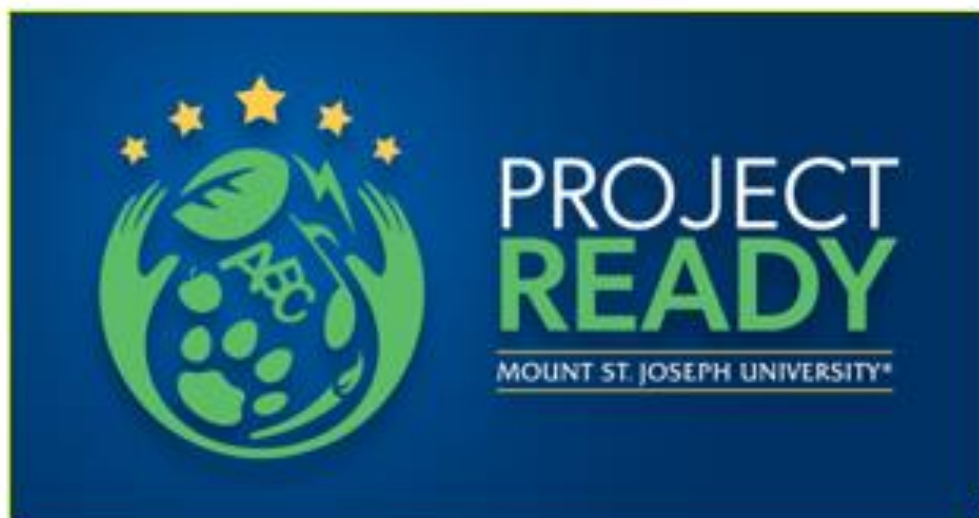




Unit 4 – Astronomy

Joyful Discoveries Preschool Curriculum



Revision Date: November 2023



Unit 4 Astronomy:
Circle Time, Small Group, & Centers



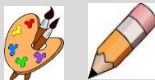

<p><u>Knowledge Building Targets</u></p> <ol style="list-style-type: none"> 1. The Earth is our planet 2. The universe 3. Maps and globes 4. Scientists and what they do: astronomer, astronaut, and engineer 5. Science tools: telescope 6. Moon 7. Moon landing 8. Planets in our solar system 9. Mars 10. Mars Rover- Curiosity 11. NASA 12. Stars and constellations 13. Engaging in play with peers: Observatory 	<p><u>Oral Language Skill Targets</u></p> <ol style="list-style-type: none"> 1. Answering questions 2. Stating an opinion 3. Academic vocabulary 4. Story vocabulary: author, illustrator, title, character (who), setting (where) 5. Length of sentences 6. Extended decontextualized accounts, explanations, and narratives 7. Retelling/summarizing 8. Fluency
<p><u>Early Literacy Skills</u></p> <ol style="list-style-type: none"> 1. Print/book skills: title, author, directionality 2. Listening comprehension <ol style="list-style-type: none"> a. Answering key questions (focus on who, when, what questions) b. Memory for events c. Retelling d. Following directions 3. Sequencing of events 4. Fiction vs. nonfiction 5. Writing skills <ol style="list-style-type: none"> a. Prewriting strokes b. Letter formation c. Shared writing 6. Early writing through crafts 	<p><u>Math Skills</u></p> <ol style="list-style-type: none"> 1. Small number recognition without counting 2. Counting 3. Number recognition 4. More than, less than, same 5. Number after knowledge 6. Number comparisons 7. Number after equals ones more 8. Addition 9. Subtraction 10. Patterns 11. Story problems

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Unit 4: Astronomy




Overview of Part 1- The Universe is BIG & Planets

Book 1	Book 1	Book 2	Book 3	Book 4
<p><i>A Pig is Big</i> by Douglas Florian</p>  <p>*Optional re-read ** Out of print</p>	<p><i>I Am Big But I'm Not the Biggest</i> by The Project Ready! Team</p>  <p>*Alternative to <i>A Pig is Big</i></p>	<p><i>Here We Are: Notes for Living on Planet Earth</i> by Oliver Jeffers</p>	<p><i>Me and My Place in Space</i> by Joan Sweeney</p>  <p>*Dramatic play center introduced</p>	<p><i>Planets</i> by Becky Baines</p> 





Book 5	Book 6	Book 7	Book 8
<p><i>On the Launch Pad</i> by Michael Dahl</p> 	<p><i>Sleepy Solar System</i> by John Hutton</p> 	<p><i>The Sun is Kind of a Big Deal</i> by Nick Seluk</p> 	<p><i>Birthday on Mars</i> by Sara Schonfeld</p> 

Overview of Part 2-Moon & Stars

Book 9	Book 10	Book 11	Book 12
<p><i>Kitten's First Full Moon</i> by Kevin Henkes</p> 	<p><i>Ten Twinkly Stars</i> by Tiger Tales & Russell Julian</p> 	<p><i>City Moon</i> by Rachael Cole & Blanca Gomez</p>	<p><i>Moon: A Peek-Through Picture Book</i> by Britta Teckentrup</p> 

Book 13	Book 14	Book 15	Book 16
<p><i>Moon's First Friends</i> by Susanna Leonard Hill</p> 	<p><i>Henry's Stars</i> by David Elliot</p> 	<p><i>Our Stars</i> by Anne Rockwell</p> 	<p><i>How to Catch a Star</i> by Oliver Jeffers</p>

Overview of Part 3- Astronauts

Book 17	Book 18	Book 19	Book 20	Book 21
<p><i>I Want to be an Astronaut</i> by Byron Barton</p> 	<p><i>Small World</i> by Ishta Mercurio</p> 	<p><i>Mae Among the Stars</i> by Roda Ahmed</p> 	<p><i>Rocket Says Look Up!</i> by Nathan Bryon</p> 	<p><i>Astronaut Training</i> by Aneta Cruz</p>

Wordless Books for Astronomy Unit

Wordless Books—Astronomy Unit
<i>Delivery</i> by Aaron Meshon
<i>Field Trip to the Moon</i> by John Hare
<i>La La La</i> by Kate DiCamillo (Challenge)

Material List for Unit 4- Astronomy

Whole Group Reading	
Books	Cost
<i>A Pig is Big</i> by Douglas Florian	\$7.99
<i>Here We Are: Notes for Living on Planet Earth</i> by Oliver Jeffers	\$15.29
<i>Me and My Place in Space</i> by Joan Sweeney	\$8.99
<i>Planets</i> by Becky Baines	\$4.99
<i>On the Launch Pad</i> by Michael Dahl	\$7.95
<i>Sleepy Solar System</i> by John Hutton	\$13.49
<i>The Sun is Kind of a Big Deal</i> by Nick Seluk (Challenge)	\$15.96
<i>Birthday on Mars</i> by Sara Schonfeld	\$4.84
<i>Kitten's First Full Moon</i> by Kevin Henkes	\$8.99
<i>Ten Twinkly Stars</i> by Tiger Tales and Russell Julian	\$3.02
<i>City Moon</i> by Rachael Cole and Blanca Gomez	\$18.99
<i>Moon: A Peek Through Picture Book</i> by Britta Teckentrup	\$13.14
<i>Moon's First Friends</i> by Susanna Leonard Hill (Challenge)	\$8.99
<i>Henry's Stars</i> by David Elliot	\$16.51
<i>Our Stars</i> by Anne Rockwell (Challenge)	\$6.99
<i>How to Catch a Star</i> by Oliver Jeffers	\$13.29
<i>I Want to be an Astronaut</i> by Byron Barton	\$7.99
<i>Small World</i> by Ishta Mercurio	\$13.26
<i>Mae Among the Stars</i> by Roda Ahmed (Challenge)	\$12.69
<i>Rocket Says Look Up!</i> by Nathan Bryon (Challenge)	\$7.99
<i>Astronaut Training</i> by Aneta Cruz	\$14.39
Wordless Books	
<i>Delivery</i> by Aaron Meshon	\$17.99
<i>Field Trip to the Moon</i> by John Hare	\$8.99
<i>La La La</i> by Kate DiCamillo (Challenge)	\$12.01
Total Book Cost	\$264.73

Craft and Additional Materials	
Space Manipulative Figures (Book 5- <i>On the Launch Pad</i>)	\$14.35 (11 piece set)
Orange or red construction paper (Book 8- <i>Birthday on Mars</i>)	\$5.39 (100 piece set)
Orange or red paint (Book 8- <i>Birthday on Mars</i>)	\$3.00 (16 oz bottle)
Marble (Book 8- <i>Birthday on Mars</i>)	\$4.99 (50 piece set)
Gluestick	Likely already purchased
Green paint (Book 9- <i>Kitten's First Full Moon</i>)	\$6.08 (32 oz bottle)
Blue paint (Book 9- <i>Kitten's First Full Moon</i>)	\$9.51 (32 oz bottle)
Gray paint (Book 9- <i>Kitten's First Full Moon</i>)	\$14.86 (16 oz bottle)
Yellow paper for stars (Book 9- <i>Kitten's First Full Moon</i>)	\$2.99 (50 sheets)
Paintbrush (Book 9- <i>Kitten's First Full Moon</i>)	Likely already purchased
Q-tips (Book 9- <i>Kitten's First Full Moon</i>)	\$3.86 (500 piece set)
Crayons or markers for coloring	Likely already purchased
Total Cost of Crafts and Additional Materials	\$65.03

Material List for Unit 4- Astronomy

(Continued)

Dramatic Play- Observatory Materials	
Astronaut costume	\$25.99
Solar system felt board	\$19.99
Telescope	\$25.99
Rocket and rover playset	\$22.43
Phases of the moon blocks	\$22.00
Planet cut outs (First use with Book 3 before placing in center)	\$15.35
Planet posters (see Astronomy Materials binder)	Cost of printing and lamination
Additional books about space	Varies
Total Cost of Dramatic Play Center	\$131.75

Total cost for Unit 4= \$461.51

Materials to Prepare			
	Teacher's Manual	www.readingscience.org	Print 2-sided, put in binder
	Book 1- <i>A Pig is Big-</i> relative size sorting cards	Basic Concepts Manual	Print, laminate, cut
	Book 1- <i>A Pig is Big-</i> optional rhyming cards	Page Materials Binder	Print, laminate, cut
	Book 1 (Alternative)- <i>I Am Big But I'm Not the Biggest</i>	Page Materials Binder	Print, laminate, bind
	Planet posters for Dramatic Play Center	Page Materials Binder	Print, laminate
	Book 5- <i>On the Launch Pad</i> Rocket counting cards (if not using space figures)	Page Materials Binder	Print, laminate, cut (Need 5-20 cards for each student in math group)
	Book 6- <i>Sleepy Solar System</i> Solar System Book	Page Materials Binder	Print (2-2 sided flip on long side), fold, staple into booklet. Need one for each student.
	Book 8- <i>Birthday on Mars</i> Rover	Page Materials Binder	Print, cut out. Need one rover for each student
	Book 9- <i>Kitten's First Full Moon</i> Craft Template	Page Materials Binder	Print on cardstock. Need one for each student.
	Book 9- <i>Kitten's First Full Moon</i> Star Cutouts	Page Teachers Manual	Cut out stars from yellow paper. Need 3-5 for each student.
	Book 10- <i>Ten Twinkly Stars</i> Star Counting Cards	Page Materials Binder	Print, laminate, cut (Need 5-20 cards for each student in math group)
	Book 14- <i>Henry's Stars</i> Constellation Cards	Page Materials Binder	Print, laminate, cut (leave labels attached)
	Book 18- <i>Small World</i> Craft Template	Page Materials Binder	Print. Need one for each student.
	<i>Delivery Sequencing Cards</i>	Page Materials Binder	Print, laminate, cut
	<i>Delivery wrapped box</i>	Page Teachers Manual	Wrap small box in white paper, draw a red heart on box

Optional Books Unit 4: Astronomy

Additional (Optional) Books About Space
<i>Every Planet Has a Place</i> by National Geographic Kids
<i>So That's How the Moon Changes Shape!</i> by Allan Fowler
<i>The Sun</i> by Melanie Chrismer
<i>Venus</i> by Seedlings (Has a book for each planet)
<i>There's No Place like Space!</i> by Tish Rabe
<i>Astronomy for kids: Planets, Stars & Constellations</i> by Intergalactic Kids Book Edition
<i>I Am Moon</i> by Rebecca and James McDonald
<i>Solar System</i> by Jill McDonalad
<i>Our Solar System</i> by Peter and Connie Roop
<i>ABC Universe</i> by American Museum of Natural History
<i>How Many Stars in the Sky?</i> by Lenny Holt
<i>I am Neil Armstrong</i> by Brad Meltzer
<i>Mae Jemison</i> by Mary Nhin
<i>My First Book of Planets</i> by Bruce Betts
<i>Eight Little Planets</i> by Chris Ferrie

Observatory Dramatic Play Center



Purpose: Let children explore looking through a telescope and examining different space objects. Play dress up as an astronaut and look through books about space.

Materials: Planets Poster & Astronomy Books; Dress Up Costume of an Astronaut, Child’s telescope; pictures of planets, the moon, constellations placed around the room for children to view; observation book to record what they see & materials to color and write in the books.

We suggest Adding these materials after Book 3 *Me and My Place in Space* by Joan Sweeney. Children will have exposure to the concepts around space and astronomy.

How it Works:

Add books & poster to science nature center to get children interested in astronomy. Let them know that we are setting up an observatory in our science center. *An observatory is where you can go to look at the stars and planets through telescopes and learn more about them. Astronomers are scientists who work at observatories and study and teach about the stars.* Talk about (maybe show pictures) of the observatory in your city. Place pictures of planets, stars, constellations, and the moon around the room for children to view through the telescope. When these new items are added to the Nature Center be sure to introduce the items and explain how to use them.

Explain that a telescope is a tool that Astronomers (Scientists who study space—planets, stars, etc.) use. They can pretend to be astronomers by aiming the telescope at different objects in the “sky” and observing them through the telescope and then writing down their observations in our Observation book.

Astronomy Observatory Center



Astronaut Costume



Go on a pretend space mission. Practice vocabulary and oral language skills while playing with peers.



Felt Board with Astronomy Pieces



Create a space scene. Use the felt pieces to tell a story. Name the planets, moon, and sun.



Telescope



Examine the planet photos close up through the telescope.



Space Set with Rocket and Rover



Take two astronauts on a mission. Practice vocabulary and oral language skills.



Phases of the Moon Blocks



Basket of Space Books to Explore.

Whole Group Circle Time—Basic Outline

1. Gathering Together (2 min): ABC Song to call student to circle.
2. Language Time! (3 min) – Nursery Rhyme, Finger Play, Song, Poem
3. Learning New Things (10 min)
 - a. Topic discussion for week 1: Showing Kindness to our Friends & Community
 - b. Story & Discussion Using 1, 2, 3 Shared Story Routine
 - c. Included periodically: Shared Writing Experience
4. Highlight Center Where You Can Learn More

Second Read of Circle Time Story – Basic Outline

1. Story & Discussion, 1, 2, 3 Shared Story Routine
2. Follow Up Activity or Craft

The 1, 2, 3 Shared Story Routine – Read Two Times

1st Read – Focus on Listening to the Story—Whole Group Story Time

1. Before:

1. Introduce the topic
2. Introduce the book to generate excitement.
3. Point out title, author, & illustrator.

2. During:

1. Read with very few interruptions so children can get a sense of the full story.
2. Model Thinking Aloud.
3. Draw children’s attention to key content, vocabulary, and story elements: characters, setting, the problem, etc.

3. After:

1. Ask their opinion—did they like it? Thumbs up/down. Why? Provide a sentence stem.
2. Questions: Ask simple questions about the book.
3. Review vocabulary & connect content of the book to their knowledge of the topic.
(2 & 3 should go in the order that makes sense for the book discussion)

2nd Read – Discuss Together & Activity

1. Before:

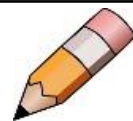
1. Ask the children if they can remember what this book is about—show them the cover to remind them.
2. Point out the title, author, & illustrator.
3. Tell them we are going to read the story again and discuss the story. So be ready to share your ideas!

