KNOWLEDGE QUEST!™

Read-Aloud Collections

The Guidebook

Grades **3–4**

SAMPLE

Updated Edition

2.0

SCHOLASTIC

Dear Parents and Teachers,

At Scholastic, we want to be your go-to resource for building the knowledge base children need to succeed. We've had the pleasure of working with very talented teachers and librarians to develop these curated collections, which cover many topics, such as science, social studies, literature, art, music, and even social themes, across grade levels.

Why is reading aloud so important? Children's ability to understand content through listening outpaces their comprehension through reading from infancy to middle-school age. Therefore, by reading aloud to children daily—without burdening them with decoding words on a page—you're able to help them learn more about interesting topics and increase their in-depth knowledge.

Why read more than one book on a topic? By listening to these topic-centric books read aloud in the recommended sequence, children gain deeper knowledge and repeated vocabulary exposure, which leads to accelerated vocabulary growth and increased reading comprehension. And by hearing fun, fictional reads interwoven with the nonfiction content, children remain engaged while important content is reinforced.

Why include activities? These activities not only extend children's learning of each collection's content, they are built to help teachers meet the Common Core State Standards and the Next Generation Science Standards. But most importantly, they're fun and cross-curricular, incorporating art, poetry, and music for a rich, integrated learning experience.

Why more than one collection on the same topic in each grade? The more children learn, the more they want to know! These collections are age-appropriate and build content coherently within a grade and from grade to grade. Studies show that children who have not had nonfiction read to them early on may be turned off by it, and their ability to understand complex texts—a skill important for college readiness—can be greatly hindered.

Why should teachers and parents both use Knowledge Quest!? As a working parent, it's hard to find time to regularly get books from the library, let alone find the best books. And if you are a home-schooling parent, high-quality books are an even greater need. As a teacher, it's hectic to juggle all the demands of your classroom while meeting the pressures of Common Core. That's why we've thoughtfully built these collections to meet the needs of both parents and teachers!

We hope your children will enjoy the Knowledge Quest! Read-Aloud Collections as much as we do!

Sincerely,

Suzanne L. Wright

Vice President, Program Development Strategy

What's in Our Universe?
Contents

What's in Our Universe?
Learning Goals & Content Objectives

The Big Idea

We live on planet Earth, which is part of one solar system in the Milky Way galaxy. The Milky Way is one of billions of galaxies in the universe. The universe is made up of everything that exists—planets, stars, galaxies, and much more! It is bigger than we can possibly imagine. Earth and the other planets in our solar system orbit the sun because of the sun's gravitational pull. Earth has a gravitational pull on celestial bodies like the moon—and also on us! Gravity is the force that keeps us from floating off into space. In recent years, astronomers have made great discoveries about our solar system and the universe using powerful telescopes, satellites, and other advanced technologies. Astronauts have traveled beyond Earth to learn more about our planet, the moon, and outer space.

Content Objectives

By listening to these books being read aloud, and by taking part in the activities listed within this guidebook, children will be able to:

- Define the universe as everything that exists in space, extending beyond what we can possibly imagine
- Describe the sun as the center of our solar system and our main source of light and heat
- Identify the sun as a star and the one closest to Earth
- Name the eight planets in our solar system and identify one characteristic of each
- Identify Pluto as a dwarf planet
- Identify our solar system as located in the Milky Way galaxy
- Describe stars as big, hot, and made of gas
- Describe how stars are very big and only appear small because of their distance from Earth
- Describe the importance of the North Star (Polaris) for celestial navigation
- Describe the daily cycle of sunrise and sunset, including how the sun rises in the east and sets in the west

What's in Our Universe?

Recommended Vocabulary for Explicit Discussion

Some vocabulary is learned implicitly by repeated exposure through reading books on a related topic. However, it is also beneficial to explicitly discuss and teach a few words from each read-aloud.

