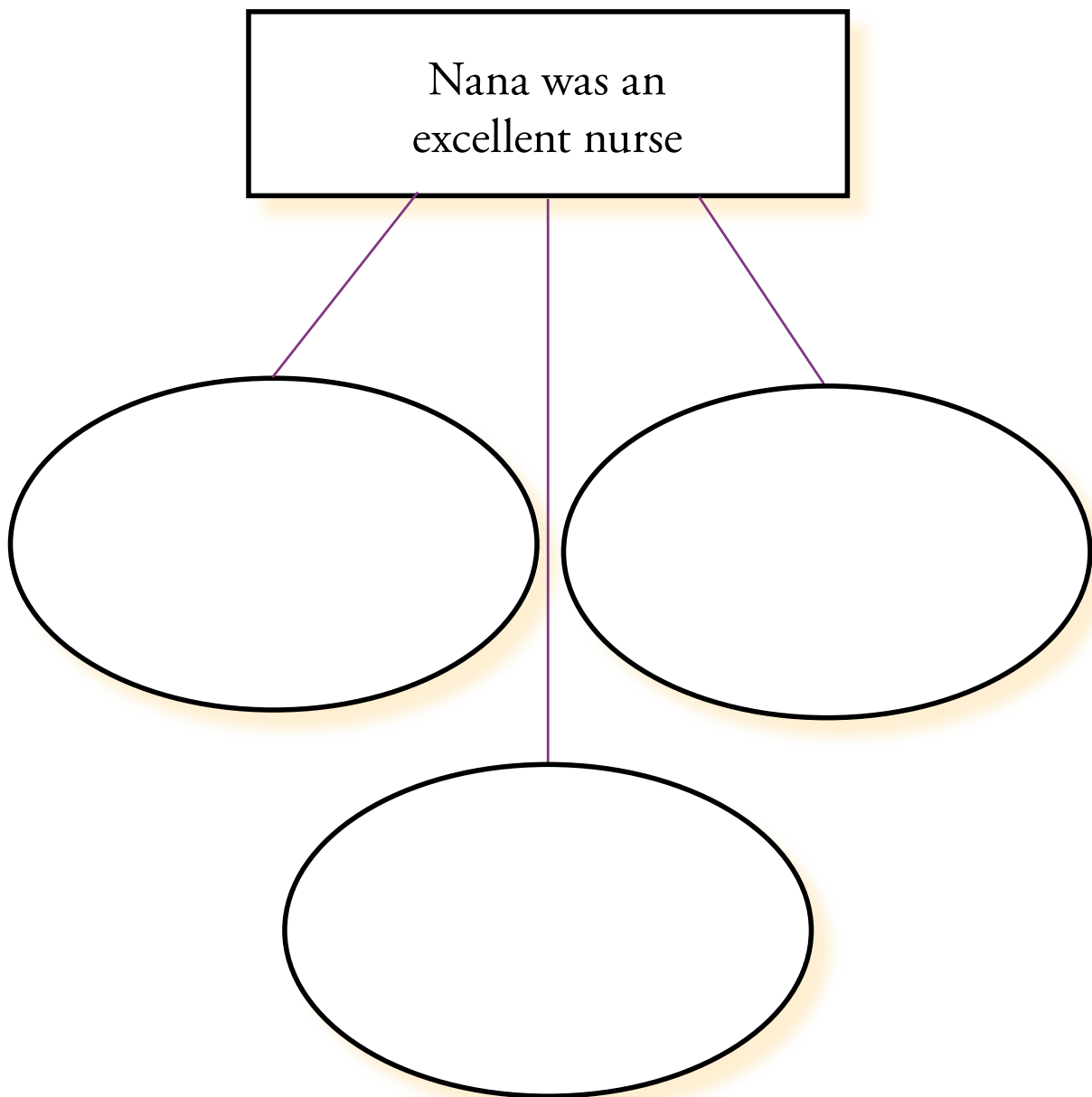
Below are quotations from the passage from *Peter Pan*. Circle the letter of the correct meaning for each underlined word or phrase.

- “Mrs. Darling loved to have everything just so...”
A. expensive B. colorful C. perfect D. dusted
- “...Nana, who had belonged to no one in particular until the Darlings engaged her.”
A. gave a home to B. bought C. became friends with D. hired
- “...up at any moment of the night if one of her charges made the slightest cry.”
A. puppies B. other nurses C. people whom she was responsible for D. guests
- “They affected to ignore her as of an inferior social status to themselves...”
A. lower B. higher C. equal D. different
- “The gaiety of those romps!”
A. conversations B. very active play sessions C. loud singing of songs D. games of hide and seek
- “Mrs. Darling, who would pirouette so wildly...”
A. jump up and down B. hug C. applaud D. turn while dancing

Name: _____

Peter Pan: Supporting the Main Idea

For the main idea listed in the rectangle, write in your own words three supporting ideas from the text in the ovals.



Name: _____

Peter Pan: What's Your Story?

What if a family today had a children's nurse like Nana? What would the dog be like? What kind of things would it have to do to take care of the children? What would the neighbors think of that kind of nurse? In the space below, write about this modern Nana.

[illegible]

Name: _____

Fun With Words: Peter Pan Word Search

Circle each word from the list in the puzzle. The words can go in any direction

I	N	F	E	R	I	O	R	D	S	R	A	B	W	D
R	O	T	A	L	U	B	M	A	R	E	P	N	B	C
P	U	V	Z	N	H	J	R	Y	O	Q	S	A	O	O
F	I	O	R	J	K	F	H	E	B	M	P	N	H	N
D	K	N	Z	E	V	C	T	K	H	E	D	A	W	K
O	E	B	A	B	T	T	H	D	G	U	T	V	D	S
K	G	L	E	F	E	O	A	Q	I	M	D	O	R	E
O	D	U	G	U	O	R	O	Q	E	B	G	E	V	O
D	A	Z	O	N	L	R	R	F	N	R	T	L	N	I
J	N	R	F	I	A	J	E	T	W	E	N	D	Y	U
L	I	C	N	H	O	F	O	W	P	L	E	O	B	K
P	M	G	V	D	P	Q	W	H	C	L	S	C	K	K
L	E	A	H	C	I	M	P	E	N	A	R	M	Z	S
W	Q	D	T	M	U	Y	V	Z	N	J	U	X	C	A
R	Z	C	Q	O	K	T	Z	Q	F	O	N	F	M	J

DARLING

JOHN

NEWFANGLED

PINAFORE

DOG

MICHAEL

NURSE

PIROUETTE

FOOTER

NANA

PERAMBULATOR

UMBRELLA

INFERIOR

NEIGHBORS

PETER

WENDY

Point of View: Who Is Telling the Story?