2. During:

1. Read with excitement and fluency.
2. Ask questions about how characters feel or what they might be thinking.
3. Highlight key vocabulary, content, and story elements.

3. After:

1. Ask for their opinion—did they like it? Thumbs up/down. Why? Provide a sentence stem.
2. Ask a few questions about story elements and discuss 2-3 interesting vocabulary words.
3. Complete follow up activity



Shared Writing Experience - Basic Outline

Exposing children to print at an early age is helpful in many aspects of learning to read. The Shared Writing Routine is done across a number of books (not all) in each Unit at least once a week.

Goals of the Shared Writing experience:

- Meaningful exposure of children to print, helping them understand that print carries meaning,
- Demonstration of the process of transcribing speech to print,
- Highlighting of specific letter-sound relationships and conventions of writing.

When planning Shared Writing experiences, make sure to keep the following in mind:

1. Facilitate the production of a topical message that is reflective of your current Project Ready! theme. Make sure this message incorporates **target vocabulary** and **current theme**.
2. Keep sentences constructed short (5-7 words) and the total text brief (2-4 sentences).
3. When gathering input from children regarding the written message construction, “recast” the messages to ensure that they are clear and reflect content from the theme. This “recasting” requires restating students’ input into clear and grammatically standard statements.

You can use this Shared Writing Preparation Template to prepare for a shared writing experience:

1. Topic of Message: (to be reflected in the first and last sentence):

Plan your topic sentence or the topic that you will communicate in the first sentence.

Vocabulary word(s) to include:

Include a word or words that have been highlighted in the 1, 2, 3 Shared Reading Routine.

Specific letter(s) or conventions to highlight:

This could include attention to spaces between words, directionality, punctuation, capital letters, and sentence types.

2. Plan your sentences. *Often you will follow this pattern:*

Topic -

Detail -

Detail -

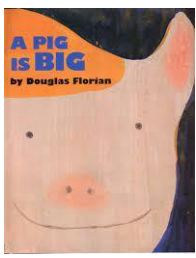
Detail -

Concluding

The Shared Writing Routine utilizes these three steps repeatedly for each sentence written together: Plan – talk to the children about what to write; Write – write within view of the children and “think aloud” as you write your sentence, highlighting the vocabulary and conventions you planned; Read – Point to each word and read the sentence together. There are four different types of writing highlighted across the curriculum

1. Tell a Story 2. Express Ideas 3. Share Information 4. Discuss & Respond to Questions

With most writing teachers should facilitate the development of a paragraph structure including an introductory (topic) sentence, followed by details, and finished with a “wrap up” (concluding) sentence. By continually modeling the basic paragraph structure, a foundation for this type of organization within children’s writing is established.



Unit: Astronomy, Part 1- The Universe is BIG & Planets
Book 1: A Pig is Big by Douglas Florian
Extra Materials Needed:



Language Time

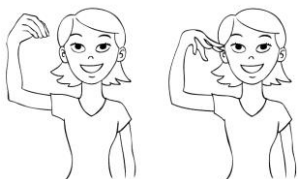
Tuning up for Outer Space
 (to the tune of Farmer in the Dell)

The sun is in the sky
(point up to sky)
 The sun is in the sky
(point up to sky)
 Hot and bright
 it gives us light
(ASL sign for light)
 The sun is in the sky
(point up to sky)

The moon is in the sky
(point up to sky)
 The moon is in the sky
(point up to sky)
 Around and round
 the Earth it goes
(make circle with hands)
 The moon is in the sky
(point up to sky)

<https://www.tes.com/teaching-resource/space-song-book-301319>

ASL- light



1. Before

1. Topic Introduction- *Today we are starting a new unit. We will be learning about Astronomy. Let's clap that word. A-stron-o-my. Good! Astronomy is the study of outer space. We are going to learn about things that are in space, like stars and planets. Space is huge and many things are very, very far away.*

2. Book Introduction- *This book is called A Pig is BIG. I wonder why we are reading about a big pig when we are learning about space. Let's read to find out.*

3. Title and Author- Draw attention to title and author.

2. During

1. Read- Read with few interruptions so children can follow the full story.

2. Model Thinking Aloud- Pause to model what good readers think about.

- "A car. It's bigger than a cow by far." *I can see that the car is bigger than the cow. The pig and the cow fit inside the car. The car is much bigger than the cow.*
- "A truck." *The truck is even bigger than the car. The truck can haul the car and the pig and cow.*
- "What's bigger than a city?" *The city is so big. It fits all the streets. Here is the big truck that is hauling the car, pig, and cow. Look how small it looks compared to the city.*

3. Draw Attention to Key Events and Vocabulary- Pause to highlight vocabulary and key concepts.

- Key content
*Some things are big, other things are bigger.
 The universe is the biggest of all.*
- Vocabulary: briefly define/highlight vocab words when they come up in the story.
 Reinforce throughout the day.
measure- use a tool to see how big something is
Streets are big so we find out how big they are, we measure them, in miles.
earth- the planet where we live
The earth is gigantic!
universe- everything! Everything in space, including us, planets, and stars.
The universe is the biggest thing of all. Everything is part of the universe.

3. After

1. Ask their Opinion- *Did you like reading about all of those things that were bigger than the big pig? Thumbs up if you liked that book.*

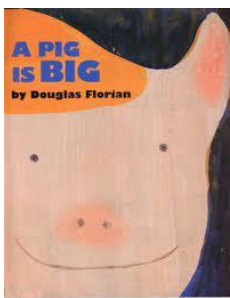
2. Ask Questions- Check their understanding. Ask children to respond in different ways (choral response, individual response, etc.)

- *What is bigger than the pig?* (various answers- cow, car, street, etc.)
- *What is the biggest of all?* (the universe)

3. Follow Up Activity- Rhyming Practice

Explain, *There were lots of rhyming words in this book. Remember, rhyming words sound the same at the end. Let's go back and read parts of the book. Reread the passages. Emphasize the words in bold. Ask Do those words rhyme? Do they sound the same at the end?* Read the whole passage, emphasizing the words in bold.

- *A truck can haul a car that's **stuck**... **bad luck**.* (Yes)
- *That neighborhoods sit side by **side**... to make a city **wide**.* (Yes)
- *The universe is wide in **girth**. It is the biggest thing of **all**.* (No)



Unit: Astronomy, Part 1- The Universe is BIG & Planets
Book 1: A Pig is Big by Douglas Florian



Re-Read & Activity- Math Activities

Extra Materials Needed: relative size sorting cards (see Basic Concepts Manual)

Before:

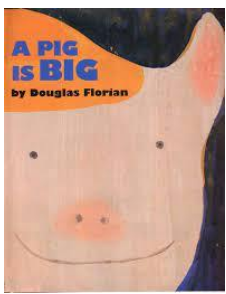
1. Ask if they can remember what this book is about- show them the cover to remind them.
We have already read this story. Do you remember it? Look at the cover. Do you remember this big pig? What things were bigger than the pig?
2. Point out title & author- ask if anyone can tell you what the author does.
The title of this story is A Pig is Big. The author of the story is Douglas Florian. Who remembers what the author does? Tell me. Yes, the author writes the words. The illustrator is also Douglas Florian. What does the illustrator do? They draw the pictures. Douglas Florian wrote the words and drew the pictures.
3. Tell them this time we are going to read and discuss the story so be ready to share your ideas!
We are going to read the story again. Pay close attention so we can talk about the book when it's done.

During:

1. Read with excitement and fluency.
2. Ask Questions
 - a. "What's bigger than a cow?" *Do you remember what is bigger than a cow?* (a car)
 - b. "What's bigger than a truck?" *Do you remember what is bigger than a truck?* (a street)
 - c. "Add streets together, and I'll bet A neighborhood is what you'll get." *What do you get when you add streets together?* (a neighborhood)
 - d. "The earth's dimensions do excel." *What is the name of our planet?* (Earth)
 - e. "It is the biggest thing of all" *What is the biggest of all?* (the universe)

After:

1. Ask for their opinion- did they like it? Thumbs up/down? Why? Provide a sentence stem.
Did you like this story? Raise your hand to tell me. "I liked this story because..."
2. Discussion questions
 - a. *What is one thing that is bigger than the pig?* (various answers)
 - b. *What is the name of our planet?* (Earth)
 - c. *What is the biggest thing of all?* (the universe)
3. Do RELATIVE SIZE math activity. Remember, these groups should be homogenous and small so each child's math skill level can be targeted. Manipulatives: relative size cards (see Basic Concepts materials)



Unit: Astronomy, Part 1- The Universe is BIG & Planets
Book 1: A Pig is Big by Douglas Florian

Optional Re-Read & Activity- Rhyming Cards



Extra Materials Needed: rhyming cards

Before:

1. Ask if they can remember what this book is about- show them the cover to remind them.
We have already read this story. Do you remember it? Look at the cover. What is this animal? It's a pig!
2. Point out title & author- ask if anyone can tell you what the author does.
The title of this story is A Pig is Big. The author of the story is Douglas Florian. Who remembers what the author does? Tell me! Yes, the author writes the words. Douglas Florian is also the illustrator, so he wrote the words and drew the pictures.
3. Tell them this time we are going to read and discuss the story so be ready to share your ideas!
We are going to read the story again. Pay close attention so we can talk about the book when it's done.

During:

1. Read with excitement and fluency.
2. Ask Questions
 - a. "What's bigger than a cow?" *Do you remember what is bigger than a cow?* (a car)
 - b. "What's bigger than a truck?" *Do you remember what is bigger than a truck?* (a street)
 - c. "Add streets together, and I'll bet A neighborhood is what you'll get." *What do you get when you add streets together?* (a neighborhood)
 - d. "The earth's dimensions do excel." *What is the name of our planet?* (Earth)
 - e. "It is the biggest thing of all" *What is the biggest of all?* (the universe)

After:

1. Ask for their opinion- did they like it? Thumbs up/down? What was your favorite part?" My favorite part was...
2. Discussion questions
 - a. *What is the biggest thing of all?* (the universe)
 - b. *What is one thing that is bigger than the pig?* (various answers- cow, truck, street, etc.)
3. Do rhyming activity. Remember, these groups should be heterogenous so students can learn oral language skills from each other. After reading the story again, introduce the rhyming activity. There are three rhyming pairs in this activity. Set out one part of each rhyming pair- bear, snow, floor. Name each picture. Explain, *We are going to find words that rhyme. Rhyme means they sound the same at the end.* Provide a few examples of familiar rhyming words. Show students the other pictures and name them- lair, toe, door. Work together to match the rhyming words. Support students as needed. Once all three pairs have been matched, encourage students to say the rhyming pairs together.



Re-Read & Activity- Math Activities

Extra Materials Needed: relative size sorting cards (see Basic Concepts Manual)

Before:

1. Ask if they can remember what this book is about- show them the cover to remind them.

We have already read this story. Do you remember it? Look at the cover. Do you remember this boy? What things were bigger than the boy?

2. Point out title & author- ask if anyone can tell you what the author does.

The title of this story is I Am But I'm Not the Biggest. The author of the story is The Project Ready! Team. Who remembers what the author does? Tell me. Yes, the author writes the words. A whole team of people worked together to write these words. The illustrator is Maddie Taylor. What does the illustrator do? They draw the pictures. Maddie Taylor drew the beautiful pictures.

3. Tell them this time we are going to read and discuss the story so be ready to share your ideas!

We are going to read the story again. Pay close attention so we can talk about the book when it's done.

During:

1. Read with excitement and fluency.

2. Ask Questions

- a. "What is bigger than me?" *Do you remember what is bigger than the boy?* (his house)
- b. "What's bigger than my town?" *Do you remember what is bigger than his town?* (his state)
- c. "This is my country." *What country does he live in?* (USA)
- d. "This is my planet, Earth." *What is the name of our planet?* (Earth)
- e. "The universe is the biggest thing of ALL." *What is the biggest of all?* (the universe)

After:

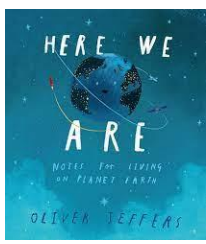
1. Ask for their opinion- did they like it? Thumbs up/down? Why? Provide a sentence stem.

Did you like this story? Raise your hand to tell me. "I liked this story because..."

2. Discussion questions

- a. *What is one thing that is bigger than the boy?* (various answers)
- b. *What is smaller than the boy?* (his little sister)
- c. *What is the biggest thing of all?* (the universe)

3. Do RELATIVE SIZE math activity. Remember, these groups should be homogenous and small so each child's math skill level can be targeted. Manipulatives: relative size cards (see Basic Concepts materials)



Language Time

Tuning up for Outer Space
(to the tune of Farmer in the Dell)

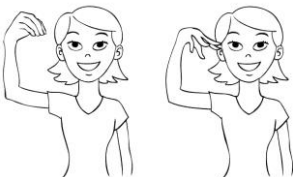
The sun is in the sky
(point up to sky)
The sun is in the sky
(point up to sky)
Hot and bright
it gives us light
(ASL sign for light)
The sun is in the sky
(point up to sky)

The moon is in the sky
(point up to sky)
The moon is in the sky
(point up to sky)
Around and round
the Earth it goes
(make circle with hands)

The moon is in the sky
(point up to sky)

<https://www.tes.com/teaching-resource/space-song-book-301319>

ASL- light



Unit: Astronomy, Part 1- The Universe is BIG & Planets

Book 2: Here We Are: Notes for Living on Planet Earth by Oliver Jeffers

Extra Materials Needed:

1. Before

1. Topic Introduction- *Yesterday we started learning about astronomy, the study of outer space. Let's clap astronomy. A-stron-o-my. We learned, yesterday, that the universe is the biggest thing of all.*

2. Book Introduction- *I see a planet and I see little things going around the planet. This looks like an airplane. I wonder what these other things are. This book is called Here We Are: Notes for Living on Planet Earth. I think this planet is Earth.*

3. Title and Author- Draw attention to title and author *Oliver Jeffers is the author and the illustrator.*

2. During

1. Read- Read with few interruptions so children can follow the full story.

2. Model Thinking Aloud- Pause to model what good readers think about.

- Title page *This* (point to drawing) *is the author and his new baby. This story is a note from the author to his new baby. That will help us understand the book.*
- “as space is very big” *Space is very big, but the universe is the biggest thing of all.*
- “so be kind. There is enough for everyone.” *It is so important to be kind. We can be kind to everyone and we can be kind to our Earth.*

3. Draw Attention to Key Events and Vocabulary- Pause to highlight vocabulary and key concepts.

- Key content

There are many people and animals on Earth.

Earth is fascinating; there is so much to see and do!

Earth is part of the solar system.

- Vocabulary: briefly define/highlight vocab words when they come up in the story. Reinforce throughout the day.

Earth- the planet where we live

Earth is a big globe, floating in space. We live there.

complicated- difficult to understand, with lots of pieces

There's a lot to learn about the sky. It's complicated; hard to understand.

3. After

1. Ask their Opinion- *I liked that book! Earth is fascinating! There is so much to learn about. I liked learning about the ocean.* Call on a few children to answer, “My favorite part was...”

2. Ask Questions- Check their understanding. Ask children to respond in different ways (choral response, individual response, talking to their elbow partners, etc.)

- *What is the name of the planet where we live?* (Earth)
- *Earth has two parts. Who lives on the land?* (people, animals, etc.) *Who lives in the sea?* (animals)

3. Follow Up Activity- Game: Was it in the Book?

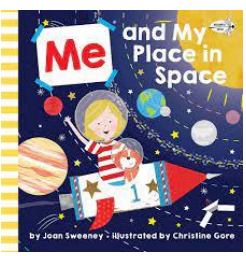
- Explain, *We are going to play a game called Was it in the Book? I'm going to say a fact. You will nod your head if the fact was in the book and shake your head if it wasn't in the book.* Practice nodding and shaking.

