Alaska Skies

Connecting Through Play & Culture

BRIDGE

Borrow • Read • Investigate • Design • Grow • Explore

Attributions

The CHILD Family Kits are a collaborative project under the Cultural Heritage Improves Learning & Development (CHILD) curriculum.

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- Alaska Department of Education & Early Development: Pre-Elementary Grant (PEG)
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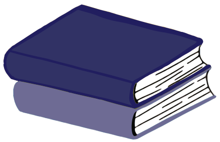
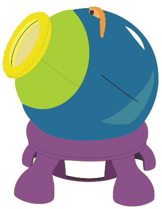
BRIDGE - Borrow

Materials:

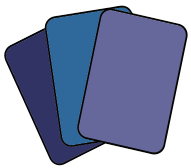


2 Books

Plush Seal



Planetarium



Guide to the Night Sky Cards

Now is a great time to practice counting skills by making sure all of the materials are in the kit!

1 2 3 4

Family Message

Observing the Night Sky

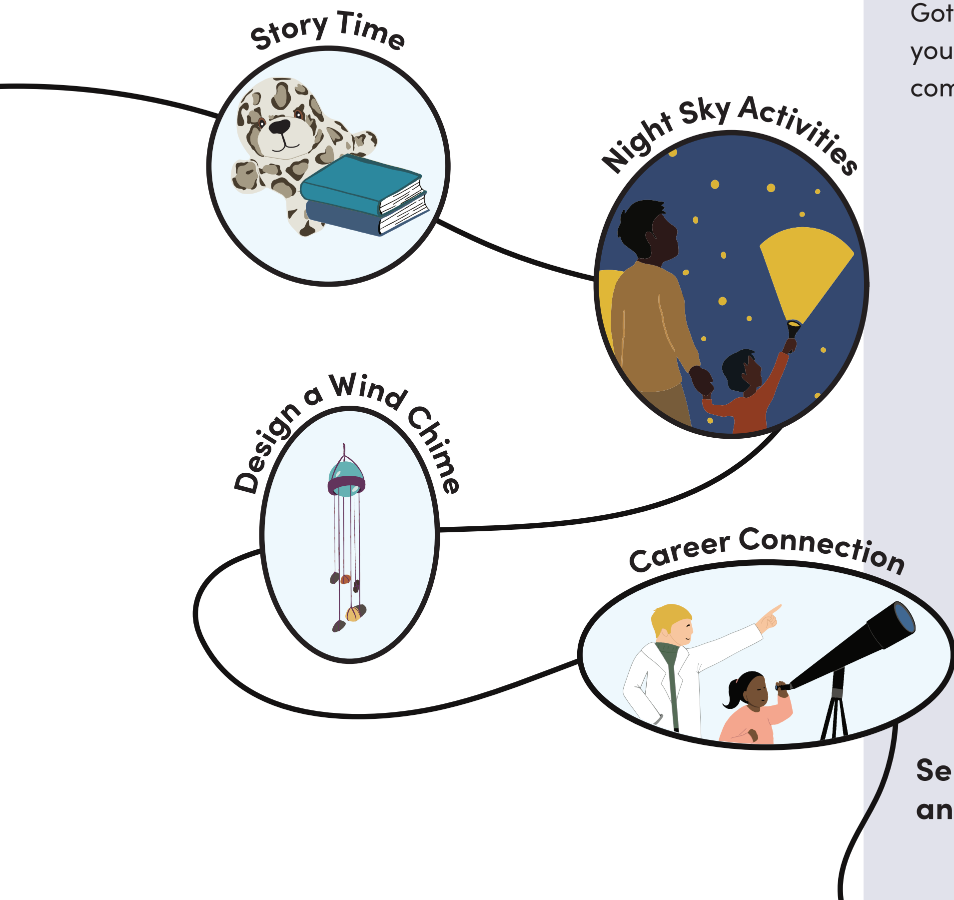
Explore the night sky through a beautiful, sensory experience! Our senses allow us to see the shining stars, feel the calming wind, and smell the crisp air all around us, while exploring the wonders above. Throughout this kit, you will have many opportunities to explore this theme together!

This kit includes:

- Books to learn about the night sky.
- A seal for snuggling while reading together or pretending to follow the stars.
- A card deck for observing the night sky.
- Activities for exploring navigation by stars.

Enjoy this journey in learning about Alaska Skies!

Got 5 minutes? Read a story or choose a short activity. If you have a larger amount of time, spend 20 minutes to complete the Wind Chime Design activity.



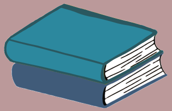
Select your favorite this time and check this kit out again!

BRIDGE - Read

Sharing Stories

Find a comfy spot and snuggle up for story time!

Picture Walk



Flip through the pages, without reading words, to highlight the illustrations and ask guiding questions such as these:

- What do you think this story will be about?
- What do they see in the night sky?
- How will the shapes change?
- What do you notice about the pictures?