Utilize these key terms chosen from this read-aloud collection in conversation and activities to build vocabulary and reinforce concepts.

ancient
Apollo 11
asteroid belt
astronauts
astronomers
atmosphere
comets
constellations
cycles
dwarf planets
Eagle
energy
engines
farther
force
fuel
galaxy
gases
gravity
imagine
lunar eclipse
Mission Control
North Star
orbit
outer space
patterns
planetarium
proved
repeat
rotation
scattered
shooting star
shuttle
solar energy
solar system
spaceships
space station
sphere
tides
tie
waning
waxing
weight
zero gravity
zodiac

What's in Our Universe?
Activity Bank

The following activities reinforce the content from the read-alouds and applicable skills outlined in the **Common Core State Standards**. Choose from the activities below, in any order that suits your schedule and needs, to complement the read-aloud books in this collection.

KNOWLEDGE QUEST! Activities		Grade Level	Common Core State Standards (CCSS)					
			RL	RI	RF	W	SL	L
Quest Questions	pg. 25	3,4	1 2	1 2		8	2 3	
Visit a Planetarium	pg. 26	3,4						6
Book Walk	pg. 27	3,4	7	5 7			1d 2	4d
Let's Write!	pg. 28	3,4				1 2 2d 3 3b 3d 7 8 9 10		
Compare and Contrast	pg. 30	3,4		9		10		
Living Constellations	pg. 31	3,4	2 7	7		7 10		6
Lunar and Solar Eclipses	pg. 32	3,4		7 9		8 10		5b 6
Our Place in the Universe	pg. 34	3,4						5b 6
Falling for Gravity	pg. 35	3,4		7		7 8	2	6
Earth Cycles Demonstration	pg. 36	3,4		7		7 8		5b 6
Sky Watchers	pg. 38	3,4				8 10		5b 6
Read-Aloud Image Review	pg. 39	3,4	2 3 7	2 7			2	
Sayings Corner	pg. 40	3,4	4					5 5a 5b
Moon Phases	pg. 42	3,4		7		8 10		5b 6

RL = Reading Standards for Literature
RI = Reading Standards for Informational Text
RF = Reading Standards for Foundational Skills
W = Writing Standards
SL = Speaking and Listening Standards
L = Language Standards
# = The standard number in CCSS

What's in Our Universe?
Activity Bank (continued)

The content children learn through the read-alouds and activities in this collection helps prepare them to meet the **Next Generation Science Standards (NGSS)**. The content objectives outlined for each read-aloud and the supporting activities in the Activity Bank address the disciplinary core ideas, as well as prepare children for the performance expectations of NGSS.

Next Generation Science Standards NGSS

PERFORMANCE EXPECTATIONS

K-PS3-1. Make observations to determine the effect of sunlight on Earth's surface.

1-PS4-2. Make observations to construct an evidence-based account that objects can be seen only when illuminated.

3-PS2-2. Make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion.

5-PS2-1. Support an argument that the gravitational force exerted by Earth on objects is directed down.

5-ESS1-1. Support an argument that differences in the apparent brightness of the sun compared to other stars is due to their relative distances from Earth.

5-ESS1-2. Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky.

MS-ESS1-1. Develop and use a model of the Earth-sun-moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons.

SUMMARY OF DISCIPLINARY CORE IDEAS

PS3.B: Conservation of Energy and Energy Transfer
Sunlight warms Earth's surface.

PS4.B: Electromagnetic Radiation
Objects can be seen only when light is available to illuminate them.

PS2.A: Forces and Motion and PS2.B: Types of Interactions
The effect of unbalanced forces on an object results in a change of motion. Patterns of motion can be used to predict future motion. Some forces act through contact; some forces act even when the objects are not in contact. The gravitational force of Earth acting on an object near Earth's surface pulls that object toward the planet's center.

ESS1.A: The Universe and Its Stars
Stars range greatly in size and distance from Earth and this can explain their relative brightness.

ESS1.B: Earth and the Solar System
The Earth's orbit and rotation, and the orbit of the moon around the Earth, cause observable patterns.

MS-ESS1.A: The Universe and Its Stars
The solar system is part of the Milky Way, which is one of many billions of galaxies.

MS-ESS1.B: Earth and the Solar System
The solar system contains many varied objects held together by gravity. Solar system models explain and predict eclipses, lunar phases, and seasons.