The narrator tells what happens in a story. Sometimes it is a character in the story, or sometimes it is someone else who does not take part in the story. There are two main types of narrators: first person and third person.

In first person narrations, the narrator is usually a main character and uses *I* and *me*.

In third person narrations, the narrator is not a main character and uses *she*, *he*, *they* or *it*. The words *I* and *me* are only used in conversations.

Below are some passages from books. Read them and write what type of narration it is: first person or third person. The briefly explain your reasons.

1. My father had a small estate in Nottinghamshire: I was the third of five sons. He sent me to Emanuel College in Cambridge at fourteen years old, where I resided three years, and applied myself close to my studies...

(Gulliver's Travels by Jonathan Swift)

2. Mr. Sherlock Holmes, who was usually very late in the mornings, save upon those not infrequent occasions when he was up all night, was seated at the breakfast table. I stood upon the hearth-rug and picked up the stick which our visitor had left behind him the night before.

(The Hound of the Baskervilles by Sir Arthur Conan Doyle)

3. Mary asked no more questions but waited in the darkness of her corner, keeping her eyes on the window. The carriage lamps cast rays of light a little distance ahead of them and she caught glimpses of the things they passed.

(The Secret Garden by Frances Hodgson Burnett)

4. Phileas Fogg was seated squarely in his armchair, his feet close together like those of a grenadier on parade, his hands resting on his knees, his body straight, his head erect; he was steadily watching a complicated clock which indicated the hours, the minutes, the seconds, the days, the months, and the years.

(Around the World in Eighty Days by Jules Verne)

5. At first I hated the school, but by and by I got so I could stand it. Whenever I got uncommon tired I played hookey, and the hiding I got next day done me good and cheered me up. So the longer I went to school the easier it got to be.

(The Adventures of Huckleberry Finn by Mark Twain)

6. Poor Jo would gladly have gone under the table, as one thing after another was tasted and left; while Amy giggled, Meg looked distressed, Miss Crocker pursed up her lips, and Laurie talked and laughed with all his might, to give a cheerful tone to the festive scene.

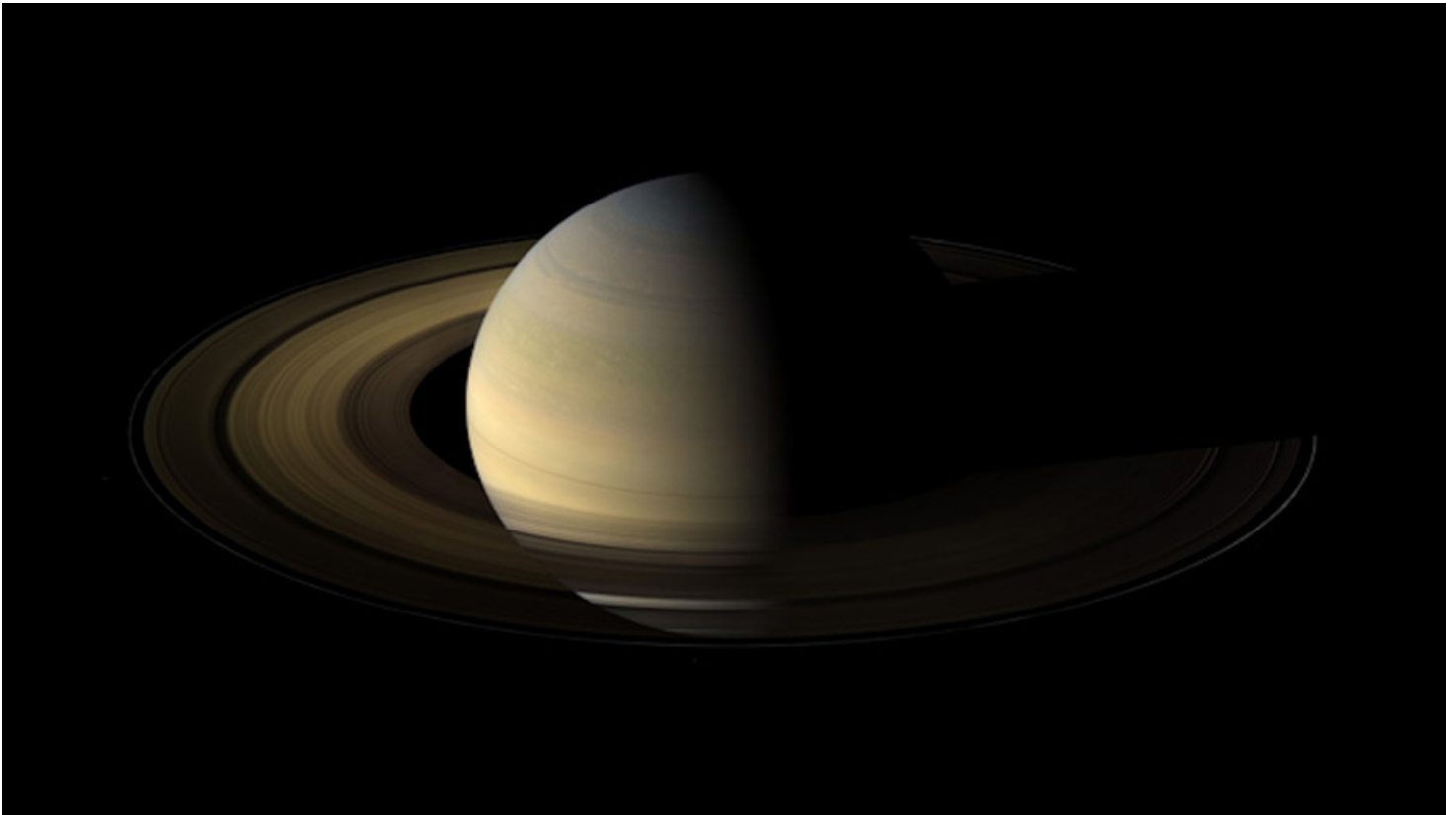
(Little Women by Louisa May Alcott)

