

Topic of Study – Things in the Sky

Introduction

Things in the sky are a part of children’s natural environment. They see the bright sun, the shining moon and twinkling stars, and sometimes they see a beautiful rainbow. In the summer, they can feel the warmth of the sun on their skin. However, children mostly experience “things in the sky” through their sense of sight - through their eyes.

Teacher Notes about STEM

- *Early Childhood Educators are now linking together science, technology, engineering, and math into what is called STEM curriculum.*
 - *This topic of study, Things in the Sky, focuses on the science component of STEM.*
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Teacher Note

Arkansas Minimum Licensing Requirements (Rev. 1.1.15) requires the following:

400 PROGRAM – 402 Program Requirements for all ages

5.a. The facility shall have an approved curriculum with weekly activity plans appropriate for the developmental needs of each group of children.

To assist your program in meeting this requirement, refer to Developing Weekly Activity Plans for Adventures in Learning for information on how to develop your plans. In addition, 2 different examples of blank activity plan sheets are included. Feel free to make copies of the plan sheet you select and use it each week. To help you in your planning, there are also 2 samples of completed plan sheet that you may use as guides when developing weekly activity plans for your group of children.

- ***Adventures in Learning** is an Arkansas approved curriculum.*
- *This curriculum guide is a collection of activities that support the Big Ideas listed below. Choose those activities that best meet the needs of the children in your group.*
- *Consider extending this topic of study beyond a one-week period of time. There is so much for children to learn about things in the sky. Carry over experiences from one week to another because children enjoy and learn best through repetition.*
- *If you do not have some of the featured books, refer to the Additional Books section for other books you can use.*
- *It is important to read the same book several times to children so that they have a better understanding of the theme, plot, characters, and sequence of events. In each of the readings presented here, there is a different focus on what is happening in the story.*

Big Ideas

Here are three big ideas about “things in the sky” that you can help children explore:

- We see the sun during the daytime and the stars and moon at night
- We sometimes see clouds and rainbows
- We see beautiful things in the sky

Materials to Collect and Make

- Pictures of things in the sky: sun, moon, stars, clouds and rainbows. Laminate or cover the pictures with clear adhesive to preserve.
- Chart sheet, marker board or chalk board and markers and chalk
- Felt or magnetic board
- Storytelling figures (felt or magnetic) for the Mother Goose Rhyme “Hey Diddle Diddle” (See Attachment: [Hey Diddle Diddle](#))
- Storytelling figures (felt or magnetic) for the story *Happy Birthday Moon* (See Attachment: [Happy Birthday Moon](#))
- Illustrated nursery rhyme charts: “Twinkle, twinkle little star,” “Star light, star bright,” “I see the moon,” and “There was an old woman tossed up in a basket.”
- Mother Goose Rhymes Lollipops
 - Cut three to four inch circles from poster board
 - Write a title of a Mother Goose rhyme on a circle.
 - Draw or glue on a picture related to the rhyme.
 - Glue or tape the circles to craft sticks to make lollipops and store in a can decorated with a picture of Mother Goose
- Children’s books about things in the sky:
Goodnight Moon by Margaret Wise Brown, illustrated by Clement Hurd
It Looked Like Spilt Milk by Charles G. Shaw
A Rainbow of My Own by Don Freeman
- Mother Goose rhymes book
- CD such as Dance Party Fun or All Time Favorite Dances or CDs that have music such as waltz, boogie, Latin music, reggae and Irish Jig.
- Craft foam from craft or discount stores
- White and black construction paper
- Prism

Resources

- Check with your local library for the availability of children’s books and Mother Goose rhymes book.
- Children’s books, Mother Goose rhymes books and CDs can be purchased online, from school supply catalogs or local bookstores and music stores.

Introducing and Concluding the Topic

Introduction: Finding out What Children Know about Things in the Sky

Learning Goals:

CD2.4 Holds and manipulates information in memory (*short term and working memory and long-term memory*)

CD3.2 Engages in symbolic and abstract thinking (*abstract thinking*)

EL3.1 Responds to features of books and print (*print knowledge*)

To introduce the topic of study, “Things in the sky,” you need to know what children already know about the topic. This allows you to build on your children’s experiences. It also helps create an interest in the topic. Here’s how to begin.