Usha and the Big Dipper

Authors: Amitha Jagannath Knight
Illustrator: Sandhya Prabhat

Ask Engaging Questions

- What is the Big Dipper?
- Why did the girls have a disagreement?
- Why did they see different things in the same star pattern?
- How did they eventually see each other's shapes?
- How does Usha feel in this picture?

Extend the Learning

Play Simon Says: Practicing Left & Right

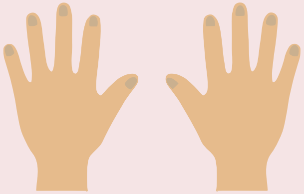
"Wiggle your right hand"

"Stomp your left foot"

"Tap your right shoulder"

"Flap your left arm"

"Raise both hands high!"



EARLY LITERACY SKILL

Receptive Language

The ability to understand spoken language, such as following directions and comprehending questions, contributes to becoming a successful reader.

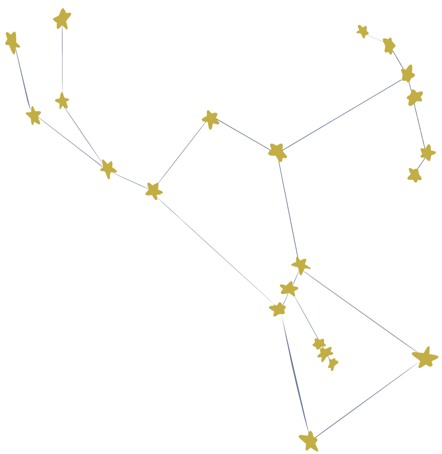
Let’s Read It Again!

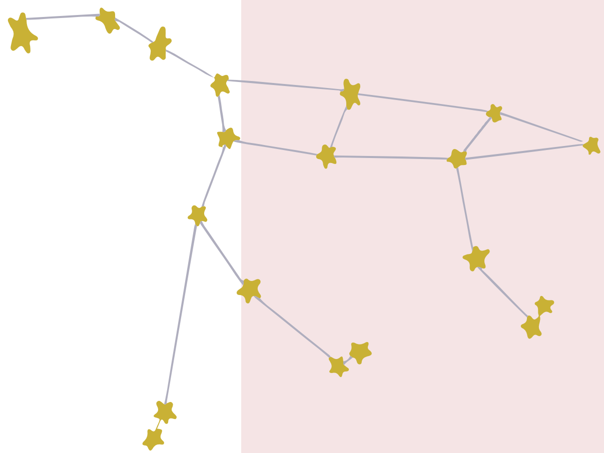
The 5 Math Areas

Numbers & Counting
Patterns & Story Problems
Data Analysis & Probability
Measurement & Math Tools
Shapes & Spatial Awareness

Observing Star Patterns

- Look at the constellations below.
- Discuss the shapes you and your little one obeserve.
- Turn the page upside down to view from another perspective.





EARLY MATH SKILL

Spatial Reasoning

The ability to see how things look when rotated or from different angles fosters future success in engineering, science, technology and math skills.

Night Sky

National Geographic Reader

Author: Stephanie Drimmer

Noticing the Night Sky

Let's See What We Can Find Tonight!

Stargazing Tips

- Choose a clear night.
- Find a spot away from street or building lights.
- Grab a blanket and get comfortable.

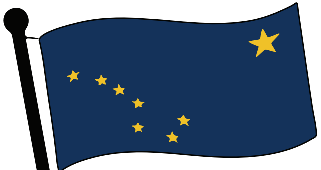
BRIDGE - Investigate

Honoring Connections

Constellations, or groups of star patterns, have helped to guide native peoples, fishermen, travelers, and even animals since time immemorial. Because they are a constant in the sky, star navigation helps us position ourselves on earth. Ask a local hunter or fisherwoman if they have ever used the night sky to lead their way home.

- Recall a time or memory you had while looking at the night sky.
- Include details such as the shapes you noticed or who you were with at the time.
- Reference the importance of remembering traditional ways of the past.

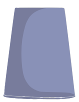
Make A Star Pattern



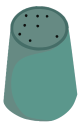
Big Dipper

Count the stars that make up the Big Dipper!

1. Take an empty paper cup & turn upside down.

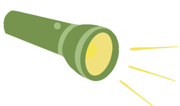


2. On the bottom, draw dots for stars to make your own pattern.

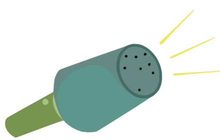


3. Use a tack to poke the dots to make holes.

4. Grab a flashlight or phone light to shine on the inside of the cup.



5. Turn out the lights to see your creation!



Sing Along Time

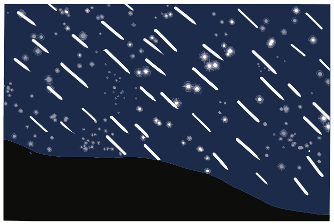
Twinkle Twinkle Little Star

The brightest star is the north star, or The Polaris!