Saturn, the jewel of our solar system

By NASA.gov, adapted by Newsela staff on 11.07.16

Word Count **739**

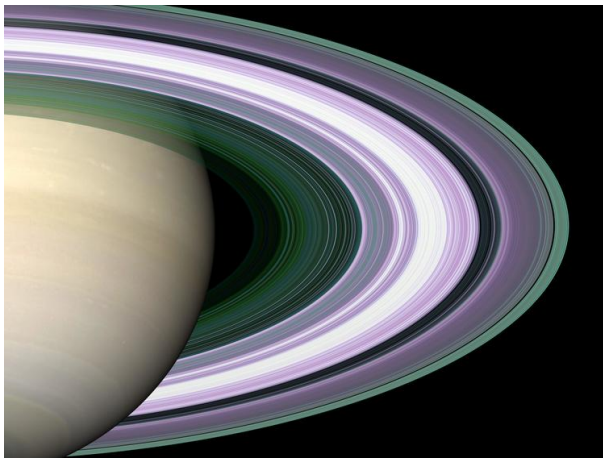
Level **970L**



TOP: Image of Saturn, September 21, 2009, NASA. BOTTOM: A simulated image of Saturn's rings, with color used to show the different particle sizes, NASA/JPL. Four of Saturn's moons come together in the Cassini spacecraft's field of view for this portrait, NASA/JPL-Caltech/Space Science Institute. Artist's rendering of Cassini arriving at Saturn, NASA.

Adorned with thousands of beautiful ringlets, Saturn is different from all the other planets. All four gas giant planets have rings made of chunks of ice and rock. None are as magnificent or as complicated as Saturn's, though. Like the other gas giants, Saturn is mostly a giant ball of hydrogen and helium.

Saturn was the farthest away of the five planets known to the ancients. In 1610, Italian astronomer Galileo Galilei was the first to gaze at Saturn through a telescope. He was surprised to see a pair of objects on either side of the planet. He sketched them as separate spheres, thinking that Saturn was triple-bodied. As he continued his observations, Galileo drew the bodies to Saturn's sides as arms or handles attached to it. In 1659, Dutch astronomer Christiaan Huygens looked at Saturn using a more powerful telescope than Galileo's. Huygens proposed that the planet was surrounded by a thin, flat ring. In 1675, Italian astronomer Jean-Dominique Cassini discovered a "division" between what are now called the A and B rings. The 3000-mile division is now known as the Cassini Division. It is the result of gravity from Saturn's moon Mimas.



QUICK FACTS

Planet Type

Gas Giant

Moons

53 confirmed and 9 provisional (for a possible total of 62 moons)

Orbit Size Around Sun

Metric: 1,426,666,422 km

English: 886,489,415 miles

What's in the Atmosphere?

Hydrogen, Helium

Scientific Notation: H₂, He

Composition Similar To Jupiter's

Like Jupiter, Saturn is made mostly of hydrogen and helium. Its volume is 755 times greater than that of Earth. Winds in the upper atmosphere reach 1,600 feet per second near the equator. On Earth, the strongest hurricane-force winds top out at about 360 feet per second. These super-fast winds, combined with heat rising from within the planet's interior, cause the yellow and gold bands visible in the atmosphere.

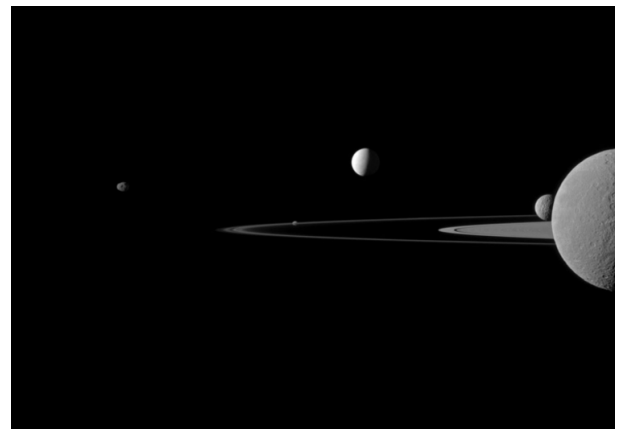
In the early 1980s, NASA's two Voyager spacecraft discovered that Saturn's rings are made mostly of water ice. The spacecraft captured images of "braided" rings and ringlets. These dark features form and initially circle the planet at different rates from that of the surrounding ring material.

Saturn's ring system extends tens of thousands of miles from the planet. The vertical height of the main rings, however, is typically about 30 feet. In autumn 2009, sunlight illuminated Saturn's rings edge-on. This allowed the Cassini spacecraft to capture images showing vertical formations in some of the rings. The material seems to pile up in bumps or ridges more than two miles tall.

Scientists have discovered 53 confirmed moons and another 9 possible moons. This means that Saturn may have as many as 62 moons. A moon is a type of satellite, or a body that orbits a planet.

One Moon Bigger Than Mercury

Saturn's largest satellite, Titan, is a bit bigger than the planet Mercury. The moon is shrouded in a thick, nitrogen-rich atmosphere. This atmosphere might be similar to what Earth's was like long ago. Further study of the moon promises to teach scientists much about planetary formation and, perhaps, about the early days of Earth.

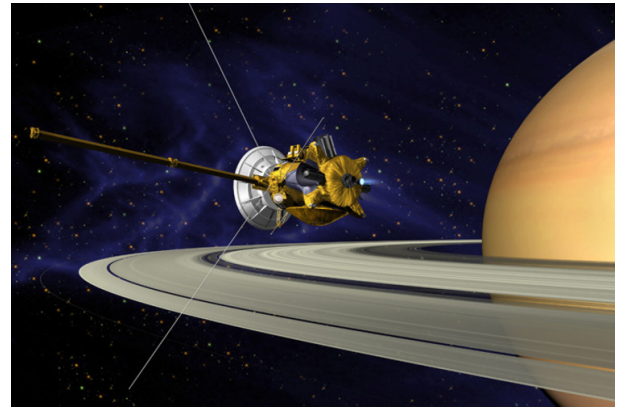


Saturn also has many smaller "icy" satellites. Each of Saturn's satellites is different. For example, Enceladus shows evidence of recent (and ongoing) surface changes. Iapetus has one hemisphere that is darker than asphalt and another as bright as snow.