BOOK 9

Moonshot

by Brian Floca

Read-Aloud Guide

CCSS Exemplar Text

Content Objectives for Discussion:

- Identify rockets, satellites, and telescopes as tools to study space
- Describe astronauts as highly trained people who travel to outer space to study it and to perform tasks such as repairing satellites
- Describe the experiences of astronauts in space
- Identify *Apollo 11* as the mission where the first manned spacecraft and astronauts successfully landed on the moon
- Recall the importance and context of the quotes "The *Eagle* has landed" and "One small step for a man, one giant leap for mankind"
- Describe the contributions of astronauts Neil Armstrong, Michael Collins, and Buzz Aldrin

Recommended Vocabulary for Explicit Discussion:

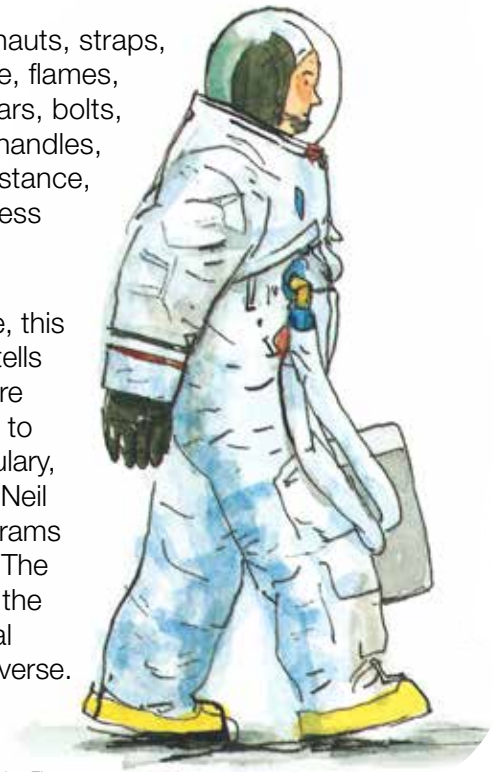
Apollo 11, spaceships, *Eagle*, engines, Mission Control

Implicit Vocabulary Exposure:

helmets, stiff, suits, trained, tower, fuel, valves, pipes, massive, astronauts, straps, hatch, Launch Control, charts, countdown, launch, ignition, sequence, flames, pad, liftoff, released, flapping, cracking, roar, thunder, clay, sheds, soars, bolts, explode, ignite, stage, escape tower, course, pilot, ceilings, gauges, handles, hoses, switches, drift, float, Velcro, circuits, whir, safe site, craters, distance, models, landing, steady, magnificent, lope, leap, secrets, plains, starless

Concepts:

Now that listeners understand what it's like to be an astronaut in space, this concluding read-aloud full of engaging prose and detailed illustrations tells the story of the first manned moon landing—the *Apollo 11* mission. Pure excitement lights up the simple story, which carries children from Earth to the moon's surface and back again. Filled with elegant and rich vocabulary, the book introduces children to the astronauts on the historic mission: Neil Armstrong, Michael Collins, and Buzz Aldrin. Technical specs and diagrams of the spacecraft and equipment give curious minds plenty to explore. The concluding "One Giant Leap" pages provide a more detailed history of the mission. Wrapping up the collection with wonder and delight, this final read-aloud inspires children to learn even more about what's in our universe.



ACTIVITY

Quest Questions

To introduce the read-alouds in this collection, share the questions below. Tell children that they are on a quest to find the answers within these books. Revisit the questions periodically as you progress in the readings, encouraging children to answer them based on their new knowledge. Once you have finished reading the entire collection, have children share all the knowledge they gained while on their knowledge quest.

- What is a solar system?
- How do planets travel in our solar system?
- Why does the moon appear to change shape over time?
- What is gravity?
- What causes night and day?
- What cycle occurs due to Earth being tilted on its axis as it travels around the sun?
- What is a constellation?
- What is a NASA space mission?
- Who was the first person to walk on the moon?
- Why do astronauts get taller in space over time?
- Do bigger things fall faster than smaller things?
- Is there any air on the moon?
- Are shooting stars really stars?
- Do stars really twinkle?
- Are all stars the same color?