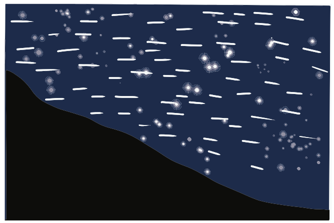
Twinkle twinkle little star
(Wiggle fingers like a twinkling star)
How I wonder what you are
(Raise shoulders and hold hands out like wondering)
Up above the world so high
(Raise hands high in the sky and open and close them again)
Like a diamond in the sky
(Form a diamond shape with your fingers)
Twinkle twinkle little star
(Wiggle fingers like a twinkling star)
How I wonder what you are
(Raise shoulders and hold hands out like wondering)

Shifting Stars

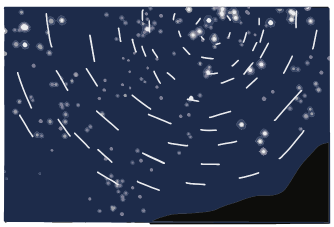
Depending on where you are on the globe, the stars move in different directions:



Diagonally



Horizontally

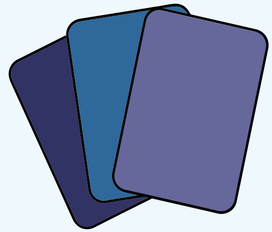


Circular

Take a look to see how the stars move around your community!

Scavenger Hunt

Use the card deck to search for objects!



Guiding Questions:

- What did you notice?
- Were you able to locate all of them?
- Did you see a shooting star?
- What did the big dipper look like this time?

Being Afraid of the Dark

Exploring activities in the dark and night can help to alleviate this fear and create a sense of comfort.

Try these activities with your child:

Sometimes darkness of the night can be a fun time to explore!

BRIDGE - Design

Z is for Zephyr

I like making wind chimes. You should too! Wind chimes are really musical and fun to listen to when the wind is blowing. My wind chime is still hanging in my tree and it’s summer time!

See you next time! - Sawyer

STEAM

EXPLORE 1

Explore outdoors with your 5 senses, as you hunt for rocks.

DESIGN 2

Design a wind chime and learn about balance.

CREATE 3

Assemble your collected materials to make the wind chime.

OBSERVE 4

Observe your project and listen to the pitch it makes.

IMPROVE 5

Using math, discuss how you could change your project to improve it.

1 EXPLORE

Science

Scientists collect information through observation and manipulation.

Technology

Natural vs. Human-Made Tool

What is technology?

Technology is using our knowledge to invent a tool.

This definition expands young children's understanding to include more than just digital technology.

YOU CAN

Provide child with a variety of natural materials and human-made materials to learn their characteristics.

PRESCHOOLERS MAY

Identify some materials as natural or as human-made and explain how he/she knows the difference.

GOAL 45: Children use technology appropriately

2 DESIGN

Collect Materials


Collected Rocks


Clear Nail Polish


Waxed Thread or Floss


Mason Jar Ring

Optional


Colored Yarn or Thread


Glass Float

Ask your child whether each material is technology?
Have your child point to technology or not.

Guiding Questions:
Is it found in nature or invented by humans?
What is it made of? (discuss characteristics)
How is this a tool helpful to humans? (all except rocks)

How do you think we can design this?

What should we do first, next, last?

3 CREATE

Engineering

Engineers create things that help people!

1 Rock Collecting

Go on a rock hunt with your child.

Paint them with nail polish to make them shiny.

2 Hanging Thread

Using waxed thread, tie strands around the mason jar lid.

Discuss the importance of balance. Space strings evenly so that the rocks don't hang on one side.

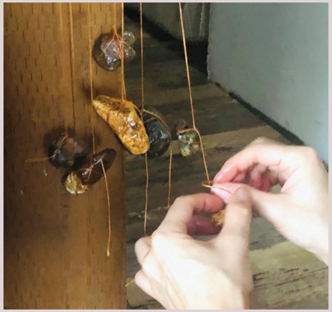
While you tie knots, have your child assist with cutting and cleaning up strings.

3 Adding Color

To add color to the rim, use an array of embroidery thread.

4 Tie On the Rocks

Choose the favorite rocks and help each other tie the thread around the rocks.



Enjoy the Sounds

Hang outside and wait for the next zephyr.

Art

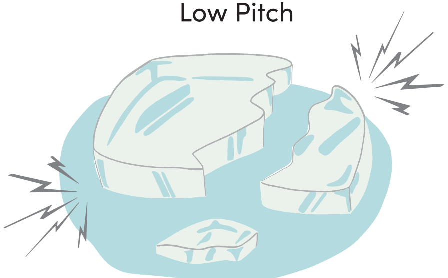
4 OBSERVE

Art Concepts Focus: PITCH

In creating a wind chime, discuss the musical element of pitch.