At Saturn's center is a dense core of rock, ice, water and other compounds made solid by the intense pressure and heat. It is enveloped by liquid metallic hydrogen, inside a layer of liquid hydrogen. In this way, it's similar to Jupiter but much smaller. Saturn's magnetic field is also smaller than Jupiter's. Still, it is 578 times as powerful as Earth's.

Cassini Will Keep Orbiting For Another Year

The next chapter in scientists' knowledge of Saturn is being written now by the Cassini-Huygens mission. The Huygens spacecraft descended through Titan's atmosphere in January 2005. It collected information on the atmosphere and surface. The Cassini spacecraft has orbited Saturn since 2004. It continues to explore the planet and its moons and rings. The Cassini Equinox Mission studied the rings during Saturn's autumnal equinox, when the Sun was shining directly on the equator, through 2010. Now the spacecraft is seeking to make exciting new discoveries in a second extended mission. The Cassini Solstice Mission continues until September 2017.



How Saturn Got Its Name

Saturn is named for the Roman god of wealth and agriculture. In Greek myth, Saturn was called Cronos, the father of Zeus (whom the Romans called Jupiter). Other civilizations have given different names to Saturn, the farthest planet from Earth that can be observed by the naked eye.

Quiz

- 1 Read the selection from the section "Composition Similar to Jupiter's."

This allowed the Cassini spacecraft to capture images showing vertical formations in some of the rings. The material seems to pile up in bumps or ridges more than two miles tall.

Which of these words in the selection helps you understand the meaning of the word "vertical"?

- (A) capture
- (B) material
- (C) bumps
- (D) tall

- 2 Read the sentences from the section "Cassini Will Keep Orbiting For Another Year."

The Huygens spacecraft descended through Titan's atmosphere in January 2005. It collected information on the atmosphere and surface.

Which answer choice, if it replaced the word "descended," would CHANGE the meaning of the sentence?

- (A) lowered itself
- (B) departed
- (C) went down
- (D) dropped

- 3 Which of the following sentences from the article BEST develops the idea that Saturn has been studied for a long time?

- (A) Saturn was the farthest away of the five planets known to the ancients.
- (B) In 1610, Italian astronomer Galileo Galilei was the first to gaze at Saturn through a telescope.
- (C) Scientists have discovered 53 confirmed moons and another nine possible moons.
- (D) Further study of the moon promises to teach scientists much about planetary formation and, perhaps, about the early days of Earth.

- 4 Which sentence BEST explains how the section "Composition Similar to Jupiter's" helps to develop the main idea of the article?

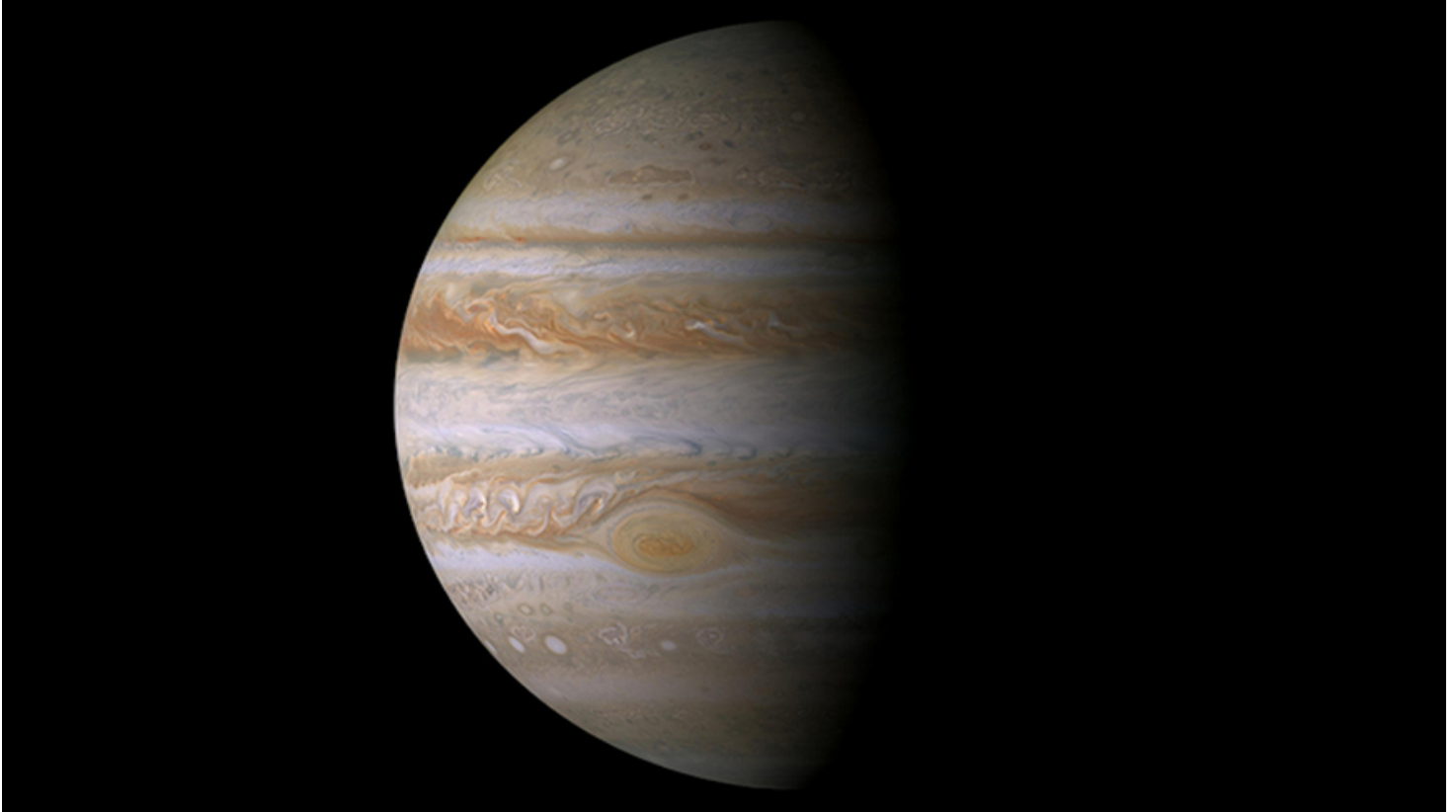
- (A) The section compares winds on Saturn with winds on Earth.
- (B) The section describes the feature of Saturn that makes it different from all the other planets.
- (C) The section identifies different spacecraft that have made discoveries about Saturn.
- (D) The section estimates the number of moons that Saturn might have.