- *We live on a planet called Mars.* (No)

- *We live on a planet called Earth.* (Yes)

- *Only a few people live on the Earth.* (No)

- *Many, many people live on the Earth.* (Yes)



Unit: Astronomy, Part 1- The Universe is BIG & Planets

Book 3: Me and My Place in Space by Joan Sweeney

Extra Materials Needed:



1. Before

1. Topic Introduction- *We have been reading about Astronomy, the study of space. Let's clap that word. A-stron-o-my. We learned that the universe is huge. Everything in space is part of our universe.*

2. Book Introduction- *This looks like a really fun book. I see a person in a rocket ship. It looks like she is in space!*

3. Title and Author- Draw attention to title and author *The title is Me and My Place in Space. The author is Joan Sweeney. We read another book she wrote about maps.*

2. During

1. Read- Read with few interruptions so children can follow the full story.

2. Model Thinking Aloud- Pause to model what good readers think about.

- "Tonight, I can see the Moon from my place in space." *Sometimes I can see the moon. Have you ever noticed the moon in the sky?*

- "as big as a million Earths" *Wow! I didn't know the sun was so big!*

- "you could travel for trillions of years and never get to the other side." *The universe is enormous! Our solar system is just one tiny part of the universe.*

3. Draw Attention to Key Events and Vocabulary- Pause to highlight vocabulary and key concepts.

- Key content

The Earth is in a solar system with 7 other planets that orbit around the sun.

The universe is HUGE!

- Vocabulary: briefly define/highlight vocab words when they come up in the story.

Reinforce throughout the day.

planet- a huge natural object that travels around a star, our planet is Earth

This globe is a model of our planet, Earth.

solar system- everything that travels around the sun, including eight planets

The sun is the largest thing in our solar system. Everything travels around it.

universe- everything that exists in space, including us, planets, and stars.

The universe is so big, no one has ever traveled all the way across it.

3. After

1. Ask their Opinion- *Did you like learning about space? My favorite thing was learning about the other planets in the solar system. What was your favorite part? Turn to your neighbor and tell them. Say, "My favorite part was..."*

2. Ask Questions- Check their understanding. Ask children to respond in different ways (choral response, individual response, talking to their elbow partners, etc.)

- *What do all the planets orbit-go around?* (the sun)

- *Which is bigger- the sun or the Earth?* (the sun)

3. Follow Up Activity- Introduce observatory center

- Show the children the items in the center. Explain and model how to use the items appropriately. Ensure that a teacher is available near this area to help guide children until they are independent in their play and exploration. The teacher can also suggest play ideas while encouraging the use of new vocabulary and background knowledge.

Language Time

Tuning up for Outer Space
(to the tune of Farmer in the Dell)

The sun is in the sky
(point up to sky)

The sun is in the sky
(point up to sky)

Hot and bright
it gives us light

(ASL sign for light)

The sun is in the sky
(point up to sky)

The moon is in the sky

(point up to sky)

The moon is in the sky

(point up to sky)

Around and round
the Earth it goes

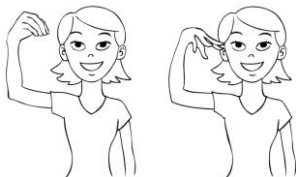
(make circle with hands)

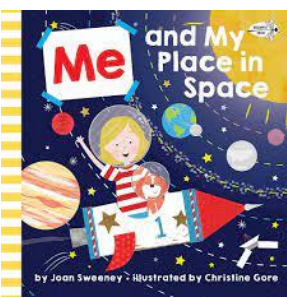
The moon is in the sky

(point up to sky)

<https://www.tes.com/teaching-resource/space-song-book-301319>

ASL- light





Unit: Astronomy, Part 1- The Universe is BIG & Planets
Book 3: Me and My Place in Space by Joan Sweeney



Re-Read & Activity- Solar System Activity

Extra Materials Needed: planet cut outs

Before:

1. Ask if they can remember what this book is about- show them the cover to remind them.
We have already read this story. Do you remember it? Look at the cover. What is this girl riding in? A spaceship! We learned about space in this book. What other space things do you see on this cover?
2. Point out title & author- ask if anyone can tell you what the author does.
The title of this story is Me and My Place in Space. The author of the story is Joan Sweeney. Who remembers what the author does? Tell me! Yes, the author writes the words. The illustrator is Christine Gore. She made the pictures.
3. Tell them this time we are going to read and discuss the story so be ready to share your ideas!
We are going to read the story again. Pay close attention so we can talk about the book when it's done.

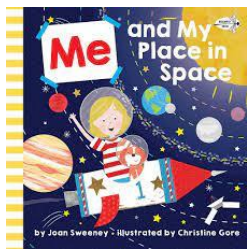
During:

1. Read with excitement and fluency.
2. Ask Questions
 - a. "The Earth travels in a path around the Sun." *What does the Earth travel around?* (the Sun)
 - b. "On Mercury" *How many syllables in the name of that planet? Let's clap it to find out.* (three)
 - c. "Jupiter is a massive ball of gas, bigger than all the other planets combined." *What is the biggest planet in our solar system?* (Jupiter, it's bigger than all the others put together!)
 - d. "Neptune looks like a blue twin of Uranus" *Why are there snowflakes on these pages?* (it is very cold on Uranus and Neptune)

After:

1. Ask for their opinion- did they like it? Thumbs up/down? Tell me one thing you learned in this story. "I learned..."
2. Discussion questions
 - a. *Where does this story take place?* (in space)
 - b. *What does the girl see as she travels through space?* (various answers- moon, planets, etc.)
3. Do solar system activity. Remember, these groups should be heterogenous so students can learn oral language skills from each other. After reading the story (or parts of the story) again, introduce the solar system activity. This activity will require 9 people. It might need to be done in whole group, depending on your class size. Regardless, make sure you repeat this activity so that everyone gets a turn to be a planet. Explain that the students are going to become the solar system. Create a model of the solar system using these steps:
 - Show the students the sun.
 - Encourage them to say the "sun" and clap the syllables.
 - Show the page in the book about the sun and remind them of a few key facts.
 - Assign one student to be the sun. Give them the sun cut out to hold.
 - Continue with the above steps for each planet.
 - Move quickly and keep this brief. Try to keep this activity to 15 minutes or less.
 - Once all planets are lined up in order, encourage the students to orbit (travel around) the sun while remaining in their same order.





Unit: Astronomy, Part 1- The Universe is BIG & Planets
Book 3: Me and My Place in Space by Joan Sweeney



Discuss and respond to questions

Extra Materials Needed: book and whiteboard or chart paper to create shared writing

Shared Writing Preparation Template: Discuss and respond to questions

Topic Sentence: Prepare this topic sentence by writing it on the Shared Writing board, leaving a blank space for the purple word:

What is a solar **system**?

Vocabulary to include, if possible:

planet- a huge natural object that travels around a star, our planet is Earth

This globe is a model of our planet, Earth.

solar system- everything that travels around the sun, including eight planets

The sun is the largest thing in our solar system. Everything travels around it.

Specific letters or conventions to highlight:

Current letters from the alphabetic group, capitals, periods, question mark

Plan your detail and concluding sentences (You can utilize the following.)

Detail: *A solar system is the sun and planets that move around it.*

Detail: *We have nine planets in our solar system.*

Detail: *There are many other solar systems in our universe.*

Conclusion: *This is what we know about solar systems.*

Steps in the Process

Discuss the book and vocabulary: *We read this book called Me and My Place in Space. Do you remember how this girl traveled through space? What did she see on her journey through space? Do you remember the name of any planets she saw in our solar system? What is the name we use for everything in space? The universe! The universe is so unbelievably big. It's the biggest thing!*

Write Topic Sentence

Plan: *Let's work together to answer this question. What is a solar... Hmm... What word is missing?*

Write: Write system to complete the sentence. Point out the question mark as you write it. Explain the function of the question mark. *This symbol means we are asking a question. A question needs answer.*

Read aloud, pointing to each word: *What is a solar system?*

Write Detail Sentence(s)

Plan: *Let's answer that question. What do we know about solar systems?* Guide children by showing them a few pictures in the book, if necessary. Remember the planned detail sentences are available if your students need more direction. Otherwise, write the ideas they share.

Write: A solar system is the sun and planets that move around it.

Read aloud, pointing to each word: *A solar system is the sun and planets that move around it.* Read again, encouraging children to read with you.

Continue adding detail sentences if students are engaged.

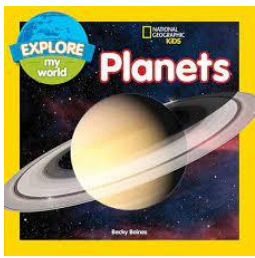
Write Concluding Sentence

Plan: *We used facts to answer that question about solar systems. Now, how do we tell our readers that we are done answering the question?*

Write: This is what we know about solar systems.

Read aloud, pointing to each word: *This is what we know about solar systems.* Read again, encouraging children to read with you

***Read whole paragraph with students. Post writing where they can return to it frequently to "read."** 21



Unit: Astronomy, Part 1- The Universe is BIG & Planets

Book 4: Planets by Becky Baines

Extra Materials Needed: dramatic play center ready for play



1. Before

1. Topic Introduction- *We have been learning all about our astronomy. Astronomy is the study of space. Let's clap the word astronomy. A-stron-o-my. We have learned so much about space. Raise your hand if you want to tell us one thing you have learned about space.*

2. Book Introduction- *This story is called Planets. It is a non-fiction book. We are going to be learning about something. What do you think we will learn about?*

3. Title and Author- Draw attention to title and author

2. During

1. Read- Read with few interruptions so children can follow the full story.

2. Model Thinking Aloud- Pause to model what good readers think about.

- Page 8- "And people, too." *So many interesting things live on Earth, but Earth is the only planet in our solar system that has living things. I think that is so neat!*

- Page 12- "Can you find Earth?" *Everyone point to our planet and say, "Earth!"*

- Page 25- "The Milky Way is just one of hundreds of billions of galaxies in the universe." *Wow! The universe is so big!*

3. Draw Attention to Key Events and Vocabulary- Pause to highlight vocabulary and key concepts.

- Key content

Earth is the third planet from the sun in our solar system.

Our solar system is part of the Milky Way galaxy.

The universe is HUGE!

- Vocabulary: briefly define/highlight vocab words when they come up in the story. Reinforce throughout the day.

planet- a huge natural object that travels around a star, our planet is Earth

Our planet looks like a blue and green marble when you look at it from space.

solar system- everything that travels around the sun, including eight planets

Earth is the third planet from the sun in our solar system.

galaxy- a group of solar systems, we live in the Milky Way galaxy

Scientists have counted 500 other solar systems in our galaxy.

universe- everything that exists in space, including us, planets, and stars.

There are hundreds of billions of galaxies in our universe!

3. After

1. Ask their Opinion- *Did you enjoy this book? Thumbs up if you did.*

2. Ask Questions- Check their understanding. Ask children to respond in different ways (choral response, individual response, talking to their elbow partners, etc.)

- *What was this story about?* (various answers- planets, solar system, galaxies, etc.)

- *Where is Earth in our solar system?* (the third planet from the sun)

3. Follow Up Activity- Game: Was it in the Book?

- Explain, *We are going to play a game called Was it in the Book? I'm going to say a fact. You will nod your head if the fact was in the book and shake your head if it wasn't in the book. Practice nodding and shaking.*

- *Earth is the fifth planet from the sun.* (No)

- *Earth is the third planet from the sun.* (Yes)

- *Earth has rings around it.* (No)

- *Earth has one moon.* (Yes)

Language Time

Tuning up for Outer Space

(to the tune of Farmer in the Dell)

The sun is in the sky

(point up to sky)

The sun is in the sky

(point up to sky)

Hot and bright
it gives us light

(ASL sign for light)

The sun is in the sky

(point up to sky)

The moon is in the sky

(point up to sky)

The moon is in the sky

(point up to sky)

Around and round
the Earth it goes

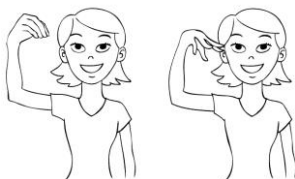
(make circle with hands)

The moon is in the sky

(point up to sky)

<https://www.tes.com/teaching-resource/space-song-book-301319>

ASL- light





Unit: Astronomy, Part 1- The Universe is BIG & Planets
Book 5: On the Launch Pad by Michael Dahl
Extra Materials Needed:



Language Time

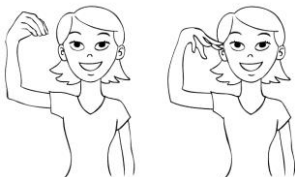
Tuning up for Outer Space
(to the tune of Farmer in the Dell)

The sun is in the sky
(point up to sky)
The sun is in the sky
(point up to sky)
Hot and bright
it gives us light
(ASL sign for light)
The sun is in the sky
(point up to sky)

The moon is in the sky
(point up to sky)
The moon is in the sky
(point up to sky)
Around and round
the Earth it goes
(make circle with hands)
The moon is in the sky
(point up to sky)

<https://www.tes.com/teaching-resource/space-song-book-301319>

ASL- light



1. Before

1. Topic Introduction- *What have we been learning about? Astronomy! Astronomy is the study of space.. Turn to the person sitting next to you and whisper the name of one thing that is in space.*

2. Book Introduction- *When I look at the cover of this book, I see a rocket ship. It looks like someone might be inside. I think this book might be about someone going into space on a rocket. Let's read to find out if I'm correct.*

3. Title and Author- Draw attention to title and author *This book is called On the Launchpad. The author is Michael Dahl. He wrote the words.*

2. During

1. Read- Read with few interruptions so children can follow the full story.

2. Model Thinking Aloud- Pause to model what good readers think about.

- Pg. 3 "Twelve stars twinkle in the morning sky." *This is a counting book, but we didn't start counting where we normally do. We started with twelve. I wonder what the next number will be in this counting book.*
- Pg. 4 "Eleven workers take care of tasks." *Oh! I understand now! We are counting backward. We started at 12, now we're at 11 and we're counting as the rocket gets ready to blast off into space.*
- Pg. 13 "Six astronauts ride the elevator." *Here are the astronauts. They have to ride an elevator to get into the rocket. The rocket must be very big.*

3. Draw Attention to Key Events and Vocabulary- Pause to highlight vocabulary and key concepts.

- Key content
Numbers tell us how many. We say numbers when we count. Lots of work must be done before a rocket can blast off!
- Vocabulary: briefly define/highlight vocab words when they come up in the story. Reinforce throughout the day.
tasks- jobs, work that must be done
These workers are doing different tasks. What work are they doing?
engineer- a type of scientist
These engineers use computers to help launch the rocket safely.
fuel- the liquid rockets need for energy
Rockets need a lot of fuel to reach all the way to space.

3. After

1. Ask their Opinion- *Did you enjoy counting the items in that book? What did you like counting best? Turn to someone and ask, "What did you like counting?"*

2. Ask Questions- Check their understanding. Ask children to respond in different ways (choral response, individual response, talking to their elbow partners, etc.)

- *What did we count in this book?* (various answers- trucks, windows, etc.)
- *How did we count in this book?* (backward, the numbers got smaller)

3. Follow Up Activity- Math Word Problem

- Explain, *We counted different things as we watched a rocket get ready to blast off. On the rocket, we counted four windows (hold up 4 fingers) and two engines (hold up 2 fingers). How many rocket parts is that in all? (Wiggle fingers as you count.) 1,2,3,4,5,6. Four plus two equals six. Say that with me and show me your fingers. Four plus two equals six. Thank you for helping me with that addition problem.*



Unit: Astronomy, Part 1- The Universe is BIG & Planets
Book 5: On the Launch Pad by Michael Dahl



Re-Read & Activity- Math Activities

Extra Materials Needed: space manipulative figures or rocket counting cards (see Astronomy Materials binder)

Before:

1. Ask if they can remember what this book is about- show them the cover to remind them.

We have already read this story. Do you remember it? Look at the cover. What did we count in this book? What is this on the cover?