- Gather the children in a group. Say, “For the next few days we’re going to be learning about things in the sky.”
- Write on chart paper, chalkboard or marker board the words “Things in the Sky.”
- Invite children to tell you things they already know about things in the sky. You may have to ask questions to stimulate their thinking: questions such as “When you look up in the sky, what do you see?” If children say things like “airplane” or “birds,” ask them if they see these things in the sky all the time.
- Make a list of the things children already know about things in the sky.
- Review the list with them and say, “You already know a lot of things about things in the sky and we’ll find out even more.”
- Now ask children what they would like to know about things in the sky and make a list of their responses.
- Keep the two lists until you have completed the topic of study.

What We Know about Things in the Sky	What We Would Like to Know about Things in the Sky	Things We Learned about Things in the Sky

Conclusion: Finding out What Children Have Learned about Things in the Sky

- Gather the children in a group at the conclusion of the study about things in the sky.
- Invite children to tell you some things they have learned about things in the sky. You may have to ask prompt questions such as “What is your favorite thing to see in the sky?”
- Make a list of all the things children learned about things in the sky.
- Read the first two lists you made with the children. Then say, “Here are some new things you learned about things in the sky” and read today’s list with the children.

Teacher Note: *This method of introducing and concluding the topic is known as KWL. What do children know, what they want to know, and what did they learn.*

Reading Books with Children

Learning Goals:

CD2.1 Focuses and sustains attention

CD2.4 Holds and manipulates information in memory (*short term and working memory*)

LD1.1 Understands and responds to language (in child's home language) (*vocabulary and language comprehension*)

LD2.1 Uses increasingly complex vocabulary, grammar, and sentence structure (in child's home language) (*expressive vocabulary*)

EL1.1 Shows interest in literacy experiences (*engagement in literacy experiences*)

EL3.1 Responds to features of books and print (*book knowledge*)

Book #1: *Goodnight Moon* by Margaret Wise Brown, illustrated by Clement Hurd.

First Reading of *Goodnight Moon*

- Prepare to read the book, *Goodnight Moon*.
- Show cover; give title, author and illustrator. (Explain that the author is the person who writes the book and the illustrator is the person who draws the pictures.)
- Ask children to look at cover and predict what story is about.
- Read the story so all children can see the pictures in the book.
- Follow up by asking children who and what they say goodnight to when they go to bed. Allow them to discuss their bedtime routines and rituals.

Second Reading of *Goodnight Moon*

- Show cover, give title, author and illustrator
- Read the story so all children can see the pictures in the book.
- Follow up the second reading by showing the first few pages in the book and asking children to identify the things they see in the great green room. Give the children clues by pointing to the items on the page in the order they appear in the text.
- Continue by asking children to identify all the things the little rabbit said goodnight to.

Third Reading of *Goodnight Moon*

- Show cover. Invite children to recall the name of the story. Give author and illustrator.
- Read the story so all children can see the pictures in the book.
- Follow up the third reading by inviting the children to fill in all of the rhyming words. For example, read, "And there were three little bears sitting in _____ (Pause and children will say "chairs.")"

Additional Learning Goal:

EL2.1 Notices and manipulates the sounds of language (*rhyme*)

Fourth Reading of *Goodnight Moon* (small group)

- Involve a small group of children (4 to 6) for this activity.
- Show cover, give title, author and illustrator.
- Read the story so all children can see the pictures in the book.
- Follow up the fourth reading by telling children you are going to let them look at the pages that show the entire room.
- Invite children to look carefully at the pictures and tell you what is happening in the room. (It is getting darker and darker as day fades into night.)

Additional Learning Goal:

ST1.1 Engages in the scientific process to collect, analyze, and communicate information (*observations, questions and predictions*)

Book #2: *It Looked Like Spilt Milk* by Charles G. Shaw, author and illustrator

First Reading of *It Looked Like Spilt Milk*

- Prepare to read the book, *It Looked Like Spilt Milk*.
- Show cover; give title, author and illustrator. (Explain that the author is the person who writes the book and the illustrator is the person who draws the pictures.)
- Ask children to name the items they see on the cover.
- Read story so all children can see the pictures in the book.
- Follow up by inviting children to talk about clouds they have seen and what they looked like.
- Review by showing each page and allowing children to name what they see on each page

Second Reading of *It Looked Like Spilt Milk*

- Show cover, give title, author and illustrator.
- Read the story so all children can see the pictures in the book.
- Follow up the second reading by explaining to children that you are going to let them help you read the book.
- Pause and allow children to fill in the words. For example, read, "Sometimes it looked like ____ (Pause and children will say "spilt milk.")"