Jupiter, king of the planets

By NASA.gov, adapted by Newsela staff on 11.04.16

Word Count **713**

Level **850L**



TOP: A true color mosaic of Jupiter taken by the Cassini spacecraft in 2000, NASA. SECOND: Jupiter compared to Earth, NASA. THIRD: Image showing cloud swirls and Jupiter's Great Red Spot. BOTTOM: The watery-ice surface of Jupiter's moon Europa. NASA

Jupiter is the fifth planet from the sun and the largest planet in the solar system. All of the other planets in the solar system could fit inside it. Jupiter's stripes and swirls are cold, windy clouds of gas and water. The atmosphere is mostly hydrogen and helium gas, and its iconic Great Red Spot is a giant storm bigger than Earth. Jupiter is surrounded by more than 50 moons. Scientists are most interested in the four largest moons. These are named Europa, Callisto, Ganymede and Io.

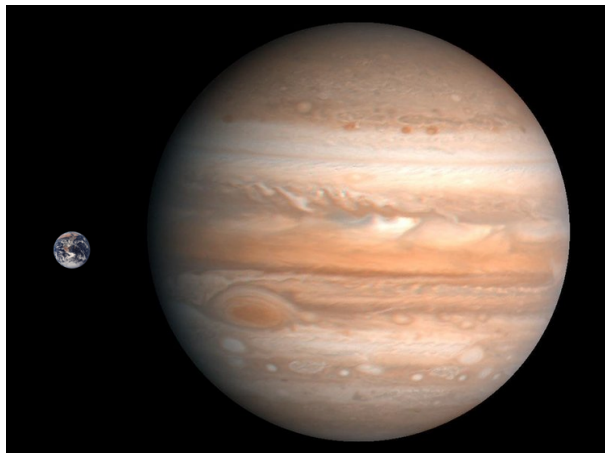
Jupiter is named after the king of the ancient Roman gods.

Jupiter Is As Big As 1,300 Earths

Jupiter is 11 times wider than Earth. If Earth were the size of a nickel, Jupiter would be about as big as a basketball. More than 1,300 Earths could fit inside Jupiter.

Jupiter is about 484 million miles from the sun. From this distance, it takes sunlight 43 minutes to travel from the sun to Jupiter.

Jupiter rotates, or spins, faster than any other planet. It has the shortest day in the solar system.



One day on Jupiter takes only about 10 Earth hours (the time it takes for Jupiter to spin around once). Jupiter makes a complete orbit around the sun in about 12 Earth years.

Jupiter And The Sun Are Both Made Of Gas

Jupiter took shape about 4.5 billion years ago. Gravity pulled together swirling gas and dust left over after the sun formed.

Like the sun, Jupiter is mostly made of hydrogen and helium gas. Deep in the atmosphere, heat and pressure turn the hydrogen gas into a liquid. This gives Jupiter the largest ocean in the solar system. Scientists are still not sure if the center of the planet is solid or liquid.

Jupiter doesn't have a true surface. The planet is mostly made of swirling gases and liquids.

The bright colors in Jupiter's atmosphere may come from different gases. The planet's fast rotation separates its clouds into dark and light zones.

With no solid surface to slow them down, Jupiter's spots can last for many years. The Great Red Spot is a swirling oval of clouds twice as wide as Earth. It has been seen on the giant planet for more than 300 years.

Potential For Life

The temperatures and materials of Jupiter are probably too extreme to support life. However, the same is not true of some of the planet's many moons. Europa is one of the likeliest places, other than Earth, to sustain life in the solar system. There is evidence of a large ocean just beneath its icy crust, where life could possibly be supported.

Jupiter Has The Most Moons In The Solar System

QUICK FACTS

Planet Type

Gas Giant

Time

Day: 9.92496 Hours

Year: 4,333 Earth days

Moons

53 confirmed, 14 provisional (for a possible total of 67 moons)

Equatorial Circumference

Metric: 439,263.8 km

English: 272,945.9 miles



With many moons, Jupiter forms a kind of miniature solar system. The planet has 53 confirmed moons, as well as 14 possible ones. This brings the possible total to 67 moons.

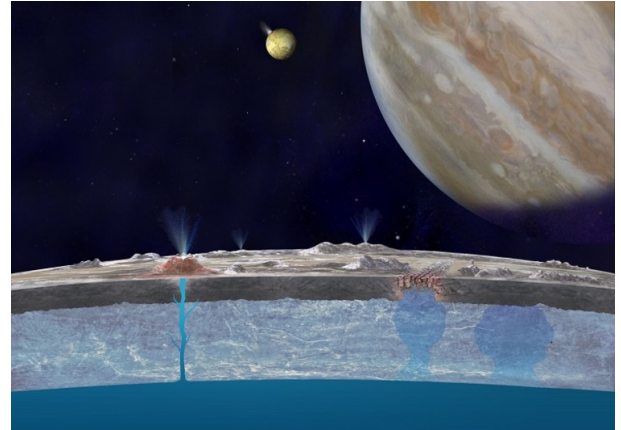
Jupiter's four largest moons are Io, Europa, Ganymede and Callisto. They were first seen by the scientist Galileo Galilei in 1610. These four moons are some of the most fascinating bodies in the solar system. For example, Io is covered in active volcanoes. Ganymede is the largest moon in the solar system (even bigger than the planet Mercury).

Rings

NASA's Voyager 1 spacecraft discovered Jupiter's rings in 1979. The discovery was a huge surprise. Jupiter's rings are made up mostly of tiny dust particles.