After completing the read-aloud collection, encourage children to find the answers to these questions using the text as their source and/or derive answers from their personal experience. Encourage them to take notes of direct quotes and include page numbers. Ask children if they have any questions that are left unanswered. Encourage them to seek outside sources to find their answers and to write about their findings and illustrate any relevant details.

CCSS

- **Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers. 3RL❶, 3RI❶**
- **Determine the main idea of a text; recount the key details and explain how they support the main idea. 3RI❷**
- **Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories. 3W❽**
- **Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally. 3SL❷**
- **Ask and answer questions about information from a speaker, offering appropriate elaboration and detail. 3SL❸**
- **Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text. 4RL❶, 4RI❶**
- **Determine a theme of a story, drama, or poem from details in the text; summarize the text. 4RL❷**
- **Determine the main idea of a text and explain how it is supported by key details; summarize the text. 4RI❷**
- **Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources. 4W❽**
- **Paraphrase portions of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally. 4SL❷**

ACTIVITY Sayings Corner

- Discuss with children the common saying "Once in a blue moon." Review the phases of the moon. Ask children how long it takes for the moon to go through all of its phases (about a month). Explain that on rare occasions, the moon is full twice in one month. When this happens, the second full moon of the month is called a "blue moon." Explain that the saying "Once in a blue moon" refers to the rarity of this occurrence. Tell children that people sometimes use this phrase to describe how often an event occurs. Ask children if they were to hear someone say "Once in a blue moon I go apple picking," whether they would think that person went apple picking frequently. Finally, have children think of times when this phrase is applicable to them.

- Review the historical significance of the *Apollo 11* mission. Explain that this tremendous scientific achievement generated two very famous lines from astronaut Neil Armstrong: "The Eagle has landed" and "One small step for a man, one giant leap for mankind." Using the read-aloud *Moonshot* by Brian Floca, discuss the context of these two phrases.

  Remind children that the *Eagle* was the first manned spacecraft to land on the surface of the moon. Review how Mission Control is located in Houston, Texas, pointing to this area on a map if desired. Discuss how the full phrase uttered was "Houston, Tranquility Base here. The *Eagle* has landed." Discuss how since these words were first uttered, the phrase "The *Eagle* has landed" has come to be used in different contexts to acknowledge an accomplishment or the completion of a goal. Ask children to share situations where they think this phrase could be applicable.

  Explain to children that the phrase "One small step for a man, one giant leap for mankind" was said after Neil Armstrong descended a ladder and took his first steps on the moon. Ask children to share what they think this phrase means. Discuss the word *mankind*, explaining that it means all people grouped together as one, meaning all humans on Earth. Discuss how this phrase means to convey that this small action by one man is a monumental achievement for all people. Review how shortly after Neil Armstrong took his first steps, his colleague Buzz Aldrin followed him. Ask children to imagine what that first moon walk would have been like for these two men.