Teacher Note: *This process of pausing and allowing children to complete a sentence or phrase is called the cloze technique.*

Book #3: *A Rainbow of His Own* by Don Freeman, author and illustrator

First Reading of *A Rainbow of His Own*

- Prepare to read the book, *A Rainbow of His Own*.
- Show cover; give title, author and illustrator. (Explain that the author is the person who writes the book and the illustrator is the person who draws the pictures.)
- Ask children to look at cover and predict what story is about.
- Read the story so all children can see the pictures in the book.
- Follow up by inviting children to discuss their experiences with rainbows. Where did they see a rainbow? What was the weather like when they saw a rainbow? Do they remember the colors they saw in the rainbow?

Additional Learning Goal:

ST1.1 Engages in the scientific process to collect, analyze, and communicate information (*observations, questions and predictions*)

Second Reading of *A Rainbow of His Own*

- Show cover, give title, author and illustrator
- Read the story so all children can see the pictures in the book.
- Follow up the second reading by showing appropriate pages and asking children what the weather was like when the little boy saw a rainbow. (stormy, windy) How can they tell what the weather was like in the book? (dark clouds, grass blowing, boy wearing a raincoat and rain hat)
- Ask children what the weather was like when the boy returned home? (sunshine). What do they think created the rainbow in the boy's room? (sun shining through the water)

Third Reading of *A Rainbow of His Own*

- Show cover. Invite children to recall title. Give author and illustrator.
- Read the story so all children can see the pictures in the book.
- Follow up the third reading by asking children questions such as, “If a rainbow visited you, what are some things you would like to do with the rainbow?” “If you could ride on a rainbow, where would you like to go?”

Additional Learning Goal:

CD3.2 Engages in symbolic and abstract thinking (*abstract thinking*)

Additional Books

Moon Cake (Moonbear) by Frank Asch

Happy Birthday Moon (Moonbear) by Frank Asch

The Napping House by Audrey Wood, illustrated by Don Wood (Also available in Spanish)

Moonbear’s Skyfire by Frank Asch

The Moon Book by Gail Gibbons

The Kissing Hand by Audrey Penn (Also available in Spanish)

Time for Bed by Mem Fox, illustrated by Jane Dyer (Also available in English/Spanish version)

Kitten’s First Full Moon by Kevin Henkes

Papa, Please Get the Moon for Me by Eric Carle

Language and Literacy Materials and Activities

Learning Goals:

EL1.1 Shows interest in literacy experiences

EL2.1 Notices and manipulates the sounds of language (*rhyme*)

EL3.1 Responds to features of books and print (*print knowledge*)

CA1.1 Explores through listening, singing, creating, and moving to music

Mother Goose Rhymes

- Read the following Mother Goose rhymes to the children on different days.
- Show them the picture of the rhyme in the book as you read it.
- Read each rhyme several times and invite children to join in with you in saying the rhyme.
- Read it and leave off the last word in a line for children to complete. For example, say “Star light, star _____(bright), First star I see _____(tonight). Children are learning to listen and recognize rhyming words.

Star Light, Star Bright

Star light, star bright,
First star I see tonight,
I wish I may, I wish I might,
Have the wish I wish tonight.

I See the Moon

I see the moon,
And the moon sees me,
God bless the moon,
And God bless me.

Twinkle, Twinkle, Little Star

Twinkle, twinkle, little star,
How I wonder what you are
Up above the world so high,
Like a diamond in the sky.

Hey Diddle, Diddle

Hey diddle, diddle,
The Cat and the Fiddle,
The Cow jumped over the Moon.
The little Dog laughed
To see such sport,
And the Dish ran away
With the Spoon.