Magnetosphere

The magnetosphere is the area of space most affected by Jupiter's powerful magnetic field. It extends 2 million miles toward the sun and narrows into a thin tail behind Jupiter. This enormous magnetic field is 16 to 54 times as powerful as Earth's.



Exploration

Galileo made the first detailed observations of Jupiter in 1610. He used a small telescope, which allowed him to see deep into space. More recently, passing spacecraft have visited Jupiter.

Significant Dates

1610: Galileo Galilei makes the first detailed observations of Jupiter.

1979: Voyager 1 and 2 discover Jupiter's faint rings.

1995-2003: The Galileo spacecraft explores Jupiter and its moons.

2000: The Cassini spacecraft approaches Jupiter. It takes a highly detailed true color photo of the planet.

2016: NASA's Juno spacecraft arrives at Jupiter. It is studying the planet's atmosphere, structure and magnetosphere.

Quiz

- 1 Which sentence from the section "Jupiter And The Sun Are Both Made Of Gas" helps you understand that we have not yet learned everything about Jupiter?
- (A) Like the sun, Jupiter is mostly made of hydrogen and helium gas.
 - (B) Scientists are still not sure if the center of the planet is solid or liquid.
 - (C) The bright colors in Jupiter's atmosphere may come from different gases.
 - (D) The Great Red Spot is a swirling oval of clouds twice as wide as Earth.
- 2 Select the sentence from the section "Potential For Life" that BEST explains that life might be able to exist on Jupiter's moons.
- (A) The temperatures and materials of Jupiter are probably too extreme to support life.
 - (B) However, the same is not true of some of the planet's many moons.
 - (C) Europa is one of the likeliest places, other than Earth, to sustain life in the solar system.
 - (D) With many moons, Jupiter forms a kind of miniature solar system.
- 3 Which section of the article uses a different structure than the other sections?
- (A) "Potential For Life"
 - (B) "Jupiter Has The Most Moons In The Solar System"
 - (C) "Magnetosphere"
 - (D) "Significant Dates"

- 4 Read the paragraph from the section "Jupiter Is As Big As 1,300 Earths."

Jupiter rotates, or spins, faster than any other planet. It has the shortest day in the solar system. One day on Jupiter takes only about 10 Earth hours (the time it takes for Jupiter to spin around once). Jupiter makes a complete orbit around the sun in about 12 Earth years.

What information MOST contributes to the organization of this paragraph?

- (A) where Jupiter is located in the solar system
- (B) how fast Jupiter moves in the solar system
- (C) why Jupiter spins faster than any other planet
- (D) when Jupiter completely orbits the sun

English Language Learner Supplement 4-5

Excerpt from **My Shadow**

By Robert Louis Stevenson

I have a little shadow that goes in and out with me,

And what can be the use of him is more than I can see.

He is very, very like me from the heels up to the head;

And I see him jump before me, when I jump into my bed.

The funniest thing about him is the way he likes to grow—

Not at all like proper children, which is always very slow;

For he sometimes shoots up taller like an India-rubber ball,

And he sometimes gets so little that there's none of him at all.

Poem in the Public Domain

Reading: Read the poem by yourself or with someone at home. Circle any words in the poem that are new to you and look up their definitions.

Speaking: Read the poem aloud to someone at home. Tell them what the poem means in your own words.

Listening: Have someone at home read the poem aloud to you. Close your eyes and try to make pictures in your mind to match the words in the poem.

Writing: What do you know about shadows? Use examples from the poem and from your own experience.

Suplemento para

Estudiantes que Aprenden Inglés 4-5

Se recomienda que los niños completen la página en inglés para practicar las habilidades en inglés.

Extracto de **Mi Sombra**

Por Robert Louis Stevenson

Tengo una pequeña sombra que entra y sale conmigo

Y lo que puede ser su uso es más de lo que puedo ver.

Él es muy, muy parecido a mí desde los talones hasta la cabeza;

Y lo veo saltar delante de mí, cuando salto a mi cama.

Lo más divertido de él es la forma en que le gusta crecer:

No como niños apropiados, que siempre es muy lento;

Porque a veces se dispara más alto como una pelota de goma india,

Y a veces se pone tan poco que no hay nada de él.

Poema en el Dominio Público

Lectura: Lee el poema solo o con alguien en casa. Encierra en un círculo cualquier palabra del poema que sea nueva para ti y busca sus definiciones.

Hablando: Lea el poema en voz alta a alguien en casa. Diles lo que significa el poema en tus propias palabras.

Escuchando: Haz que alguien en casa te lea el poema en voz alta. Cierra los ojos y trata de hacer dibujos en tu mente para que coincidan con las palabras del poema.

Escritura: ¿Qué sabes sobre las sombras? Use ejemplos del poema y de su propia experiencia.

Writing Ideas 4-5 Elementary Week #11

Students can compose one or multiple paragraphs to respond to the prompts and ideas below. This will vary depending on their age/grade level.

Narrative

- What did you do over the weekend? Write a personal narrative to tell about your weekend. You should include what you did, the order you did it in, and who and/or what was involved. Be sure to include a sequence of events, details, descriptions, and the setting. Establish an introduction, middle, and conclusion. .

Opinion/Argument

- What is your favorite color? Why is it your favorite color? Write an opinion piece on your favorite color and why it is the best. Add reasons, examples, and/or details to support your opinion. Be sure to have an introduction and a conclusion that relates to the opinion stated.

Informational/Explanatory

- Did you know there are many things that fly! There are airplanes, hot air balloons, kites, spaceships, various birds, bats, insects, and even flying squirrels. Talk to someone in your family or do some research to find out more about things that fly. Pick your favorite thing that can fly and write an informational piece about it. Learn as much as you can about it. Be sure to add enough facts, information, and/or details. Introduce your topic and have a conclusion.

Writing in Response to Reading Bingo

Complete the Bingo board by engaging in various writing ideas from this week's reading selections. Try to get 3-in-a row!

Want to learn more about the planets in our Solar System? Pick a planet and become an expert on that planet! Write about your findings in an informational piece.

For more information visit
<https://bit.ly/2TJOBa6>

Point of View – select a story that you have read and decide what point of view it was written in. Then take a section of that text or story and rewrite it from a different point of view. For more information on point of view visit

<https://bit.ly/3d8TmSh>

Write about how the two reading selections **Saturn, the jewel of our solar system** and **Jupiter, king of the planets** are similar and/or different!