2. Point out title & author- ask if anyone can tell you what the author does.

The title of this story is On the Launch Pad. The author of the story is Michael Dahl. Who remembers what the author does? Tell me. Yes, the author writes the words. There are two illustrators. Their names are Derrick Alderman and Denise Shea. What does the illustrator do? They draw the pictures.

3. Tell them this time we are going to read and discuss the story so be ready to share your ideas!

We are going to read the story again. Pay close attention so we can talk about the book when it's done.

During:

1. Read with excitement and fluency.

2. Ask Questions

a. "Eleven workers take care of tasks." *What does that work tasks mean?* (work, jobs)

b. "Eight trucks carry the fuel." *What does that word fuel mean?* (the liquid that gives energy)

c. "Seven radar dishes silently stand." *Can you find the hidden number 7?* (in the top, right radar)

d. "Four windows gleam in the dawn." *Where is the hidden number four?* (in the bottom, right window)

e. "Blastoff" *Where is the hidden number one?* (top of the rocket)

After:

1. Ask for their opinion- did they like it? Thumbs up/down? Why? Provide a sentence stem.

Did you like this story? Raise your hand to tell me. "I liked this story because..."

2. Discussion questions

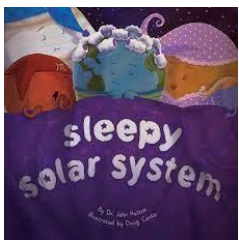
a. *What did we count in this book?* (various answers- engineers, windows, etc.)

b. *How many engines were on the rocket?* (two)

c. *Who rode on the rocket ship?* (the astronauts)

d. *Where did the rocket go?* (aimed toward the stars, space)

3. Do a math activity. Remember, these groups should be homogenous and small so each child's math skill level can be targeted. Manipulatives: space manipulative figures or rocket counting cards (see Astronomy Materials binder)



Unit: Astronomy, Part 1- The Universe is BIG & Planets

Book 6: Sleepy Solar System by John Hutton

Extra Materials Needed:



Language Time

Tuning up for Outer Space
(to the tune of Farmer in the Dell)

The sun is in the sky
(point up to sky)

The sun is in the sky
(point up to sky)

Hot and bright
it gives us light
(ASL sign for light)

The sun is in the sky
(point up to sky)

The moon is in the sky
(point up to sky)

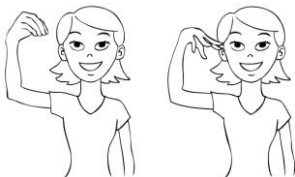
The moon is in the sky
(point up to sky)

Around and round
the Earth it goes
(make circle with hands)

The moon is in the sky
(point up to sky)

<https://www.tes.com/teaching-resource/space-song-book-301319>

ASL- light



1. Before

1. Topic Introduction- *We have been learning about the study of space, astronomy. Raise your hand if you want to tell us the name of our planet.*

2. Book Introduction- *This picture looks so silly! I think these big, round things might be planets. It looks like they are tucked into bed. Do you think real planets sleep in a bed? No!*

3. Title and Author- Draw attention to title and author *This book is called Sleepy Solar System. The author is Dr. John Hutton. He lives in our city- Cincinnati!*

2. During

1. Read- Read with few interruptions so children can follow the full story.

2. Model Thinking Aloud- Pause to model what good readers think about.

- “in the starry Milky Way” *I remember learning about the Milky Way. That’s the name of our galaxy, where are solar system is.*

- “puts a cozy nightgown on” *That’s so silly! Venus is a real planet in our solar system, but I don’t think Venus actually wears a nightgown. Do you?*

- “Saturn brushes rings” *Saturn has rings made of ice and rock. Do you think Saturn really brushes its rings?*

3. Draw Attention to Key Events and Vocabulary- Pause to highlight vocabulary and key concepts.

- Key content

There are eight planets in our solar system. Each planet is unique.

- Vocabulary: briefly define/highlight vocab words when they come up in the story. Reinforce throughout the day.

Earth- the planet where we live

Earth is a big globe, floating in space. We live there.

sun- the biggest star in our solar system, all the planets travel around the sun

The sun is setting. That is what happens at the end of the day.

asteroids- small rocks that orbit the sun, like the planets

The asteroids zoom across the sky.

3. After

1. Ask their Opinion- *Did you like reading that silly book? I liked reading about the real planets doing make believe things. Thumbs up if you liked that, too.*

2. Ask Questions- Check their understanding. Ask children to respond in different ways (choral response, individual response, talking to their elbow partners, etc.)

- *What were the planets doing in this book?* (getting ready for bed)

- *How many planets were in this story?* (eight)

- *What do all of the planets travel around?* (the sun)

3. Follow Up Activity- Rhyming Practice

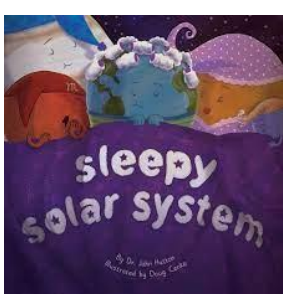
Explain, *There were lots of rhyming words in this book. Remember, rhyming words sound the same at the end. Let’s go back and read parts of the book. Reread the passages. Emphasize the words in bold. Ask, Do those words rhyme? Do they sound the same at the end?* Read the whole passage, emphasizing the words in bold.

- *It’s been a long, busy **day** in the starry Milky **Way**.* (Yes)

- *Sleepy, setting Sun calls **out**, “Bedtime, everyone.”* (No)

- *As asteroids zoom and **fly** across the twinkling **sky**.* (Yes)

- *And as mellow Father **Moon** turns on a pale night **light**...* (No)



Unit: Astronomy, Part 1- The Universe is BIG & Planets
Book 6: Sleepy Solar System by John Hutton



Re-Read & Activity- Craft

Extra Materials Needed: solar system booklets (1 for each student), coloring tools (crayons, markers, paints, etc.)

Before:

1. Ask if they can remember what this book is about- show them the cover to remind them.
We have already read this story. Do you remember it? Look at the cover. What are these big, round thing? Planets. What are the planets doing? Going to bed!
2. Point out title & author- ask if anyone can tell you what the author does.
The title of this story is Sleepy Solar System. The author is Dr. John Hutton. Who remembers what the author does? Tell me! Yes, the author writes the words. The illustrator is Doug Cenko. He made the pictures.
3. Tell them this time we are going to read and discuss the story so be ready to share your ideas!
We are going to read the story again. Pay close attention so we can talk about the book when it's done.

During:

1. Read with excitement and fluency.
2. Ask Questions
 - a. “Dizzy Mercury says, ‘At least- been spinning so fast.’” *Why is Mercury dizzy?* (It spins very fast, much faster than Earth.)
 - b. “Mother Earth is sleepy too, in pajamas green and blue?” *Why is Earth wearing green and blue pajamas?* (Earth is green and blue)
 - c. “with a bubbly toothbrush thing.” *What is Saturn brushing?* (its rings)
 - d. “over icy, chilly feet” *Why does Neptune have icy, chilly feet?* (Neptune is far from the sun so it’s very cold)

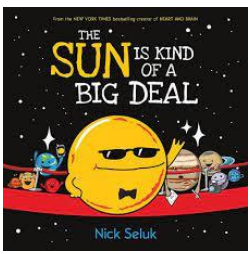
After:

1. Ask for their opinion- did they like it? Thumbs up/down? Tell me one thing you learned in this story. “I learned...”
2. Discussion questions
 - a. *What planets did we see in this book?* (Mercury, Venus, Earth, etc.)
 - b. *Which planet is farthest from the sun?* (Neptune)
3. Do craft activity. Remember, these groups should be heterogenous so students can learn oral language skills from each other. After reading the story again, introduce the craft. Explain that everyone will be making a book about the solar system. Ask students to use their knowledge of the solar system to guess what might be in the book. Show students the booklets. Talk briefly about each page, asking the students what they remember about each celestial item. Students color and decorate their solar system book.

Name _____



The Solar
System



Unit: Astronomy, Part 1- The Universe is BIG & Planets

Book 7: The Sun is Kind of a Big Deal by Nick Seluk

CHALLENGE

Extra Materials Needed:

1. Before

1. Topic Introduction- *We have been learning about space. We know so many things about our solar system and the planets in it. How many planets are in our solar system? Eight! The planets all travel around the... SUN!*

2. Book Introduction- *Look at the sun! It's wearing sun glasses and walking on a red carpet. Red carpets are for very important people at very fancy events. I'm wondering if the sun is on a red carpet because it is important? The title of this book is The Sun is Kind of a Big Deal. If something is a big deal, it is very important. I know the sun is very important to our solar system. Everything travels around it!*

3. Title and Author- Draw attention to title and author *The author of this book is Nick Seluk. He is also the illustrator. He wrote the words and drew the pictures.*

2. During

1. Read- Read with few interruptions so children can follow the full story.

2. Model Thinking Aloud- Pause to model what good readers think about.

- "Like, over a millions times bigger!" *The sun is over a million times bigger than the Earth! That's amazing! I'm having a hard time imagining how big that it.*
- "Do you know how many times you have been around the Sun?" *The Earth travels around the sun once time every year. That means, your age also tells how many times you have traveled around the sun! How cool!*
- "The Sun is always there, even when you can't see it." *The sun is always there, even at night and on cloudy days when we can't see it.*

3. Draw Attention to Key Events and Vocabulary- Pause to highlight vocabulary and key concepts.

- Key content
The sun is at the center of our solar system; all the planets travel around it. The sun is always there! We need the sun to give us light and heat.
- Vocabulary: briefly define/highlight vocab words when they come up in the story. Reinforce throughout the day.

planet- a huge natural object that travels around a star, our planet is Earth
Let's count the planets in our solar system. 1,2,3,4,5,6,7,8.

orbit- travel in a circle around something

All of the planets orbit the sun, like they are going around a racetrack.

3. After

1. Ask their Opinion- *Did you enjoy learning about the sun? Turn to someone next to you and tell them one thing you learned.*

2. Ask Questions- Check their understanding. Ask children to respond in different ways (choral response, individual response, talking to their elbow partners, etc.)

- *What is at the center of our solar system?* (the sun)
- *Why is the sun kind of a big deal? What does the sun do that is so important?* (various answers- gives us light and heat, all the planets go around it, etc.)

3. Follow Up Activity- Game: Was it in the Book?

- Explain, *We are going to play a game called Was it in the Book? I'm going to say a fact. You will nod your head if the fact was in the book and shake your head if it wasn't in the book. Practice nodding and shaking.*

- *Earth is the center of our solar system.* (No)

- *The sun is the center of our solar system.* (Yes)

Language Time

Tuning up for Outer Space
(to the tune of Farmer in the Dell)

The sun is in the sky
(point up to sky)

The sun is in the sky
(point up to sky)

Hot and bright
it gives us light

(ASL sign for light)

The sun is in the sky
(point up to sky)

The moon is in the sky

(point up to sky)

The moon is in the sky

(point up to sky)

Around and round
the Earth it goes

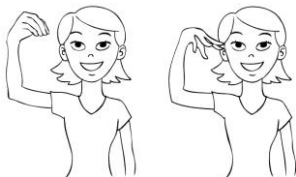
(make circle with hands)

The moon is in the sky

(point up to sky)

<https://www.tes.com/teaching-resource/space-song-book-301319>

ASL- light





Unit: Astronomy, Part 1- The Universe is BIG & Planets

Book 8: Birthday on Mars by Sara Schonfeld

Extra Materials Needed:



1. Before

1. Topic Introduction- *We have been learning all about space. There's a name for the study of space. What is that word? Tell someone near you. Let's all say it together. 1,2,3. Astronomy! Let's clap that word. A-stron-o-my.*

2. Book Introduction- *This picture is so interesting. This looks like a little robot. It's holding a birthday hat. Everything I see in this picture is red and orange. I wonder what this book is going to be about.*

3. Title and Author- Draw attention to title and author *This book is called Birthday on Mars! Oh! This must be the planet Mars.*

2. During

1. Read- Read with few interruptions so children can follow the full story.

2. Model Thinking Aloud- Pause to model what good readers think about.

- "My friends from Earth sent me here to explore the entire planet." *I wonder why people want to explore Mars. What are they hoping to find.*

- "It's my birthday!" *How exciting! It's Curiosity's birthday. I wonder if it will celebrate its birthday.*

- "Oops- I made a dust cloud!" *Mars is a dusty planet. Curiosity probably makes dust clouds a lot!*

3. Draw Attention to Key Events and Vocabulary- Pause to highlight vocabulary and key concepts.

- Key content

Curiosity is a rover that was sent to Mars to explore.

No people have ever visited Mars, even though it is our closest planet neighbor.

- Vocabulary: briefly define/highlight vocab words when they come up in the story. Reinforce throughout the day

planet- a huge natural object that travels around a star, our planet is Earth
People on Earth sent Curiosity to another planet, Mars.

lonely- feeling sad to be alone

Curiosity isn't lonely because it talks to people on Earth every day.

curious- wanting to learn or know something

We should all be curious about new things.

3. After

1. Ask their Opinion- *I enjoyed the story about Curiosity. I think it is so interesting that a robot is helping curious people to learn more about a planet that people have never traveled to.*

2. Ask Questions- Check their understanding. Ask children to respond in different ways (choral response, individual response, talking to their elbow partners, etc.)

- Who was this book about? (Curiosity, the Mars rover)

- Where did this story take place? (on Mars.)

3. Follow Up Activity- Vocabulary Review

Explain, *We talked about some of the important words in this story. One word we learned was curious. Curious means wanting to learn or know something. We can all be curious about new things. For example, I am curious about... I want to know more about... because... (Share something you are curious about.) I'm wondering what you are curious about. Turn to someone near you and tell them one thing you are curious about, one thing you want to learn more about. (Pause briefly for discussion or facilitation of conversation.) Raise your hand to tell everyone.*

Language Time

Tuning up for Outer Space
(to the tune of Farmer in the Dell)

The sun is in the sky
(point up to sky)

The sun is in the sky
(point up to sky)

Hot and bright
it gives us light

(ASL sign for light)

The sun is in the sky
(point up to sky)

The moon is in the sky

(point up to sky)

The moon is in the sky

(point up to sky)

Around and round
the Earth it goes

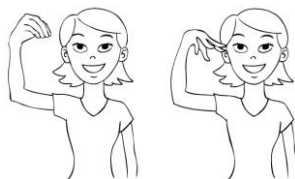
(make circle with hands)

The moon is in the sky

(point up to sky)

<https://www.tes.com/teaching-resource/space-song-book-301319>

ASL- light





Unit: Astronomy, Part 1- The Universe is BIG & Planets
Book 8: Birthday on Mars by Sara Schonfeld



Re-Read & Activity- Craft

Extra Materials Needed: orange paper, red paint, marble, tray with edges or cardboard box, rover cutout, gluestick

Before:

1. Ask if they can remember what this book is about- show them the cover to remind them.
We have already read this story. Do you remember it? Look at the cover. What is this little robot? Curiosity! Where is Curiosity? On Mars!
2. Point out title & author- ask if anyone can tell you what the author does.
The title of this story is Birthday on Mars!. The author of the story is Sara Schonfeld. Who remembers what the author does? Tell me! Yes, the author writes the words. The illustrator is Andrew J. Ross. He made the pictures.
3. Tell them this time we are going to read and discuss the story so be ready to share your ideas!
We are going to read the story again. Pay close attention so we can talk about the book when it's done.