There Was an Old Woman

There was an old woman tossed up in a basket,
Seventeen times as high as the moon:
Where she was going I couldn't but ask it,
For in her hand she carried a broom.

Old woman, old woman, old woman, quote I,
Where are you going to up so high?
To brush the cobwebs off the sky?
May I go with you? Aye, by-and-by.

Teacher Note: Make illustrated rhyme charts and laminate or cover them with clear adhesive to preserve them. Read from the charts to the children. Show the children a chart and allow time for them to name the rhyme. Post the rhyme charts in the library/book area.

Teacher Note: Make Mother Goose rhymes lollipops. Show a lollipop to the children and invite them to say the rhyme it represents.

Hey, Diddle, Diddle Felt or Magnetic Figures

- Make Hey, Diddle, Diddle felt or magnetic figures.
- Say the rhyme as you place the figures on the storyboard.
- Place the figures and a board in the library/book area for children to use independently.
- Ask children if they think a cow can jump over the moon and to explain why or why not. Accept all answers.
- Ask children if they have ever seen a dog laughing or a dish and a spoon running.
- Allow children to discuss these occurrences and accept answers they give. The idea is for them to use their imagination.

Sunshine Song

(Sing to tune of "You Are My Sunshine")

Outside there's sunshine	(Use arms to form circle sun overhead)
There's lots of sunshine.	
And not a cloud in	
The sky so blue!	((Shade eyes and look upward)
So let's go outside	(Point thumb toward door.)
Let's not stay inside!	(Shake index finger "no")
I'll spend my sunny days with you!	(Point to self, then others.)

Have You Seen the Sun Today?
(Sing to Tune of “Oh, Do You Know the Muffin Man”
or Chant It)

Oh, have you seen the sun today,
The sun today, the sun today?
Oh, have you seen the sun today,
Way up in the sky?

Oh, yes I've seen the sun today,
The sun today, the sun today.
Oh, yes I've seen the sun today,
Way up in the sky.

Repeat the first verse, then sing the following:

No, there is no sun today,
Sun today, sun today?
No there is no sun today,
Way up in the sky.

Learning Goal:

EL1.1 Shows interest in literacy experiences

Storytelling Figures: *Happy Birthday Moon* (See Attachment: [Happy Birthday Moon](#))

- Make either felt or magnetic storytelling figures for the story, *Happy Birthday Moon*.
- Read the book, *Happy Birthday Moon*, to the children.
- Use the storytelling figures to tell the story.
- Explain to the children that the storytelling figures will be in the library/book area for them to use.
- Demonstrate and discuss with the children the correct way to use the storytelling figures.

Science / Discovery and Math

Learning Goals:

ST1.1 Engages in the scientific process to collect, analyze, and communicate information

ST2.1 Demonstrates knowledge of core science ideas and concepts (*stability and change*)

ST3.1 Demonstrates knowledge of the characteristics of living things, the earth's environment, and physical objects and materials (*nature and the environment*)

Activity: Cloud Watch

- Read the book, *It Looked Like Spilt Milk*, to the children.
- Invite the children to go outside on a windy day when there are clouds in the sky. Ask them to lie or sit down (have blanket for children to lie or sit on) and to watch the clouds.
- Ask questions such as: “Do the clouds move? What do you think makes the clouds move? What do the clouds look like to you? What shapes or images can you see in the clouds? Did the clouds change shapes?”

Activity: A Rainbow of Our Own

- Involve children in hanging a prism in a window that faces either east or west. When the sun shines in the window, rainbows will appear in the room.
- Call attention to rainbows if children do not notice them.
- Move the prism so the sun does not shine through it and the rainbows disappear.
- Ask children questions such as: “When we moved the prism, what happened?” (The sun no longer shines through it and the rainbows disappear).
- Call attention to the prism on a cloudy day and ask the children why they think there are no rainbows in the room. (No sun to shine through the prism)

Activity: Sunny Design

- Involve the children in helping you cut out a large design such as a circle or a heart.
- Place the design on a sheet of dark construction paper.
- Place the paper with design in direct sunlight and leave it there for several days.
- Ask children to remove the paper and talk about what has happened to the paper and to the design. (The dark paper has faded, but the design remains on the area that was covered).
- Involve children in discussing why the dark paper faded and the part that was covered did not fade. (Sun faded the dark paper)