Want to learn more about measuring temperature? Conduct some research and find out more information. Write an informative piece about your findings. For more information, watch the video at <https://bit.ly/3cbeqq2>

Want to learn more about the Declaration of Independence? Conduct some research and find out more information. Write an informative piece about your findings. For more information visit <https://bit.ly/3gmyetU>

WRITER'S CHOICE

Significant passage scavenger hunt! Choose a significant passage from one or more of the reading selections this week! Write about why you selected the passage you and why you feel it is significant.

From what we learn of Nana (the dog) in **Peter Pan**, pretend like you are interviewing her about her role as the children's nurse. Make a list of question you would ask her and then write about how she might answer. Use evidence from the text to support your reasons.

Select one of this week's readings and write a summary about what you have read. Remember that a summary is a short retelling of the text in your own words. For a short video on summary writing go to <https://bit.ly/2yDmEtv>









Is it Equivalent?

Materials: Is it Equivalent? Cards

$$\frac{1}{2} \quad \frac{2}{5} \quad \frac{3}{6}$$

$$\frac{2}{2} \quad \frac{4}{4} \quad \frac{3}{6}$$

1. Choose a card showing a set of three fractions. Identify which fraction in the group is not equivalent to the others.
2. Use fraction models and equations to show your thinking.
3. Repeat with two other cards.
4. Write your own set of fractions on an index card that includes two equivalent fractions and one non-equivalent fraction.
5. Swap index cards with a partner and identify the non-equivalent fraction. After you have both recorded your thinking, discuss the strategies you used to identify the non-equivalent fraction.

Is it Equivalent? cards

$$\frac{1}{2} = \frac{2}{5} = \frac{3}{6}$$

$$\frac{1}{5} = \frac{2}{5} = \frac{3}{15}$$

$$\frac{6}{6} = \frac{3}{3} = \frac{5}{6}$$

$$\frac{2}{4} = \frac{4}{8} = \frac{6}{10}$$

$$\frac{1}{4} = \frac{3}{12} = \frac{2}{9}$$

$$\frac{2}{5} = \frac{3}{10} = \frac{4}{10}$$

$$\frac{1}{3} = \frac{3}{6} = \frac{4}{12}$$

$$\frac{1}{6} = \frac{2}{12} = \frac{2}{3}$$

$$\frac{3}{4} = \frac{4}{6} = \frac{6}{8}$$

$$\frac{1}{2} = \frac{4}{8} = \frac{6}{3}$$

$$\frac{2}{3} = \frac{4}{12} = \frac{6}{9}$$

$$\frac{2}{2} = \frac{4}{4} = \frac{3}{6}$$

Equivalent Fractions Race

Materials: number cubes, recording sheet for each player

Take turns to roll two number cubes and create a proper fraction with the two numbers rolled. Record the fraction in the first column on your recording sheet. Race to write 10 equivalent fractions. Check each other's work for accuracy. Each correct equivalent fraction is worth 1 point. The first player to write 10 equivalent fractions gets 2 bonus points for the round. Play 10 rounds. Keep a running total of your scores.

Proper Fraction	Equivalent Fractions									
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—
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—	—	—	—	—	—	—	—	—	—	—

Lesson 6: Envelope Variables

Overview

Variables are used as placeholders for values such as numbers or words. Variables allow for a lot of freedom in programming. Instead of having to type out a phrase many times or remember an obscure number, computer scientists can use variables to reference them. This lesson helps to explain what variables are and how we can use them in many different ways. The idea of variables isn't an easy concept to grasp, so we recommend allowing plenty of time for discussion at the end of the lesson.

Purpose

Variables are very helpful in programming. Students will be introduced to this topic using envelopes to represent variables that have been given names. The value of the variable will be written on a card inside of an envelope. This lesson helps students understand how names can be a placeholder for values in the physical world, so that programming with variables will seem less confusing in the virtual world.

Agenda

- [Warm Up \(10 min\)](#)
 - [Vocabulary](#)
 - [Introduction](#)
- [Main Activity \(20 min\)](#)
 - [Envelope Variables - Worksheet](#)
- [Wrap Up \(10 min\)](#)
 - [Flash Chat: What did we learn?](#)
 - [Journaling](#)
- [Assessment \(10 min\)](#)
 - [Envelope Variables - Assessment](#)
- [Extended Learning](#)

Teaching Guide

Warm Up (10 min)

Vocabulary

This lesson has one important word:

- Variable - Say it with me: Vayr-ee-ah-buhl

A placeholder for a piece of information that can change.

Introduction

Call four volunteers to the front of the room and line them up. Let the students know that you are going to write a poem for each of them.

On the board (or under your document camera) write the sentence for your first student (suppose it's Bill):

"My student Bill, standing proud
is a fine example for the crowd"

Encourage the students to clap at your abilities and thank Bill for volunteering. Allow Bill to sit down (or go to the back of the line) as you erase the board, then call the next volunteer (we'll say that she's called Annie).

"My student Annie, standing proud
is a fine example for the crowd"

Again, accepting applause, erase the board and invite the next volunteer.

"My student Jenny, standing proud
is a fine example for the crowd"

As you call the final volunteer, inquire as to whether everyone in the class would like a poem written about each of them. Maybe the everyone in the whole school? Goodness, that's going to take a while! Pose the question to your students:

"How could I do this more quickly?"

Your students will likely pick up on the fact that only one word is changing, and that word is simply a person's name. Help them see the location by circling Jenny's name on the board and writing "firstName" next to it.

"It would take a long time to write a poem for everyone in the school if I couldn't start until I knew who I was writing it about, wouldn't it?"

- How long do you think it would take to make a video game if they couldn't start until they knew your username?
- How expensive would video games be if they had to be created separately for each person?
- How do you think we can get around that?

By this time, it's quite likely that your class will come up with the idea of having a placeholder. With that, they're most of the way into understanding where this lesson goes.

- What would we call that placeholder?
 - We need to call it something that makes sense. We wouldn't want to call it "age" if it was a placeholder for their name, right?

Now, let's add some more volunteers. Give them each a piece of paper to write their name on, and have them tuck it inside individual envelopes labeled firstName.