During:

1. Read with excitement and fluency.
2. Ask Questions
 - a. "and I live on Mars." *Where is Curiosity?* (on Mars)
 - b. "No humans have ever been here before." *Do people live on Mars?* (No)
 - c. "We should all be curious- about everything!" *Curiosity is lifting up a rock to see what's underneath. Have you ever done that? What did you see under the rock?* (various answers)
 - d. "Especially today. Because today is extra-special." *Where is Mars in this picture? Where is Earth? Do you see how far away these planets are?*

After:

1. Ask for their opinion- did they like it? Thumbs up/down? What was your favorite part? Tell me, my favorite part was..."
2. Discussion questions
 - a. *Who was this book about?* (Curiosity)
 - b. *Where did this story take place?* (Mars)
3. Do craft activity. Remember, these groups should be heterogenous so students can learn oral language skills from each other. After reading the story again, introduce the craft. Explain that you will be making a scene from the book. Remind students that Mars is the color of rust and it's very dusty. Give students an orange piece of paper on an edged tray or in a cardboard box. Put a line of red paint on the bottom of the paper. Drop a marble onto the paper. Encourage students to gently roll the marble around by tilting the tray. The red lines represent Curiosity's tracks. Allow the paint to dry before gluing Curiosity onto the scene.





Unit: Astronomy, Part 1- The Universe is BIG & Planets

Book 8: Birthday on Mars by Sara Schonfeld



Express ideas

Extra Materials Needed: book and whiteboard or chart paper to create shared writing

Shared Writing Preparation Template: Express ideas

Topic Sentence: Prepare this topic sentence by writing it on the Shared Writing board, leaving a blank space for the purple word:

There are many things that we are **curious** about.

Vocabulary to include, if possible:

curious- wanting to learn or know something

We are all curious about new things.

Specific letters or conventions to highlight:

Current letters from the alphabetic group, capitals, periods

Plan your detail and concluding sentences (You can utilize the following.)

Detail: *We are curious about outer space.*

Detail: *We are curious about astronauts.*

Detail: *We are curious about the planets.*

Conclusion: *It is fun to be curious.*

Steps in the Process

Discuss the book and vocabulary: *We read this book called Birthday on Mars. Do you remember that the rover named Curiosity celebrated its birthday on the planet Mars? Mars is our closest planet neighbor but it's still too far away for people to visit. This little robot investigated the planet for us. Curious means wanting to learn more about something. We are all curious about new things. Let's share some things we are curious about.*

Write Topic Sentence

Plan: *Let's work together to tell about things we want to learn more about. What's the word that means wanting to learn more?*

Write: Write **CURI**OUS to complete the sentence.

Read aloud, pointing to each word: *There are many things we are curious about.*

Write Detail Sentence(s)

Plan: *Let's express our ideas around curiosity. What are you curious to learn more about?* Guide children by showing them a few pictures in the book (or other books from the unit), if necessary. Remember the planned detail sentences are available if your students need more direction. Otherwise, write the ideas they share.

Write: We are curious about outer space.

Read aloud, pointing to each word: *We are curious about outer space.* Read again, encouraging children to read with you.

Continue adding detail sentences if students are engaged.

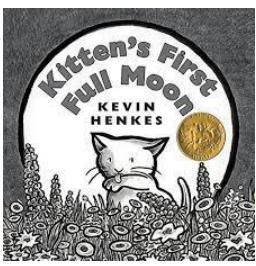
Write Concluding Sentence

Plan: *We shared many things that we are curious about. Now, how could we tell our readers that we are done?*

Write: It is fun to be curious.

Read aloud, pointing to each word: *It is fun to be curious.* Read again, encouraging children to read with you

***Read whole paragraph with students. Post writing where they can return to it frequently to "read."**



Unit: Astronomy, Part 2- Moon & Stars
Book 9: Kitten's First Full Moon by Kevin Henkes
Extra Materials Needed:



Language Time

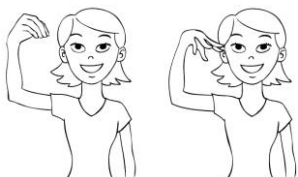
Tuning up for Outer Space
 (to the tune of Farmer in the Dell)

The sun is in the sky
(point up to sky)
 The sun is in the sky
(point up to sky)
 Hot and bright
 it gives us light
(ASL sign for light)
 The sun is in the sky
(point up to sky)

The moon is in the sky
(point up to sky)
 The moon is in the sky
(point up to sky)
 Around and round
 the Earth it goes
(make circle with hands)
 The moon is in the sky
(point up to sky)

<https://www.tes.com/teaching-resource/space-song-book-301319>

ASL- light



1. Before

1. Topic Introduction- *We have been learning about astronomy, the study of space. We learned about the universe and planets. Today we are going to start learning about something else that is in space.*

2. Book Introduction- *Look at this cute cat! I see a great, big circle behind the cat. I wonder what that is. This book is called Kitten's First Full Moon. Is it the moon?*

3. Title and Author- Draw attention to title and author

2. During

1. Read- Read with few interruptions so children can follow the full story.

2. Model Thinking Aloud- Pause to model what good readers think about.

- "and opened her mouth and licked." *Oh no! Is Kitten going to be able to reach the full moon with her tongue? What is Kitten going to reach with her tongue? Ew!*
- "But Kitten never seemed to get closer. Poor Kitten." *The moon is so far away. Kitten can't run to the moon. I wonder if Kitten will keep trying.*
- "Kitten saw another bowl of milk." *This is a reflection of the moon. It's not really the moon. I don't think Kitten knows that. What is she going to do?*
- "She leaped with all her might-" *Oh no! I think Kitten is going to jump into the pond and get wet. I don't think she's going to like that.*
- "just waiting for her." *Kitten tried so hard to get the moon because she thought it was a bowl of milk. She never reached the moon, but she did get a bowl of milk!*

3. Draw Attention to Key Events and Vocabulary- Pause to highlight vocabulary and key concepts.

- Key content
The full moon is big and round.
The moon is far away from Earth. We can't reach it when we are on Earth.
- Vocabulary: briefly define/highlight vocab words when they come up in the story. Reinforce throughout the day.

kitten- a baby cat

The kitten has never seen a full moon before.

full moon- when we can see the whole moon, it is big and round

Kitten thinks the full moon is a bowl of milk.

3. After

1. Ask their Opinion- *Did you enjoy reading about Kitten trying to get to the moon? I felt a little bit sad for Kitten because she tried so hard and couldn't get to the moon. Nod your head yes if you also felt sad for Kitten.*

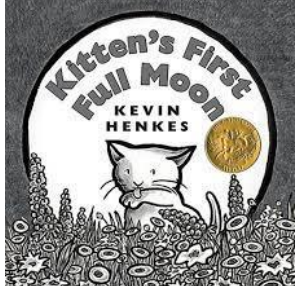
2. Ask Questions- Check their understanding. Ask children to respond in different ways (choral response, individual response, talking to their elbow partners, etc.)

- Who was this story about? (Kitten)
- Why did Kitten think the full moon was a bowl of milk? (it is big & round)

3. Follow Up Activity- Story Retell

- Explain, *We are going to tell the story again. I want you to help me. Show pictures in book to help children remember if necessary.*

Kitten looked up at the sky and saw a full... (moon.) She looked at the moon and thought that it was a bowl of... (milk.) She wanted to drink the milk, so tried different ways to reach it. She jumped off her steps, climbed a tree, and tried to get the moon's reflection in a pond. Nothing worked. When she went home, she found something waiting on her porch. It was a... (a bowl of milk.)



Unit: Astronomy, Part 2- Moon & Stars
Book 9: Kitten's First Full Moon by Kevin Henkes



Re-Read & Activity- Craft

Extra Materials Needed: Earth and moon template on tagboard, paint (green, blue, gray, black), paintbrush, Q-tip, yellow star cutouts, gluestick

Before:

1. Ask if they can remember what this book is about- show them the cover to remind them.
We have already read this story. Do you remember it? Look at the cover. What is the big, round circle behind the kitten? The full moon! What does Kitten think the moon is? A bowl of milk.
2. Point out title & author- ask if anyone can tell you what the author does.
The title of this story is Kitten's First Full Moon. The author of the story is Kevin Henkes. Who remembers what the author does? Tell me! Yes, the author writes the words. The illustrator is also Kevin Henkes. He made the pictures and wrote the words.
3. Tell them this time we are going to read and discuss the story so be ready to share your ideas!
We are going to read the story again. Pay close attention so we can talk about the book when it's done.

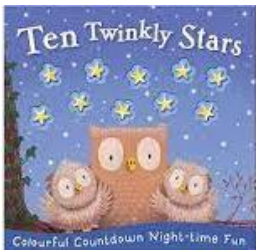
During:

1. Read with excitement and fluency.
2. Ask Questions
 - a. "It was Kitten's first full moon." *What is a full moon?* (When we can see the whole moon and it looks big and round.)
 - b. "And opened her mouth and licked" *Can Kitten lick the moon?* (no) *What did she lick?* (a bug)
 - c. "She leaped with all her might-." *Oh no! What is going to happen to Kitten?* (She's going to get all wet)
 - d. "So she went back home-" *What is Kitten going to find on her porch?* (a bowl of milk)

After:

1. Ask for their opinion- did they like it? Thumbs up/down? Tell me one thing you learned in this story. "I learned..."
2. Discussion questions
 - a. Who was this book about? (Kitten)
 - b. What did Kitten try to reach? (the full moon)
3. Do craft activity. Remember, these groups should be heterogenous so students can learn oral language skills from each other. After reading the story again, introduce the craft. Remind students that Kitten couldn't reach the moon because it is far from Earth. Briefly explain that the moon seems to change shape as it travels around in space. Explain that students are going to be making a picture of the Earth and moon in space. Show students the template and ask which circle represents Earth and which represents that moon. With the paintbrush, students paint the Earth green and blue. With a Q-tip (to represent the moon's craters), students paint the moon gray. Students paint the background black. Once all paint is dry, students glue star cutouts to complete the picture.





Language Time

Twinkle, Twinkle
Little Star

Twinkle, twinkle little
star
*(open and close
hands)*

How I wonder what
you are
*(point to temple with
pointer finger)*

Up above the world
so high
(point up)

Like a diamond in the
sky
*(make a diamond with
fingers)*

Twinkle, twinkle little
star
*(open and close
hands)*

How I wonder what
you are
*(point to temple with
pointer finger)*

Unit: Astronomy, Part 2- Moon & Stars

Book 10: Ten Twinkly Stars by Tiger Tales and Russell Julian

Extra Materials Needed:



1. Before

1. Topic Introduction- *We have been reading books about space. Yesterday we read about something in space that we can see at night. The moon! Today we are going to read about something else we can see at night from space.*

2. Book Introduction- *This book is called Ten Twinkly Stars. Have you ever seen the stars twinkle at night? This is a counting book. What do you think we are going to count in this book? Stars!*

3. Title and Author- Draw attention to title and author

2. During

1. Read- Read with few interruptions so children can follow the full story.

2. Model Thinking Aloud- Pause to model what good readers think about.

- “High above the sleepy jungle” *It’s time for bed. I think it’s night time in the jungle.*
- “They play the whole night through” *Owls don’t sleep at night. They stay awake. Owls sleep during the day. Did you know that?*
- “And snooze upon the sand” *Camels live in the hot, dry desert. There’s a lot of sand in the desert.*

3. Draw Attention to Key Events and Vocabulary- Pause to highlight vocabulary and key concepts.

- Key content

Stars twinkle in the night sky.

Most animals sleep at night.

- Vocabulary: briefly define/highlight vocab words when they come up in the story. Reinforce throughout the day.

star- a glowing light in the sky. The sun is our biggest star.

Most stars are so far away that we can only see them at night. They twinkle in the night sky.

gleam- shine, glitter

The stars gleam. They twinkle and glitter.

snooze- sleep

Most people and animals snooze at night.

3. After

1. Ask their Opinion- I enjoyed counting the twinkly stars. Thumbs up if you did too. Say, “I liked counting the stars” or “I didn’t like counting the stars.”

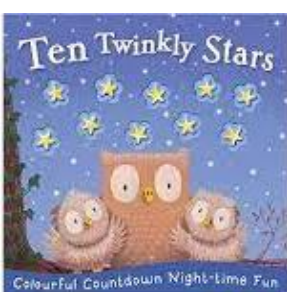
2. Ask Questions- Check their understanding. Ask children to respond in different ways (choral response, individual response, talking to their elbow partners, etc.)

- *What did we count in this book?* (stars)

- *What animals did we see in this book?* (various answers- lion, owls, camel)

3. Follow Up Activity- Math Word Problem

- Explain, *We counted twinkly stars in that book. Four bright stars shimmered on ice.* (hold up 4 fingers) *and one star shined through the night outside the bears’ cozy cave* (hold up 1 finger). *How many stars is that in all?* (Wiggle fingers as you count.) *1,2,3,4,5. Four plus one equals five. Say that with me and show me your fingers. Four plus one equals five. Thank you for helping me with that addition problem.*



Unit: Astronomy, Part 2- Moon & Stars
Book 10: Ten Twinkly Stars by Tiger Tales and Russell Julian



Re-Read & Activity- Math Activities

Extra Materials Needed: star counting cards (see Astronomy Materials binder)

Before:

1. Ask if they can remember what this book is about- show them the cover to remind them.

We have already read this story. Do you remember it? Look at the cover. What did we count in this book? What animals did we see in the story?

2. Point out title & author- ask if anyone can tell you what the author does.

The title of this story is Ten Twinkly Stars. The author of the story is Tiger Tales and Russell Julian. The author writes the words and the illustrator draws the pictures. I think Tiger Tales might be a group of people who wrote the words and Russell Julian might be the illustrator, but I'm not really sure. The book doesn't tell me who did each job.

3. Tell them this time we are going to read and discuss the story so be ready to share your ideas!

We are going to read the story again. Pay close attention so we can talk about the book when it's done.

During:

1. Read with excitement and fluency.

2. Ask Questions

a. "Ten stars are shining bright" *How many stars are shining above the jungle?* (10) *Do we normally start with the number ten when we are counting.* (no)

b. "As the owl sings, 'hoo, hoo.'" *How many sparkly stars gleam?* (8)

c. "They play the whole night through" *Do owls sleep at night?* (no)

d. "Down on the dusty land" *How many stars sparkle in the sky?* (3)

e. "until the morning light" *Do bears sleep at night?* (yes, they sleep until the morning light)

After:

1. Ask for their opinion- did they like it? Thumbs up/down? Why? Provide a sentence stem.

Did you like this story? What animal did you like best?

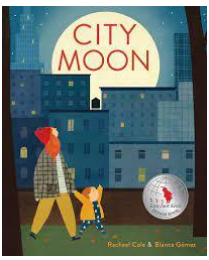
2. Discussion questions

a. *What did we count in this book?* (twinkly stars)

b. *What animals did we see in the book?* (various answers- owl, camel, bear, etc.)

c. *Which animal did not sleep at night?* (owl)

3. Do a math activity. Remember, these groups should be homogenous and small so each child's math skill level can be targeted. Manipulatives: star counting cards (see Astronomy Materials binder)



Language Time

Twinkle, Twinkle Little Star

Twinkle, twinkle little star
(open and close hands)

How I wonder what you are
(point to temple with pointer finger)

Up above the world so high
(point up)

Like a diamond in the sky
(make a diamond with fingers)

Twinkle, twinkle little star
(open and close hands)

How I wonder what you are
(point to temple with pointer finger)

Unit: Astronomy, Part 2- Moon & Stars

Book 11: City Moon by Rachael Cole & Blanca Gomez

Extra Materials Needed:

1. Before

1. Topic Introduction- *We have been learning about space. Everyone tell me the name for the study of outer space. Astronomy. Let's clap that. A-stron-o-my. We learned about planets and the universe. Now we are reading about things in space that we can see at night. We are reading about the moon and stars.*

2. Book Introduction- *This picture makes me feel peaceful. I see two people walking in a city and I notice something big and round. I think it might be the moon.*

3. Title and Author- Draw attention to title and author

2. During

1. Read- Read with few interruptions so children can follow the full story.

2. Model Thinking Aloud- Pause to model what good readers think about.

- "Where is it?" *They can't see the moon. It's hiding. I wonder what it is hiding behind. Maybe this cloud?*
- "Mama, are those other moons?" *Our planet, Earth only has one moon. I think those glittery dots are stars.*
- "Is that the moon in the puddle?" *This reminds me of another book. Do you remember when Kitten saw a reflection of the full moon in the pond?*

3. Draw Attention to Key Events and Vocabulary- Pause to highlight vocabulary and key concepts.

- Key content

You can see the moon when it is dark.