Activity: Seeing Stars

- Place a sheet of black construction paper over the end of a paper towel roll, securing it with a rubber band.
- Prick holes in the construction paper with a pin.
- Invite children to look through the open end of the paper towel roll toward a source of light and tell you what they see. (It will look like stars)

Food/ Nutrition Experience

Learning Goals:

PH2.1 Demonstrates fine-motor strength, control, and coordination (*hand-eye coordination*)

PH3.1 Demonstrates interest in engaging in healthy eating habits and making nutritious food choices (*exploration of food experiences*)

Activity: A Star Sandwich (Individual activity)

- Gather the following: one small plate per child, large star cookie cutters, a slice of bread and a slice of cheese for each child
- Make an illustrated recipe chart that lists steps for making A Star Sandwich

A Star Sandwich

- Step 1. Place a slice of cheese on top of a slice of bread
- Step 2. Center the star cookie cutter over the cheese and bread
- Step 3. Press the cookie cutter cutting through the cheese and bread
- Step 4. Eat the edges of bread and cheese
- Step 5. Eat the star sandwich

Teacher Notes:

- *Allow the children to do as much of this food experience as possible. Guide them as they use the cookie cutter to make their star shaped sandwich.*
- *Teachers and children should always wash hands before participating in a food experience.*

Movement / Physical Education

Learning Goal:

CA1.1 Explores through listening, singing, creating, and moving to music (*exploration of music and movement, music and movement concepts*)

Activity: Dancing with the Stars

- Cut out from yellow construction paper enough small stars (2 – 3”) for each child in the class
- Tape the stars to the end of a straw.
- Give each child a star and say, “This is your dance partner. You’re going to dance with the stars.”
- Tell the children you’re going to play some music and invite them to listen to it and move like the music tells them to move. Say, for example, “This is a waltz.”
- Play one dance tune and observe the children. Do they seem to be responding to the tempo they are hearing?
- Tell the children you’re going to play a different tune and invite them to listen to this one and move like the music tells them to move. Say, for example, “This is reggae.”
- Observe the children to see if they respond differently to the second tune than they did the first one.
- Repeat this activity at other times, playing different tunes.

Learning Centers

Teacher Note: *As children are involved in the learning centers, they are engaging in activities that support all or most of the domains of child development and early learning:*

- *Social and Emotional Development*
- *Cognitive Development*
- *Physical Development and Health*
- *Language Development*
- *Emergent Literacy*
- *Mathematical Thinking*
- *Science and Technology*
- *Social Studies*
- *Creativity and Aesthetics*

However, there will also be activities included and these will have specific learning goals.

Learning Goals:

PH2.1 Demonstrates fine-motor strength, control, and coordination

PH2.2 Adjusts grasp and coordinates movements to use tools (*writing and drawing tools*)

CA2.1 Explores, manipulates, creates, and responds to a variety of art media (*exploration of art*)

Art Center

Activity: Day and Night Picture

- Prepare a day and night background for children by taping a sheet of black and a sheet of white construction paper together down the middle. The total surface will be 17”x11”.
- Suggest that children use white chalk to draw a nighttime picture on the black paper (something I do at night) and use crayons and/or washable markers to draw a daytime scene on the white paper (something I do during the day).

Activity: Puffy Clouds

- Mix equal amounts of Elmer’s glue and shaving cream together.
- Let children use the mixture to finger paint or paint with a brush on light blue, dark blue or purple construction paper. (The mixture leaves a puffy paint effect)

Activity: Sponge Painting

- Cut sponges into shapes: sun, moon, stars, and clouds.
- Place yellow or white tempera paint and dark blue or black construction paper in the art center.
- Provide containers such as recycled pie pans for paint.
- Allow children to make their own designs and patterns.

Activity: Spilt Milk Painting

- Read the book, *It Looked Like Spilt Milk*, to the children.
- Give each child who wants to do this activity a sheet of dark blue, sky blue, or purple construction paper that has been folded in half.
- Suggest that the children open up the paper and use a spoon to put a blob of white tempera paint on one side of the midline of the paper.
- Have the children fold the paper in half again and rub.
- Suggest that they open up the paper and look at their designs.
- Ask children what they think their designs look like.
- Invite children to say what their design looks like, and with their permission, write this on their “spilt milk” painting.