This time, put the poem on the board with a blank space labeled "firstName" where the student's name will go.

- Have the first student in line (likely the last student from the previous example) pull their name from the envelope and that's what you'll write in the space.
- When you erase the board, only erase the portion with the last student's name in it.
- Call the next student to show their variable.
- Repeat as many times as is entertaining

Now it's time for the main activity.

Main Activity (20 min)

Envelope Variables - Worksheet

Once the students understand how the envelopes relate to the sentences, pass out the activity worksheet and let them prepare some variables of their own.

Directions:

- Divide students into groups of 2-4.
- Have students design (draw) a robot.
- After 10-15 minutes, request that the students fill their envelopes with important details about their robot such as its name, height, and purpose.
- Collect each group's envelopes, then bring them to the front of the room to share.
- Write on the board, "My robot's name is robotName, it is numUnitsTall tall, and it's purpose is purpose."
- Use the envelopes to fill the appropriate variable in the sentence, then ask each group to stand when they hear the sentence that describes their creation.

Wrap Up (10 min)

Flash Chat: What did we learn?

- What did we learn today?
- Can you think of anywhere that you have seen variables before?
- There is at least one variable at the top of most homework hand outs? Can you think of what it could be?
- Why do you think that professionals do not put spaces in variable names?
 - What would happen if there was a variable "eye" a variable "color" and a variable "eye color"?
- Variables can be used to store numbers, too.
 - Suppose I have envelopes labeled num1 and num2, then I write num1+num2?
 - What happens if the "num1" envelope contains the number 4 and "num2" contains the number 5?

Journaling

Having students write about what they learned, why it's useful, and how they feel about it can help solidify any knowledge they obtained today and build a review sheet for them to look to in the future.

Journal Prompts:

- What was today's lesson about?
- How do you feel about today's lesson?
- What is a variable?
- Why do you think variables are important in programming?

Assessment (10 min)

Envelope Variables - Assessment

Allow students enough time to finish this assessment. If you are willing to spare more time, go over the answers as a class.

Extended Learning

Use these activities to enhance student learning. They can be used as outside of class activities or other enrichment.

What's in the box?

- Draw boxes on a piece of paper with simple mathematical operators between them.
 - For instance $\square + \square = \square$
- Have similar size squares with numbers between 1 & 20.
- Ask one student to come create a true equation, using the numbers provided.
- Once the student has finished (and the class verifies the equation) exchange one of the numbers with another one, then remove a second number entirely.
 - Tell the students that there is a hidden number in the empty box that makes that equation true again.
 - What number is in the box?
- Play this game over and over again until you can remove the number from any location and the students can figure out what it is supposed to be.

Variables in Envelopes

Robot Variables Worksheet



Think about a robot. What is it supposed to do? What does it look like?

Draw your robot on paper. When you're done, answer the three questions below on separate pieces of paper, then put them in the correct envelopes.

robotName

numUnitsTall

purpose

1. My robot's name is _____ *robotName* _____
2. My robot's height is _____ *numUnitsTall* _____ (don't forget units!)
3. My robot's primary purpose is _____ *purpose* _____

Variables in Envelopes

Variables Assessment Worksheet



Given the value of each variable envelope, fill in the blanks to finish the sentence.

color = *pink*

When I grow up, I want to own a guard_____.
animal

petalNumber = 22

I found a flower with_____ petals, so I picked it.
petalNumber

animal = *monkey*

My dad just painted his house_____ to match his car.
color

bestSport = *golf*

I love_____. I do it every evening.
hobby

hobby = *coding*

The best sport in the world is_____, do you agree?
bestSport

Variable envelopes can also contain number values. Use these envelopes and the provided equations to figure out the magic numbers below.

numOne = 2

_____ = _____ - _____
magic NumberA *numThree* *numOne*

numTwo = 5

_____ = _____ × _____
magic NumberB *numTwo* *numOne*

numThree = 7

_____ = _____ + _____ × _____
magic NumberC *numOne* *numTwo* *magicNumberB*

Variables in Envelopes

Robot Variables Worksheet



Think about a robot. What is it supposed to do? What does it look like?

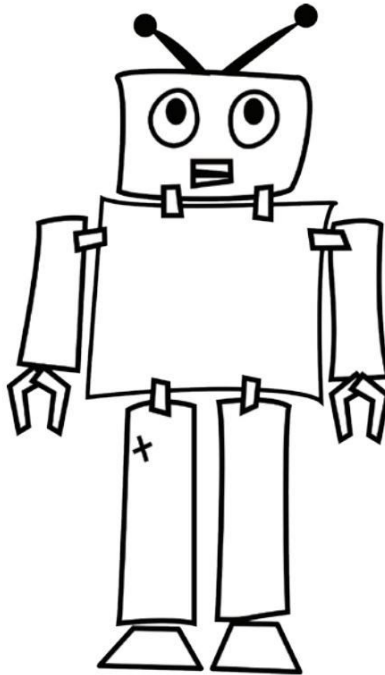
Draw your robot on paper. When you're done, answer the three questions below on separate pieces of paper, then put them in the correct envelopes.

robotName

numUnitsTall

purpose

Example



1. My robot's name is Elijah *robotName = Elijah*
2. My robot's height is 27 feet *numUnitsTall = 27 feet*
3. My robot's primary purpose is being awesome *purpose = being awesome*

Variables in Envelopes

Variables Assessment Worksheet



Given the value of each variable envelope, fill in the blanks to finish the sentence.

color = pink

petalNumber = 22

animal = monkey

bestSport = golf

hobby = coding

When I grow up, I want to own a guard monkey.
animal

I found a flower with 22 petals, so I picked it.
petalNumber

My dad just painted his house pink to match his car.
color

I love coding. I do it every evening.
hobby

There is no such thing as pink rivers, so if you find one, don't swim in it!
color

The best sport in the world is golf, do you agree?
bestSport

Variable envelopes can also contain number values. Use these envelopes and the provided equations to figure out the magic numbers below.

numOne = 2

numTwo = 5

numThree = 7

5 = 7 - 2
magic NumberA *numThree* *numOne*

10 = 5 × 2
magic NumberB *numTwo* *numOne*

52 = 2 + 5 × 10
magic NumberC *numOne* *numTwo* *magicNumberB*