Earth only has one moon.

- Vocabulary: briefly define/highlight vocab words when they come up in the story. Reinforce throughout the day.

full moon- when we can see the whole moon, it is big and round

The moon is full in this story. It is big and round.

crane- stretch so you can see better

They crane their necks to see the moon. They stretch them up to the sky.

reflection- when light bounces off a shiny surface so you can see two of something

The boy sees the moon's reflection in the water. It's not really the moon.

3. After

1. Ask their Opinion- *Thumbs up if you liked that story. Thumbs down if you didn't.*

2. Ask Questions- Check their understanding. Ask children to respond in different ways (choral response, individual response, talking to their elbow partners, etc.)

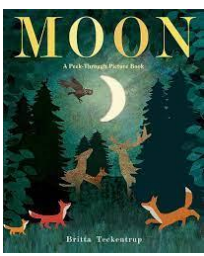
- *Who was this story about?* (a boy and his mom)

- *Where did this story happen?* (in the city)

3. Follow Up Activity- Story Retell

- Explain, *We are going to tell the story again. I want you to help me.* Show pictures in book to help children remember if necessary.

A boy and his mother went on a walk to look for the... (moon.) At first, they couldn't find the moon because it was... (hiding.) Then they found the moon in the sky. The moon was big and round. It was a... (full) moon. While they waited to cross a street, they saw the moon's reflection in a... (puddle.) When the boy and his mom got tired, they went back home and the boy went to... (bed/sleep.)



Unit: Astronomy, Part 2- Moon & Stars

Book 12: Moon: A Peek-Through Picture Book by Britta Teckentrup



Extra Materials Needed:

Language Time

Twinkle, Twinkle
Little Star

Twinkle, twinkle little
star
*(open and close
hands)*

How I wonder what
you are
*(point to temple with
pointer finger)*

Up above the world
so high
(point up)

Like a diamond in the
sky
*(make a diamond with
fingers)*

Twinkle, twinkle little
star
*(open and close
hands)*

How I wonder what
you are
*(point to temple with
pointer finger)*

1. Before

1. Topic Introduction- *We have been learning about things that are in space that we can see at night. Do you remember what those things are? The moon and stars!*

2. Book Introduction- *I think this book might be able the forest and animals that live there. I see tall trees and animals. I also see a bright light. It's not round, but I think this light might be the moon.*

3. Title and Author- Draw attention to title and author *The title of this book is Moon. The author and illustrator is Britta Teckentrup.*

2. During

1. Read- Read with few interruptions so children can follow the full story.

2. Model Thinking Aloud- Pause to model what good readers think about.

- "Have you ever wondered why The moon shines in the nighttime sky?" *I have wondered that! I am very curious about the moon. I want to learn more about it.*
- "Tree frogs croak their nightly tune." *I just noticed something about the moon. It is getting bigger. That happens with the real moon. It changes shape!*
- "Snowflakes fall on frozen ground." *You can see the moon everywhere on Earth.*

3. Draw Attention to Key Events and Vocabulary- Pause to highlight vocabulary and key concepts.

- Key content

The moon changes shape over time.

The moon affects the Earth in many ways. Its light helps guide creatures and it commands the ocean, too.

- Vocabulary: briefly define/highlight vocab words when they come up in the story. Reinforce throughout the day.

shimmering- shining with a soft, wavering light

The northern lights shimmer above the snow.

guide- show the way

As birds fly to a warmer place, the moon shows them the way.

commands- controls

The moon commands the ocean. It makes the water get higher or lower.

3. After

1. Ask their Opinion- *Thumbs up if you liked that story. Thumbs up if you liked seeing the moon change shape.*

2. Ask Questions- Check their understanding. Ask children to respond in different ways (choral response, individual response, talking to their elbow partners, etc.)

- *What was this book about?* (the moon)

- *What animals did we see in the story?* (various answers- turtles, penguins, etc.)

3. Follow Up Activity- Rhyming Practice

Explain, *There were lots of rhyming words in this book. Remember, rhyming words sound the same at the end. Let's go back and read parts of the book.* Reread the passages. Emphasize the words in bold. Ask, *Do those words rhyme? Do they sound the same at the end?* Read the whole passage, emphasizing the words in bold.

- *A scorpion scuttles through the **night**, Glowing with an eerie **light**.* (Yes)

- *In the jungle, through the **green**, Shafts of silvery light are **seen**.* (Yes)

- *Nature reveals a magical **sight**. Hundreds of turtles swim to **land*** (No)

- *As wispy clouds scutter **by**, A shining moonbow lights the **sky**...* (Yes)



Unit: Astronomy, Part 2- Moon & Stars

Book 8: Moon: A Peek-Through Picture Book by Britta Teckentrup



Discuss and Respond to Questions

Extra Materials Needed: book and whiteboard or chart paper to create shared writing

Shared Writing Preparation Template: Tell a Story

Topic Sentence: Prepare this topic sentence by writing it on the Shared Writing board, leaving a blank space for the purple word:

What does the **moon** do?

Vocabulary to include, if possible:

shimmering- shining with a soft, wavering light

The northern lights shimmer above the snow.

guide- show the way

As birds fly to a warmer place, the moon shows them the way.

commands- controls

The moon commands the ocean. It makes the water get higher or lower.

Specific letters or conventions to highlight:

Current letters from the alphabetic group, capitals, periods, question mark

Plan your detail and concluding sentences (You can utilize the following.)

Detail: **The moon** shimmers at night.

Detail: **The moon** changes shape.

Detail: **The moon** guides the way for animals.

Conclusion: **The moon** is very important.

Steps in the Process

Discuss the book and vocabulary: *We read this book called **Moon**. Do you remember how we saw the moon change shape. What else did we learn about the moon in this book?*

Write Topic Sentence

Plan: *What word is missing in this sentence? What did we read about in this book? We are going to work together to answer this question about the moon.*

Write: Write **moon** to complete the sentence.

Read aloud, pointing to each word: *What does the moon do?*

Write Detail Sentence(s)

Plan: *Let's answer that question. What did we learn from the book?* Guide children by showing them a few pictures in the book, if necessary. Remember the planned detail sentences are available if your students need more direction. Otherwise, write the ideas they share.

Write: The moon shimmers at night.

Read aloud, pointing to each word: *The moon shimmers at night.* Read again, encouraging children to read with you.

Continue adding detail sentences if students are engaged.

Write Concluding Sentence

Plan: *We answered that question about the moon. Now, how do we tell our readers we are done?*

Write: The moon is very important.

Read aloud, pointing to each word: *The moon is very important.* Read again, encouraging children to read with you

***Read whole paragraph with students. Post writing where they can return to it frequently to "read."**



Unit: Astronomy, Part 2- Moon & Stars
Book 13: Moon's First Friends by Susanna Leonard Hill
Extra Materials Needed:

CHALLENGE

Language Time

Twinkle, Twinkle
Little Star

Twinkle, twinkle little
star

*(open and close
hands)*

How I wonder what
you are

*(point to temple with
pointer finger)*

Up above the world
so high

(point up)

Like a diamond in the
sky

*(make a diamond with
fingers)*

Twinkle, twinkle little
star

*(open and close
hands)*

How I wonder what
you are

*(point to temple with
pointer finger)*

1. Before

1. Topic Introduction- *We have been learning about things in space that we can see at night, the moon and the stars. The study of space is called... astronomy!*

2. Book Introduction- *What do you think this book might be about? This looks like the moon and this looks like Earth. I'm wondering what this is. This story is called Moon's First Friends. I'm so curious. Who are Moon's first friends?*

3. Title and Author- Draw attention to title and author *The author is Susanna Leonard Hill and Elisa Paganelli is the illustrator.*

2. During

1. Read- Read with few interruptions so children can follow the full story.

2. Model Thinking Aloud- Pause to model what good readers think about.

- "The Moon saw glorious new creatures come and go." *The animals on Earth have changed through history. Some of the first animals are no longer here. There are no more saber-toothed tigers.*

- "they came nowhere near high enough to reach the Moon" *A long time ago, people build tall pyramids, but they weren't tall enough to reach the moon.*

- "she greeted the men who emerged from the ship." *Someone finally came to visit Moon. It was a person who arrived on a spaceship.*

3. Draw Attention to Key Events and Vocabulary- Pause to highlight vocabulary and key concepts.

- Key content

The Earth has changed a lot over time and the moon has been with Earth through it all.

- Vocabulary: briefly define/highlight vocab words when they come up in the story. Reinforce throughout the day.

lonely- feeling sad to be alone

Moon was lonely. She wants someone to visit her.

astronaut- a person who is trained to travel in outer space

Astronauts were Moon's first friends. They are the first to visit Moon!

3. After

1. Ask their Opinion- *Did you like that story? I thought it was fun to see how Earth changed over time. I was happy when Moon finally had a visitor. Thumbs up if that made you happy, too.*

2. Ask Questions- Check their understanding. Ask children to respond in different ways (choral response, individual response, talking to their elbow partners, etc.)

- *Who was this story about?* (Moon)

- *What do we call people who are trained to travel in space?* (astronauts)

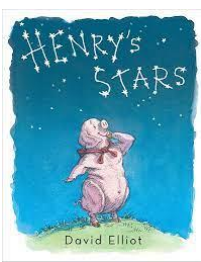
3. Follow Up Activity- Game: Was it in the Book?

- Explain, *We are going to play a game called Was it in the Book? I'm going to say a fact. You will nod your head if the fact was in the book and shake your head if it wasn't in the book. Practice nodding and shaking.*

- *Saber-tooth tigers visited the moon a long time ago.* (No)

- *People floated to the moon in a hot air balloon.* (No)

- *Astronauts were the first to visit the moon.* (Yes)



Unit: Astronomy, Part 2- Moon & Stars
Book 14: Henry's Stars by David Elliot
Extra Materials Needed:



1. Before

- 1. Topic Introduction-** *We have been learning about things in space that we can see at night. Turn to someone near you and tell them what we can see in the sky at night.*
- 2. Book Introduction-** *I think this book might be about a pig who notices things in the night sky.*
- 3. Title and Author-** Draw attention to title and author *This book is called Henry's Stars. The author and illustrator is David Elliot. He wrote the words.*

2. During

- 1. Read-** Read with few interruptions so children can follow the full story.
- 2. Model Thinking Aloud-** Pause to model what good readers think about.
 - "It's a great big starry pig running across the sky!" *Henry used his imagination to find a group of stars that look like a big pig. Have you ever noticed a group of stars that look like something?*
 - "You have found a Great Sheep." *When the sheep looked at the group of stars, they didn't see a pig, they saw a sheep. Now I think those stars look like a sheep!*
 - "It's a Great Starry Horse." *All the animals think the group of stars look just like them. Now I'm confused. I'm not sure what I think the group of stars looks like.*
 - "Henry couldn't wait to show the others." *Uh oh! The other animals confused Henry before. I wonder if the same thing is going to happen again.*
- 3. Draw Attention to Key Events and Vocabulary-** Pause to highlight vocabulary and key concepts.
 - Key content
Sometimes groups of stars look like something.
 - Vocabulary: briefly define/highlight vocab words when they come up in the story. Reinforce throughout the day.
 - constellation-** a group of stars that look like something
The animals all saw something different in the constellation.
 - clever-** smart
The Sheep thought Henry was clever, smart for finding a sheep in the sky.

3. After

- 1. Ask their Opinion-** *I enjoyed reading that story and imagining that the constellation, group of stars, was different animals. Thumbs up if you liked that, too.*
- 2. Ask Questions-** Check their understanding. Ask children to respond in different ways (choral response, individual response, talking to their elbow partners, etc.)
 - *What do we call a group of stars that look like something?* (constellation)
 - *What did Henry think the constellation looked like?* (a Great Pig)
- 3. Follow Up Activity-** Story Retell
 - Explain, *We are going to tell the story again. I want you to help me.* Show pictures in book to help children remember if necessary.
Henry was staring up at the night sky. He looked at a group of stars and saw... (a pig.) Henry ran to show his friends. The sheep looked at the constellation and saw... (a Great Sheep.) Abigail, the cow, looked at the group of stars and saw... (a Great Star Cow.) Mr. Brown, the horse, tried to settle the argument, but when he looked at the constellation he saw... (a Great Starry Horse.) The chickens joined in and they thought the stars looked like... (Heavenly Hens.) Henry's mind was all aflutter. He couldn't see the Great Pig anymore. He went back home. When he looked up at the stars and saw the pig again he ran to tell his friends.

Language Time

Twinkle, Twinkle
Little Star

Twinkle, twinkle little
star
(open and close hands)

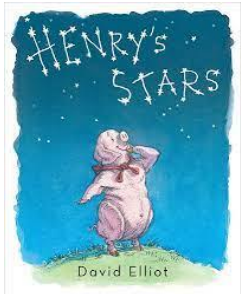
How I wonder what
you are
(point to temple with pointer finger)

Up above the world
so high
(point up)

Like a diamond in the
sky
(make a diamond with fingers)

Twinkle, twinkle little
star
(open and close hands)

How I wonder what
you are
(point to temple with pointer finger)



Unit: Astronomy, Part 2- Moon & Stars
Book 14: Henry's Stars by David Elliot



Re-Read & Activity- Explore Constellations

Extra Materials Needed: Constellation cards (see Astronomy Materials Binder)

Before:

1. Ask if they can remember what this book is about- show them the cover to remind them.

We have already read this story. Do you remember it? Look at the cover. What is Henry looking at? Stars in the night sky!

2. Point out title & author- ask if anyone can tell you what the author does.

The title of this story is Henry's Stars. The author of the story is David Elliot. Who remembers what the author does? Tell me! Yes, the author writes the words. The illustrator is also David Elliot. He also made the pictures.

3. Tell them this time we are going to read and discuss the story so be ready to share your ideas!

We are going to read the story again. Pay close attention so we can talk about the book when it's done.

During:

1. Read with excitement and fluency.

2. Ask Questions

a. "It's a great big starry pig running across the sky!" *What do we call a group of stars that look like something?* (A constellation)

b. "Ah, yes! I see it! said Daisy." *What did the sheep think the constellation looked like?* (a sheep)

c. "Great Pig, actually, said Henry." *Do the animals agree on what the constellation looks like?* (no)

d. "I'll settle this," said Mr. Brown." *Did Mr. Brown settle the argument?* (no)

After:

1. Ask for their opinion- did they like it? Thumbs up/down? Tell me one thing you learned in this story. "I learned..."

2. Discussion questions

a. *What were the animals looking at?* (a constellation, a group of stars in the sky)

b. *What were the animals arguing about?* (What animal the constellation looked like)

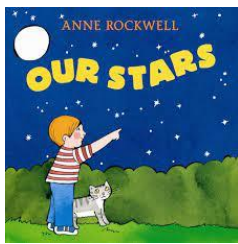
3. Do constellation exploration activity. Remember, these groups should be heterogenous so students can learn oral language skills from each other. After reading the story again, introduce the activity. Explain that people also like to imagine that groups of stars look like things. We know that people have done this for a long time. There are some constellations that people imagined a long time ago. We can still find these constellations in our sky at night. Guide students in exploring the constellations, describing what they imagine in each constellation, then looking at the map of the constellation.