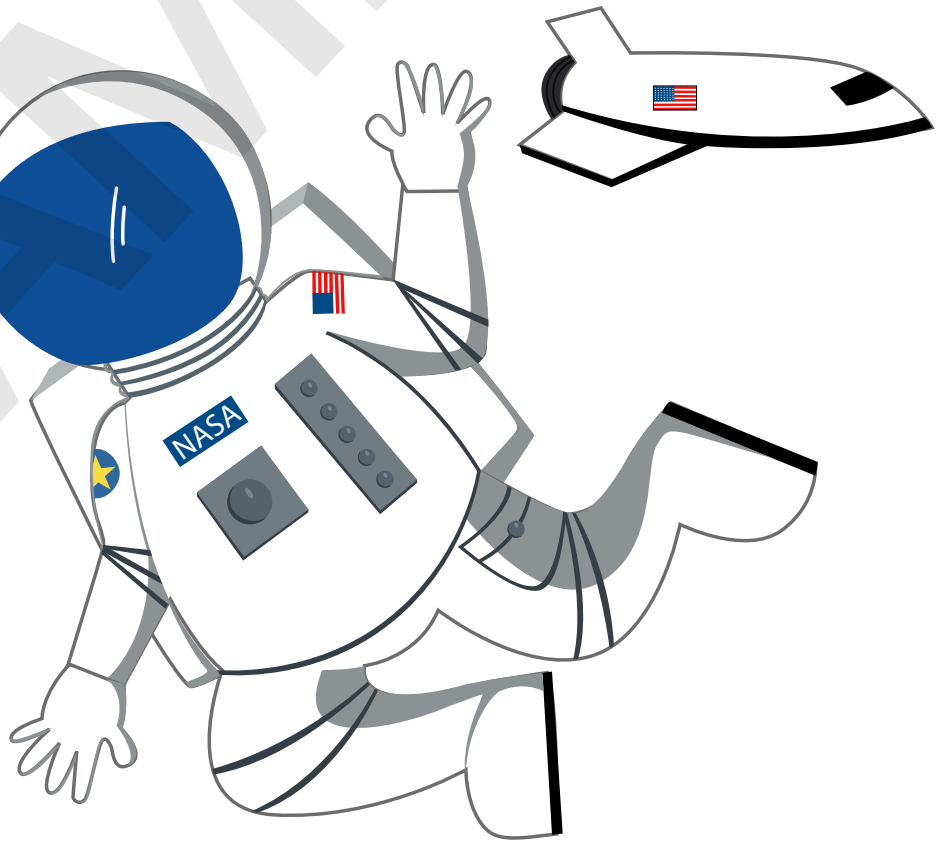
  If desired, encourage children to act out landing on the moon and taking the first steps, incorporating these phrases and any explicit and implicit vocabulary into their dialogue. You may also wish to share with children that during their moon walk, Buzz Aldrin and Neil Armstrong placed various devices: one to measure the solar wind reaching the moon, one to receive laser beams from astronomical observatories on Earth to measure the distance between the moon and Earth, and one to measure the strength of moonquakes and

Sayings Corner (continued)

meteorite collisions. They also took several pounds of rock and soil samples and many photographs, all while communicating with Mission Control. Encourage children to act out this part of the mission as well.

CCSS

- **Determine the meaning of words and phrases as they are used in a text, distinguishing literal from nonliteral language.** 3RL4
- **Distinguish the literal and nonliteral meanings of words and phrases in context.** 3L5a
- **Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.** 4L5
- **Explain the meaning of simple similes and metaphors in context.** 4L5a
- **Recognize and explain the meaning of common idioms, adages, and proverbs.** 4L5b



KNOWLEDGE QUEST!™

Read-Aloud Collections

The Guidebook Grades 3–4

Help children succeed in school and in life
by reading aloud for 20 minutes a day using these content-rich collections.

What's in Our Universe?

This lively collection examines how the universe contains everything that exists—planets, stars, galaxies, and so much more! Children explore how Earth and the other planets in our solar system orbit the sun because of its gravitational pull, learning about the effects of gravity on our planet and how the weaker gravity in space causes astronauts to float. They get to know our moon and its cycles and discover some of the constellations that humans have named through the ages. These books also expose children to the achievements in space exploration made by astronauts and astronomers.

Read the following books in sequence until the collection is completed. Choose recommended activities from the guide to suit your schedule and needs.

1. Every Planet Has a Place
   by Becky Baines
2. Earth Cycles
   by Michael Elsohn Ross, illus. by Gustav Moore
3. The Moon Book
   by Gail Gibbons
4. The Sun: Our Nearest Star
   by Franklyn M. Branley, illus. by Edward Miller
5. What Are Stars?
   by Carmen Bredeson
6. Zoo in the Sky
   by Jacqueline Mitton, illus. by Christina Balit
7. I Fall Down
   by Vicki Cobb, illus. by Julia Gorton
8. Floating in Space
   by Franklyn M. Branley, illus. by True Kelley
9. Moonshot CCSS Exemplar Text
   by Brian Floca

It's that simple to:

- Make learning fun
- Boost vocabulary
- Build skills that meet **Common Core State Standards**

Each daily read-aloud provides one piece of the puzzle to help children on their knowledge quest to see the big picture!

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