Activity: Play Dough

- Make play dough and provide star-shaped cookie cutters for the children to use.

Activity: Our Wish Book

- Read the nursery rhyme, “Star Light, Star Bright” to the children.
- Discuss with them some things they wish for.
- Suggest that they draw a picture of something they wish for.
- Ask each child individually if they would like to share their wish with others. If they say “yes”, with their permission, write what they wished for.
- Put the pictures together in a book and title it “Our Wish Book.”

Library/Book Corner

- Add books about things in the sky
- Add pictures of “things in the sky” scenes (laminated or cover pictures with self stick adhesive)
- Add felt or magnetic storytelling figures from the story, *Happy Birthday Moon*, plus a storyboard.
- Add felt or magnetic figures of the characters in “Hey Diddle Diddle” and a story board

Learning Goal:

CA3.1 Explores feelings, relationships, and concepts through imitation, pretend play, and sociodramatic plan (*exploration of drama*)

Home Living/Dramatic Play

- Create a “Bedtime” prop box. Include flashlight, robe, and slippers, Teddy Bear, and book *Goodnight Moon*.
- Place the prop box in the area.
- Observe the children and listen to their conversation as they play with the props.

Learning Goals:

MT1.1 Demonstrates number sense and an understanding of quantity (*number names and count sequence*)

MT3.1 Participates in exploratory measurement activities and compares objects (*seriation*)

Water table or tub

- Cut out three different sizes of stars from craft foam, such as 2", 3" and 4".
- Place stars and aquarium nets in the water table or tub.
- Invite children to catch the stars with the net.
- Involve children in counting the number of stars they caught.
- Ask children to put the stars in order from largest to smallest.

Science/Discovery Center

- Seeing Stars
- Sunny Design

Quiet Corner

Learning Goal:

SE2.1 Experiences, expresses, and regulates a range of emotions (*emotion regulation*)

- Create a quiet corner in your classroom; a place where children can go to be alone and to get away from the stresses of group living.
- Place soft items in the quiet corner. Carpet on the floor, soft pillows, and soft and cuddly stuffed animals or dolls are examples.
- Discuss with children when they might want to go to the quiet corner. When they are angry and need to get away from the source of their anger? When they are sad and need to be alone? When the room gets too noisy and they need a quiet spot?
- Explain to children that the quiet corner is for one child at a time.

Teacher Note: *Make sure this area can be supervised by the adults in the classroom at all times.*

Transition Activities

Learning Goal:

CD2.2 Shows flexibility in adjusting thinking and behavior to different contexts (*adjusting behavior to match context*)

Activity: Star Wand

- Cut out a 3" to 4" star from yellow construction paper and attach it to a dowel stick.
- Touch each child lightly on the shoulder to send to another activity.

Activity: Star Bright Wand

- Use the star wand to allow children to select learning centers.
- Let each child have a turn holding the star wand while saying, "Star light, star bright, first star I see tonight. I wish I might go to _____." (discovery).
- Ask the child to hand it to his/her neighbor who then has a turn selecting a center.

Activity: Moon Overhead

- Ask children to put their hands over their heads and make a full moon (big circle) as they move to the next activity.

Activity: Mother Goose Rhymes Lollipops

- Allow children, one at a time, to draw a lollipop from the storage can, say the name of the rhyme and go to the next activity.

Family Connection and Engagement

Send home a note to parents stating for the next few days, the children will be learning about things in the sky: sun, moon, stars, clouds, and rainbows. Suggest some ways families can be involved in the topic of study:

- Collect and bring to the center pictures of things in the sky from sources such as magazines and calendars.
- Take their child outdoors on a clear night when the stars are bright. Help your child find the evening star or the big dipper. If the moon is in the sky, point it out to your child and talk about whether it is a full moon, half moon, quarter moon, or a crescent moon.
- Include the titles and authors of some of the children's books about things in the sky. Suggest that they look for these books in the local library, check them out and read them with their child.
- Send home copies of some of the nursery rhyme charts and suggest that families ask their child to say the rhyme with them.