Ursa Major



Map of Ursa Major



Unit: Astronomy, Part 2- Moon & Stars

Book 15: Our Stars by Anne Rockwell

CHALLENGE

Extra Materials Needed:

Language Time

Twinkle, Twinkle
Little Star

Twinkle, twinkle little
star

*(open and close
hands)*

How I wonder what
you are
*(point to temple with
pointer finger)*

Up above the world
so high
(point up)

Like a diamond in the
sky
*(make a diamond with
fingers)*

Twinkle, twinkle little
star
*(open and close
hands)*

How I wonder what
you are
*(point to temple with
pointer finger)*

1. Before

1. Topic Introduction- *We have been reading about things we can see in the night sky, stars and the moon. The moon and stars are in space. The study of space is called astronomy. We are learning about astronomy.*

2. Book Introduction- *Today we are going to read another book about stars. I see a child pointing at the stars. Do you think he is imagining shapes in the stars?*

3. Title and Author- *Draw attention to title and author This book is called Our Stars. The author and illustrator is Anne Rockwell. She wrote the words and drew the pictures.*

2. During

1. Read- Read with few interruptions so children can follow the full story.

2. Model Thinking Aloud- Pause to model what good readers think about.

- "All year long, the Big Dipper points toward a star named Polaris. *Some constellations, like Orion, are only seen at certain times. Some, like the Big Dipper, can be seen all year. I wonder why that is.*
- "Sometimes before the stars come out, we can see a bright light...." *Cool! I'm going to look for Venus tonight before the stars come out. I wonder if I can find it.*
- "Our moon seems to change its shape each night, but it doesn't." *We read a book where we watched the moon's shape change. It doesn't actually change shape. It just looks like it does. Interesting!*

3. Draw Attention to Key Events and Vocabulary- Pause to highlight vocabulary and key concepts.

- Key content
The sun is a star. Planets orbit around stars.
- Vocabulary: briefly define/highlight vocab words when they come up in the story.

Reinforce throughout the day.

constellation- a group of stars that look like something
Constellations tell us many things.

orbit- travel in a circle around something

Planets orbit around stars. Our planet, Earth, orbits around the sun.

3. After

1. Ask their Opinion- *Did you like that story? I learned a lot! Turn to someone near you and tell them one thing you learned.*

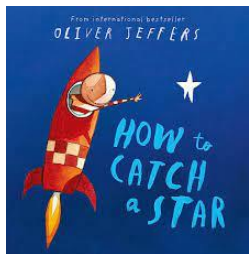
2. Ask Questions- Check their understanding. Ask children to respond in different ways (choral response, individual response, talking to their elbow partners, etc.)

- *What does our planet, Earth, orbit?* (the sun)
- *When can you see Venus?* (sometimes in the evening, just before the stars come out)

3. Follow Up Activity- Vocabulary Review

Explain, *We talked about some of the important words in this story. One word we learned was orbit. Orbit means to travel in a circle around something. Some things in space orbit and others don't. I'm going to say something and you will tell me what it orbits.*

- *Earth* (the sun)
- *Moon* (the Earth)
- *Mars* (the sun)



Language Time

Twinkle, Twinkle
Little Star

Twinkle, twinkle little
star

*(open and close
hands)*

How I wonder what
you are
*(point to temple with
pointer finger)*

Up above the world
so high
(point up)

Like a diamond in the
sky
*(make a diamond with
fingers)*

Twinkle, twinkle little
star
*(open and close
hands)*

How I wonder what
you are
*(point to temple with
pointer finger)*

Unit: Astronomy, Part 2- Moon & Stars

Book 16: How to Catch a Star by Oliver Jeffers

Extra Materials Needed:

1. Before

1. Topic Introduction- *We have been reading about the moon and stars. We can see the moon and stars at night. They are in space. The study of space is called Astronomy. Turn to someone near you and say, "The study of space is called Astronomy."*

2. Book Introduction- *Today we are going to read our last book about stars.*

3. Title and Author- Draw attention to title and author *This book is by Oliver Jeffers. He is the author and the illustrator. We read another book by Oliver Jeffers called Here We Are. Do you remember that book?*

2. During

1. Read- Read with few interruptions so children can follow the full story.

2. Model Thinking Aloud- Pause to model what good readers think about.

- "The boy decided he would try to catch one." *This reminds me of the kitten who tried to get the moon. I don't think the boy is going to be able to get the star either.*
- "If only he could fly up in a spaceship and just grab the star..." *I don't think that would work either. Stars are really big and hot. No one can grab a star.*
- "it just rippled through his fingers" *I think I know what's happening. I think the star was just a reflection in the water.*
- "Washed up on the bright golden sand." *I don't think that is a star from the sky. I think that's a sea star.*

3. Draw Attention to Key Events and Vocabulary- Pause to highlight vocabulary and key concepts.

- Key content
People can't catch stars, but it's fun to imagine.
- Vocabulary: briefly define/highlight vocab words when they come up in the story. Reinforce throughout the day.

star- a glowing light in the sky. The sun is our biggest star.

The boy loved stars very much. Do you like stars?

sunrise- the time when the sun starts to come up in the morning

The boy thought sunrise would be the best time to try to catch a star.

3. After

1. Ask their Opinion- *Did you like that story? Thumbs up if you did. Thumbs up if you think you could catch a star.*

2. Ask Questions- Check their understanding. Ask children to respond in different ways (choral response, individual response, talking to their elbow partners, etc.)

- *Who was this book about?* (a boy who loved stars)
- *What was the boy trying to catch?* (a star)

3. Follow Up Activity- Wrap up sub-theme (Moon and Stars)

- Explain, *We have learned a lot about the moon and stars. We are going to share one thing we know about each of those things. Let's take a minute now to think to ourselves. What is one thing you know about the moon. (pause) Now, turn to someone near you and tell them what you know about the moon. (pause for discussion and facilitation of conversation.) What is one thing you know about the stars? (pause) Turn to someone next to you and tell them what you know about the stars. (pause for discussion and facilitation of conversation.)*



Unit: Astronomy, Part 3- Astronauts

Book 17: I Want to be an Astronaut by Byron Barton

Extra Materials Needed:



Language Time

Twinkle, Twinkle
Little Star

Twinkle, twinkle little
star

*(open and close
hands)*

How I wonder what
you are
*(point to temple with
pointer finger)*

Up above the world
so high
(point up)

Like a diamond in the
sky
*(make a diamond with
fingers)*

Twinkle, twinkle little
star
*(open and close
hands)*

How I wonder what
you are
*(point to temple with
pointer finger)*

1. Before

1. Topic Introduction- *We have been learning all about astronomy, the study of space. We learned about the universe and planets. We learned about the moon and stars. Today we are going to start learning about something new in astronomy.*

2. Book Introduction- *Look at this picture. This person is floating in space and they're wearing a space suit. I think this is an astronaut. An astronaut is a person who is trained to go into space.*

3. Title and Author- Draw attention to title and author *This story is called I Want to Be an Astronaut. Byron Barton is the author and illustrator.*

2. During

1. Read- Read with few interruptions so children can follow the full story.

2. Model Thinking Aloud- Pause to model what good readers think about.

- "I want to be an astronaut," *I think being an astronaut would be interesting, but I'm not sure I want to be an astronaut. I'm going to keep reading to see if I learn more about what astronauts do.*
- "and sleep in zero gravity" *There is no gravity in space so astronauts float around on the space ship. They have to tie themselves down to sleep.*
- "and build a factory in orbit" *I didn't know astronauts build things in space. They are so brave!*

3. Draw Attention to Key Events and Vocabulary- Pause to highlight vocabulary and key concepts.

- Key content

Astronauts do lots of important, brave, and fun things in space.

- Vocabulary: briefly define/highlight vocab words when they come up in the story. Reinforce throughout the day.

astronaut- a person who is trained to travel in outer space

Astronauts do many things in space!

crew- a group of astronauts working together

They want to be part of the astronaut crew.

3. After

1. Ask their Opinion- *Did you like that story? Thumbs up if you think you would like to be an astronaut.*

2. Ask Questions- Check their understanding. Ask children to respond in different ways (choral response, individual response, talking to their elbow partners, etc.)

- *Who was this book about?* (astronauts)

- *What do astronauts do?* (various answers- go on missions, fix satellites, etc.)

3. Follow Up Activity- Vocabulary Review

Explain, *We talked about some of the important words in this story. One word we learned was astronaut. An astronaut is a person who is trained to travel in space. I'm going to say an important job and you're going to tell me if it is something an astronaut might do.*

- *walk around in space* (yes)
- *take care of animals* (no)
- *help fix a satellite* (yes)
- *drive a train* (no)



Unit: Astronomy, Part 3- Astronauts
Book 17: I Want to be an Astronaut by Byron Barton



Express Ideas

Extra Materials Needed: book and whiteboard or chart paper to create shared writing

Shared Writing Preparation Template: Express Ideas

Topic Sentence: Prepare this topic sentence by writing it on the Shared Writing board, leaving a blank space for the purple word:

It would be great to be an **astronaut**.

Vocabulary to include, if possible:

astronaut- a person who is trained to travel in outer space

Astronauts do many things in space!

crew- a group of astronauts working together

They want to be part of the astronaut crew.

Specific letters or conventions to highlight:

Current letters from the alphabetic group, capitals, periods, exclamation point

Plan your detail and concluding sentences (You can utilize the following.)

Detail: *It would be fun to travel on a space ship.*

Detail: *I would like to fix satellites with my crew.*

Detail: *No gravity would be cool.*

Conclusion: *Astronauts are lucky!*

Steps in the Process

Discuss the book and vocabulary: *We read this book called I Want to Be an Astronaut. Do you remember some of the fun things astronauts do? Astronauts also do important work and sometimes they have to be very brave.*

Write Topic Sentence

Plan: *Let's work together to express that we think being an astronaut is a very cool job.*

Write: Write astronaut to complete the sentence.

Read aloud, pointing to each word: *It would be great to be an astronaut.*

Write Detail Sentence(s)

Plan: *Let's tell about some cool things astronauts do.* Guide children by showing them a few pictures in the book, if necessary. Remember the planned detail sentences are available if your students need more direction. Otherwise, write the ideas they share.

Write: It would be fun to travel on a space ship.

Read aloud, pointing to each word: *It would be fun to travel on a space ship.* Read again, encouraging children to read with you.

Continue adding detail sentences if students are engaged.

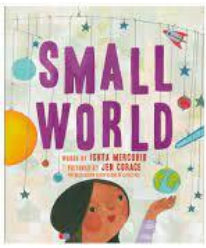
Write Concluding Sentence

Plan: *We told about some interesting things astronauts do. Now, how do we tell our readers that we are done?*

Write: Astronauts are lucky!

Read aloud, pointing to each word: *Astronauts are lucky!* Read again, encouraging children to read with you

***Read whole paragraph with students. Post writing where they can return to it frequently to "read."**



Unit: Astronomy, Part 3- Astronauts
Book 18: Small World by Ishta Mercurio
Extra Materials Needed:



Language Time

Twinkle, Twinkle
Little Star

Twinkle, twinkle little
star

*(open and close
hands)*

How I wonder what
you are
*(point to temple with
pointer finger)*

Up above the world
so high
(point up)

Like a diamond in the
sky
*(make a diamond with
fingers)*

Twinkle, twinkle little
star
*(open and close
hands)*

How I wonder what
you are
*(point to temple with
pointer finger)*

1. Before

1. Topic Introduction- *We have been learning about astronomy. Yesterday we started reading about an important job related to astronomy. Astronaut! Let's clap that word. As-tro-naut. An astronaut is a person who is trained to travel into space.*

2. Book Introduction- *This is an interesting picture. It looks like a little girl looking at a model of the solar system.*

3. Title and Author- Draw attention to title and author *This story is called Small World. The author is Ishta Mercurio. What does the author do? Writes the words! The pictures are by Jen Corace. She is the illustrator.*

2. During

1. Read- Read with few interruptions so children can follow the full story.

2. Model Thinking Aloud- Pause to model what good readers think about.

- "It became the circle of her loving family." *When the girl was a baby, her world was her mother's arms. Now her world is her whole family.*

- "Nanda got bigger and bigger. But as she grew, the world grew too." *As we get bigger and can do more things, does the Earth really get bigger? No! We just learn more about the world*

- "Nanda got bigger and bigger and BIGGER. But as she grew, the world grew, too." *Here's Nanda flying a plane. I think she grew up to be a pilot.*

- "her feet touched foreign soil." *Wow! Nanda is an astronaut. She grew up to be an astronaut. It looks like she might be exploring the moon.*

3. Draw Attention to Key Events and Vocabulary- Pause to highlight vocabulary and key concepts.

- Key content

As we get bigger, we learn more about the world.

- Vocabulary: briefly define/highlight vocab words when they come up in the story. Reinforce throughout the day.

microscopic- so tiny it can only be seen with a microscope

Snowflakes have beautiful shapes that can only be seen with a microscope.

foreign- unfamiliar, strange

Nanda is standing on soil that is different from Earth's. It is foreign.

3. After

1. Ask their Opinion- *Did you like that story? Thumbs up if you did. Thumbs down if you didn't. Turn to someone next to you and tell them your favorite part.*

2. Ask Questions- Check their understanding. Ask children to respond in different ways (choral response, individual response, talking to their elbow partners, etc.)

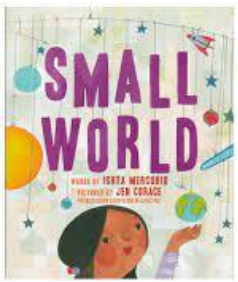
- *Who was the story about?* (Nanda)

- *What does Nanda become when she grows up?* (an astronaut)

3. Follow Up Activity- Story Retell

- Explain, *We are going to tell the story again. I want you to help me.* Show pictures in book to help children remember if necessary.

When Nanda was born, her world was safe, warm, and... (small.) As she grew, Nanda learned more about the world and it seemed to grow, too. Nanda made friends, explored new places, and even flew a small... (plane.) Then one day when Nanda was the biggest she had ever been, she became an... (astronaut.)



Unit: Astronomy, Part 3- Astronauts
Book 18: Small World by Ishta Mercurio



Re-Read & Activity- Craft

Extra Materials Needed:

Before:

1. Ask if they can remember what this book is about- show them the cover to remind them.
We have already read this story. Do you remember it? Look at the cover. What is this girl looking at? A model of our solar system.
2. Point out title & author- ask if anyone can tell you what the author does.
The title of this story is Small World. The author of the story is Ishta Mercurio. Who remembers what the author does? Tell me! Yes, the author writes the words. The illustrator is Jen Corace. She made the pictures.
3. Tell them this time we are going to read and discuss the story so be ready to share your ideas!
We are going to read the story again. Pay close attention so we can talk about the book when it's done.

During:

1. Read with excitement and fluency.
2. Ask Questions
 - a. "A bubble of giggling playmates..." *Do you think Nanda is happy as her world grows? (Yes.)*
 - b. "and coasting through the night." *Nanda is riding a roller coaster at night. She must be very brave. Would you ride a roller coaster like that? (yes/no)*
 - c. "a human-powered helicopter lifting toward the sky." *Would you try to build a helicopter like this one? (yes/no)*
 - d. "And the Earth, softly glowing A circle called home." *Would you want to see the Earth from space?*

After:

1. Ask for their opinion- did they like it? Thumbs up/down? Tell me one thing you saw in the pictures."
2. Discussion questions
 - a. *Who was this book about? (Nanda)*
 - b. *What did Nanda become when she grew up? (an astronaut)*
3. Do craft activity. Remember, these groups should be heterogenous so students can learn oral language skills from each other. After reading the story again, introduce the craft. Explain that you will be drawing what you would like to be when you grow up. Nanda likes to explore and discover new things and when she grew up she became an astronaut. What would you like to be when you grow up? There are so many different possibilities. List some familiar and unfamiliar occupational opportunities for your students. Give students the coloring tools (crayons or markers). When their pictures are complete, write their chosen occupation to complete the sentence. Encourage students to write their own names, if possible.