High Pitch

Low Pitch



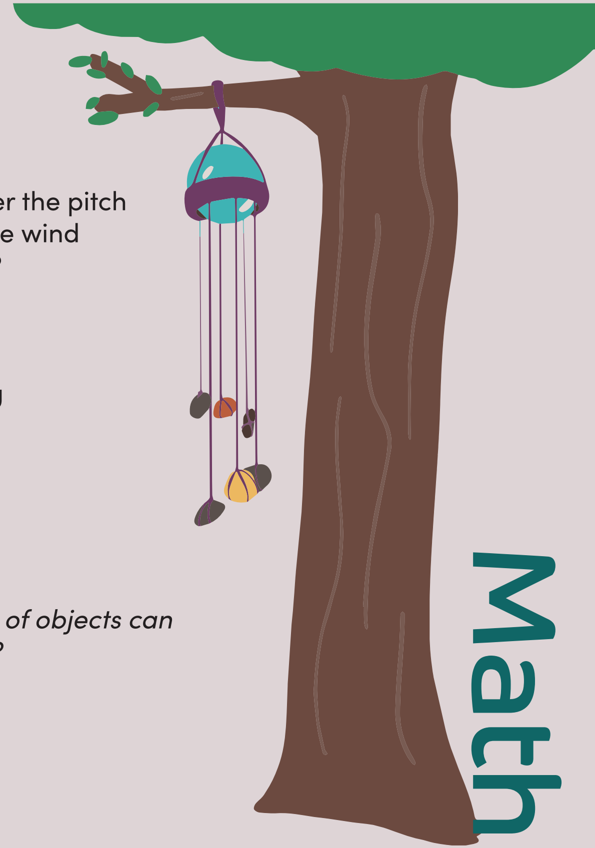
TECHNOLOGY VS. NATURE

In this design project, you are creating a human-made object that interacts with nature!

The element of "pitch" is the frequency of an object.

5 IMPROVE

How can you improve your design using math?



How can you alter the pitch or sounds that the wind chime produces?

- Size of rocks
- Length of string

What other types of objects can you find to hang?

Math

BRIDGE - Grow

When I Grow Up...

Astronomers help us understand space.

What is important to Astronomers?

Job Safety
Telescopes can be very fragile and easily damaged. Keeping materials safe is important.

Teamwork
Astronomers work in teams to gather data about stars. They have to listen to each other's ideas just as much as sharing their own.

Practice
They spent a long time learning all the names and positions of the stars.

I can be an Astronomer!

Astronomers are scientists that study the universe, the objects within, and how it works.

As I Grow...

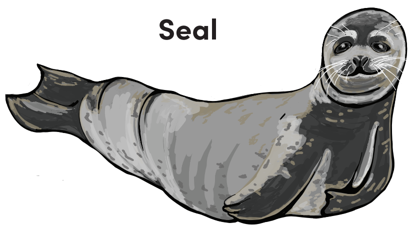
I can be prepared.

BRIDGE - Explore

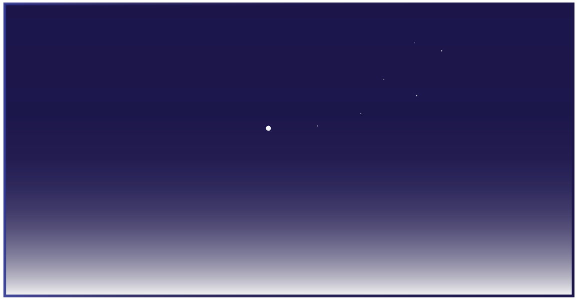
Explore the CHILD: Alaska Native Languages App

Can you find these words?

Seal



Morning Star



What to Explore Next?

We hope you have enjoyed this theme! Here are some additional ways you can continue to explore our family kits.

Share the Activities You Did Together

'Explore More' Section of Book

Check Out Another BRIDGE Family Kit

References

Knight, A. J. & Prabhat, S. (2021). Usha and the big dipper. Charlesbridge.

Drimmer, S. (2017). National geographic reader: Night sky. National Geographic Kids.

Alaska Department of Education & Early Development. (2019). Alaska early learning guidelines. Retrieved January 30, 2022, from https://www.alaskaelg.org/

Development in Math and Early Research. (2017). Spatial reasoning: Why math talk is about more than numbers. https://dreme.stanford.edu/news/spatial-reasoning-why-math-talk-about-more-numbers

University of Fairbanks. (2016). Cultural connections: Northern Lights. https://culturalconnections.gi.alaska.edu/

Mackenzie, G. (2022) Tiny nest studio. https://tinyneststudio.com/

child

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