Name: _____

When I grow up, I want to be _____



Unit: Astronomy, Part 3- Astronauts

Book 19: Mae Among the Stars by Roda Ahmed

CHALLENGE

Extra Materials Needed:

1. Before

1. Topic Introduction- *We have been reading about the people who are trained to travel in outer space. What do we call those people? Astronauts. Let's clap that word. As-tro-naut.*

2. Book Introduction- *Can you guess what this story is going to be about? Yes, an astronaut. This book is about a famous astronaut.*

3. Title and Author- Draw attention to title and author *The title of this book is Mae Among the Stars. Mae Jemison is a famous astronaut. This book is about her. The author is Roda Ahmed. The illustrator is Stasia Burrington.*

2. During

1. Read- Read with few interruptions so children can follow the full story.

2. Model Thinking Aloud- Pause to model what good readers think about.

- "That's an amazing plan." *Her parents believe she can be an astronaut. Look at the moon. Is it full? No.*

- "All the kids started laughing." *That is not kind! How do you think Mae felt?*

- "If I work hard for it, anything is possible." *Let's say that together. "Anything is possible." One more time. "Anything is possible."*

3. Draw Attention to Key Events and Vocabulary- Pause to highlight vocabulary and key concepts.

- Key content

Anything is possible if you dream it and work hard.

- Vocabulary: briefly define/highlight vocab words when they come up in the story.

Reinforce throughout the day.

astronaut- a person who is trained to travel in outer space

Mae wants to be an astronaut when she grows up.

profession- a job that grown-ups do

There are many different professions, many jobs you can do.

disappointed- sad that things didn't go the way you planned

Mae is disappointed that her teacher said she should be a nurse instead.

3. After

1. Ask their Opinion- *Did you like that story? Did you enjoy learning about Mae?*

2. Ask Questions- Check their understanding. Ask children to respond in different ways (choral response, individual response, talking to their elbow partners, etc.)

- *Who was this book about?* (Mae Jemison)

- *What did Mae want to be when she grew up?* (an astronaut)

- *Who is Mae Jemison? Is she a real person or just a pretend character?* (real)

3. Follow Up Activity- More learning

- Read all, or just some, of the last page. This page contains additional facts about Mae Jemison's life. She is an amazing person and an inspiration for many!

Language Time

Twinkle, Twinkle
Little Star

Twinkle, twinkle little
star

*(open and close
hands)*

How I wonder what
you are

*(point to temple with
pointer finger)*

Up above the world
so high

(point up)

Like a diamond in the
sky

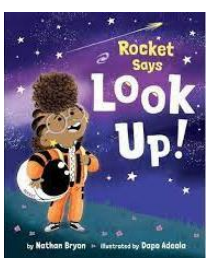
*(make a diamond with
fingers)*

Twinkle, twinkle little
star

*(open and close
hands)*

How I wonder what
you are

*(point to temple with
pointer finger)*



Language Time

Twinkle, Twinkle
Little Star

Twinkle, twinkle little
star

*(open and close
hands)*

How I wonder what
you are
*(point to temple with
pointer finger)*

Up above the world
so high
(point up)

Like a diamond in the
sky
*(make a diamond with
fingers)*

Twinkle, twinkle little
star
*(open and close
hands)*

How I wonder what
you are
*(point to temple with
pointer finger)*

Unit: Astronomy, Part 3- Astronauts

Book 20: Rocket Says Look Up! by Nathan Bryon

Extra Materials Needed:

CHALLENGE

1. Before

1. Topic Introduction- *We have been reading about astronauts. Turn to someone near you and tell them one thing you know about astronauts.*

2. Book Introduction- *This story is called Rocket Says Look Up! The girl is named Rocket. Can you guess what she wants to be when she grows up? An astronaut! She looks so happy!*

3. Title and Author- Draw attention to title and author *The author of this book is Nathan Bryon. What does the author do? The illustrator is Dapo Adeola. What does the illustrator do?*

2. During

1. Read- Read with few interruptions so children can follow the full story.

2. Model Thinking Aloud- Pause to model what good readers think about.

- “- like Mae Jemison, the first African American woman in space.” *Rocket wants to be an astronaut like Mae Jemison. I remember reading about her.*

- “I’m going to see something incredible: The Phoenix Meteor Shower” *I wonder what that is. It must be really interesting because Rocket wants everyone to see it with her.*

- “I’m so happy we looked up and saw them together.” *Rocket waited so long to see the Phoenix Meteor Shower and it finally happened. How cool!*

3. Draw Attention to Key Events and Vocabulary- Pause to highlight vocabulary and key concepts.

- Key content

A meteor shower happens when the Earth travels through dust left by a comet.

- Vocabulary: briefly define/highlight vocab words when they come up in the story. Reinforce throughout the day.

telescope- a tool for looking at things that are far away

Rocket sets up her telescope every night.

meteor- bits of dust burning up in the atmosphere

Rockets wants everyone to see the meteor shower, when lots of meteors will can be seen in the sky.

3. After

1. Ask their Opinion- *Did you like that story? Thumbs up if you did. Thumbs down if you didn't. Turn to someone next to you and tell them your favorite part.*

2. Ask Questions- Check their understanding. Ask children to respond in different ways (choral response, individual response, talking to their elbow partners, etc.)

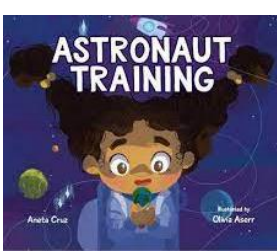
- *Who was this story about?* (Rocket, her brother Jamal)

- *Where did they go to see the meteor shower?* (the park)

3. Follow Up Activity- Story Retell

- Explain, *We are going to tell the story again. I want you to help me.* Show pictures in book to help children remember if necessary.

Rocket wants to be the greatest astronaut when she grows up, just like... (Mae Jemison.) Rocking is always looking... (up!) Her next mission is to see the famous Phoenix Meteor Shower. She makes flyers and invites everyone to watch with her. When it's time, they go to the park. They wait a really long time and don't see anything. Suddenly, the sky lights up and they watch the meteor show. Rocket is so happy they looked up and saw it... (together.)



Unit: Astronomy, Part 3- Astronauts
Book 21: Astronaut Training by Aneta Cruz
Extra Materials Needed:

CHALLENGE

Language Time

Twinkle, Twinkle
Little Star

Twinkle, twinkle little
star

*(open and close
hands)*

How I wonder what
you are
*(point to temple with
pointer finger)*

Up above the world
so high
(point up)

Like a diamond in the
sky
*(make a diamond with
fingers)*

Twinkle, twinkle little
star
*(open and close
hands)*

How I wonder what
you are
*(point to temple with
pointer finger)*

1. Before

1. Topic Introduction- *We have been learning about astronomy, the study of space. Today we are going to read our last book about astronomy.*

2. Book Introduction- *It looks like this girl might be holding a model of the Earth. I see some other space things around her.*

3. Title and Author- Draw attention to title and author *This book is called Astronaut Training. I think this girl wants to be an astronaut just like Rocket and Mae Jemison did. The author of this book is Aneta Cruz. What does the author do? The illustrator is Olivia Aserr. What does the illustrator do?*

2. During

1. Read- Read with few interruptions so children can follow the full story.

2. Model Thinking Aloud- Pause to model what good readers think about.

- “and Astrid soon ran out of all the numbers she knew.” *I’ve never tried to count the stars, but I don’t think I would be able to do it either. There are just so many!*
- “She chose the biggest one, made a wish, and...” *Astrid made a wish on a big star. I wonder what’s going to happen?*
- “chose the smallest one, and set her course.” *When she wished on the big star, she landed on a planet where everything was big. What will happen now?*
- “after a bit more training, of course.” *Astrid wants to train more before she becomes an astronaut. What is she doing to train? Reading a book about space!*

3. Draw Attention to Key Events and Vocabulary- Pause to highlight vocabulary and key concepts.

- Key content

Being an astronaut takes a lot of training.

- Vocabulary: briefly define/highlight vocab words when they come up in the story.

Reinforce throughout the day.

astronaut- a person who is trained to travel in outer space

Astrid’s dream was to be an astronaut.

mission- a job that astronauts do in space

Astrid is getting ready for her mission. Her dad says her mission is sleeping.

3. After

1. Ask their Opinion- *Did you like that story? Thumbs up if you did. Thumbs down if you didn’t. What was your favorite part?*

2. Ask Questions- Check their understanding. Ask children to respond in different ways (choral response, individual response, talking to their elbow partners, etc.)

- *Who was this book about?* (Astrid)
- *What did Astrid want to become?* (an astronaut)

3. Follow Up Activity- Wrap up sub-theme (astronauts)

- Explain, *We have learned a lot about astronauts. I’m going to say a fact about astronauts and I want you to finish my sentence. Ready?*
 - o *Astronauts are people who are trained to travel in...* (space)
 - o *The very first female African America astronaut was...* (Mae Jemison)
 - o *Astronauts travel to space in...* (space ships, rockets)

Wordless Books Small Group Work for Astronomy Unit

Books in this Unit

Delivery by Aaron Meshon

Field Trip to the Moon by John Hare

La La La by Kate DiCamillo (Challenge)

Wordless Books General Outline

Skills Targeted: Length of sentences, retelling, explanations, vocabulary, and listening comprehension, and print/book skills.

Materials: Books and follow up activity

Outline of Activity: Wordless book routine—SAMMY

1. **Show** children the book, read title & author, and generate excitement
2. **Ask** “*What do you think this book is about?*”
3. **Model**--Read it the first time with the children where you tell the story—asking a few basic questions as you read.
4. **Make sure they understood** what happened in the story by asking a few questions/reviewing: who the characters were, what the problem was that resolved, and how it ended.
5. **Your Turn:** Read the story again, this time letting the children tell the story. Provide prompts as needed—what is happening on this page? Who is that? How did the story end? Have the child complete your sentence--The girl and the boy became ____ (friends).
6. After Reading Activity.

Differentiation:

Children Who Need a Challenge: Allow students to retell the entire story. Only guide them when they seem stuck.

Children Who Need Support: Do most of the retell. Provide students with sentence starters so they can participate successfully in retelling the story.



Delivery by Aaron Meshon

Skills Targeted: Length of sentences, retelling, explanations, vocabulary, and listening comprehension, print/book skills

Materials: *Delivery* by Aaron Meshon

Story Synopsis: A grandmother remembers that her grandson’s special day is coming up soon. She bakes red, heart-shaped cookies while her cat watches and wraps them in a white box. She hands the box to the mail carrier and that is where the adventure begins. The box travels around the world into space with the help of several different types of vehicles, and one whale. Along the way, it radiates the grandmother’s love. When the package is finally delivered to the grandson, we see that he actually lives right next door to his grandmother.

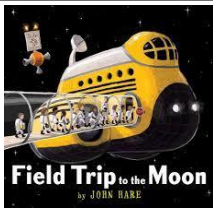
Outline of Activity: Wordless book routine—SAMMY

1. **Show** children the book, read title & author, and generate excitement by pointing out the picture of the Earth and all of the vehicles surrounding it. Talk about or name some of the vehicles.
2. **Ask** “*what do you think this book is about*” Say, “I see different kinds of vehicles traveling around the world. Every vehicles has a red heart. I wonder what these vehicles are doing.”
3. **Model**--Read it the first time with the children where you tell the story—
asking a few basic questions as you read. “What is the grandmother making? Who is it for? What is this tractor doing? Who has the package now? Where do you think they are taking it?”
4. **Make sure they understood** what happened in the story by asking a few questions/reviewing. “What were all of the vehicles doing? Who delivered the cookies to the grandson?”
5. **Your Turn:** Read the story again, this time letting the children tell the story.
Provide prompts as needed. Now the package is being carried on a _____.”
6. **After reading activity-** Story sequencing. Ask the children if they can remember some of the vehicles that carried the cookies. As the children name the vehicles, pull out and show them the sequencing card with the picture of that vehicle. When children have named three or four vehicles, work together to put the sequencing cards in the order they appear in the story. Encourage the children to retell portions of the story by moving the package along the sequencing cards as they recount the events.

Differentiation:

Children Who Need a Challenge: Allow students to retell the entire story. Only guide them when they seem stuck.

Children Who Need Support: Do most of the retell. Provide students with sentence starters so they can participate successfully in retelling the story.



Field Trip to the Moon by John Hare

Skills Targeted: Length of sentences, retelling, explanations, vocabulary, and listening comprehension, print/book skills

Materials: *Field Trip to the Moon* by John Hare

Story Synopsis: A group of students take a field trip to the moon. One student accidentally gets left behind when he wanders off and falls asleep. His teacher and class return to the space bus. The student sits down to wait for their return and decides to draw with his crayons to pass the time. A group of aliens take notice and come out from hiding. He shares his crayons. The aliens are delighted and color on everything. When the teacher returns, she runs to her student but is upset to see coloring on the moon rock. The child cleans the crayon and they return to the space bus.

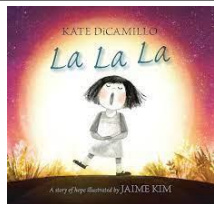
Outline of Activity: Wordless book routine—SAMMY

1. **Show** children the book, read title & author, and generate excitement by pointing out the spaceship school bus.
2. **Ask** “*what do you think this book is about*” Say, “I can see a school bus that looks like a spaceship and children dressed in spacesuits. I think they are going on a special school trip to the moon! That would be so fun. Would you like to do that? What do you think they will do?”
3. **Model**--Read it the first time with the children where you tell the story—
The story begins with the cover as the children are boarding the bus. Point out that one student is lagging behind. Ask a few basic questions as you read. “What is the student drawing? Do you think he is sleeping? What might happen if he falls asleep and the teacher doesn’t know where he is. I see the bus leaving- what will the student do?”
4. **Make sure they understood** what happened in the story by asking a few questions/reviewing. “Where did they go on their field trip? What happened when they were on the field trip? Were the moon people nice? How did the student show kindness to the moon people?”
5. **Your Turn:** Read the story again, this time letting the children tell the story.
Provide prompts as needed.
6. **After Reading Activity**— Make a moon creature! Use crayons and paper to draw your own moon creature. Remind students that we have never seen life of any sort on the moon, but it’s fun to pretend there might be moon creatures. What do you think they would look like?

Differentiation:

Children Who Need a Challenge: Allow students to retell the entire story. Only guide them when they seem stuck.

Children Who Need Support: Do most of the retell. Provide students with sentence starters so they can participate successfully in retelling the story.



La La La by Kate DiCamillo

Skills Targeted: Length of sentences, retelling, explanations, vocabulary, and listening comprehension, print/book skills

Materials: *La La La* by Kate DiCamillo

Story Synopsis: A young girl stands alone and sings. No one responds. The little girl goes out, singing to the world around her but still no one responds. The little girl is sad and feels lonely. She falls asleep but is awoken by an amazing sound. Someone heard her and is singing back.

Outline of Activity: Wordless book routine—SAMMY

1. **Show** children the book, read title & author, and generate excitement by pointing out the girl and the bright light behind her. What could this light be?

2. **Ask** “*what do you think this book is about*” Say, “Here mouth is wide open. What do you think she is doing? What is the big light behind the girl?”

3. **Model**--Read it the first time with the children where you tell the story—asking a few basic questions as you read. “What is the girl doing? Did anyone answer her?”

4. **Make sure they understood** what happened in the story by asking a few questions/reviewing.

5. **Your Turn:** Read the story again, this time letting the children tell the story. Provide prompts as needed. Note the colors in each picture. Talk about how the little girl feels in each picture. Point out the natural elements, especially those related to space.

6. **After Reading Activity**— Who was the problem in this story? Explain that every story has a problem to be solved. Guide the children toward the discovery of the problem. (The girl felt lonely because no one would answer her singing) by looking through the book and briefly discussing what the girl is doing and how she feels in the beginning, middle, and end of the story.

Differentiation:

Children Who Need a Challenge: Allow students to retell the entire story. Only guide them when they seem stuck.

Children Who Need Support: Do most of the retell. Provide students with sentence starters so they can participate successfully in retelling the story.

