

Grade 1: Module 2: Labs

3 – Extend Stage

Labs: Extend Stage

Days 11–18

Each of the Labs unfolds across an entire module and takes place in four stages: Launch, Practice, Extend, and Choice and Challenge.

At this point in the Labs, students have had several days in each Lab to become acquainted with the purpose, tasks, and materials of each Lab, as well as Labs routines.

3. The Extend stage serves two purposes:

- To push students' thinking and skills further by adding new materials and introducing greater complexity to each task (e.g., in the Create Lab, students learn how to blend colors together to create the color of the sky at different times of the day).
- To learn and practice habits of character, such as collaboration and perseverance.

What stays the same from previous stage(s):

- During the Extend stage, the guiding questions remain the same as in previous stages.
- During the Extend stage, students continue to visit two Labs per day.

What is different from previous stage(s):

- The Extend stage begins with two “transition days.” These days—described briefly at the beginning of each In the Lab section—give teachers time with their whole class to introduce new materials, introduce new layers of complexity to the task, model various Lab skills and behaviors, and clear up any confusion before students return to a more independent Lab experience.
- During the Extend stage, the learning targets change to reflect students' work in the Labs.
- During the Extend stage, students are given a greater variety of materials.

The chart below shows the guiding question, learning target(s), and ongoing assessment for each Lab during this specific stage.

(Note: The guiding question for a given Lab remains the same for the entire module. By contrast, the learning target(s) become more refined and precise from stage to stage.)



Extend Stage: At-a-Glance

Guiding Question

Create Lab

How can I contribute to an “Our Sky” class picture book?

Explore Lab

How can I explore light and shadows?

Imagine Lab

How can I use Imagine Lab materials and my imagination to bring our sky stories to life?

Research Lab

How can I use research skills to learn and wonder about our sky?

Learning Target

Create Lab

I can paint a watercolor of the sky at a specific time of day.

I can include accurate details, including color and position of the sun, in my sky watercolor.

Explore Lab

I can create shadow pictures using my hands and other materials.

Imagine Lab

I can create stories about our sky.

I can act out original stories about the sky.

Research Lab

I can learn new information about the sky using my research materials.

I can ask questions about the sky based on my research materials.

Ongoing Assessment

Create Lab

Create Lab Checklist (**SL.1.1a, c; SL.1.4; L.1.1b, c, d, f, i, j**)

Explore Lab

Explore Lab Checklist (**SL.1.1a, c; SL.1.4; L.1.1b, c, d, f, i, j**)

Imagine Lab

Imagine Lab Checklist (**RL.1.2; RL.1.3; RL.1. 9; SL.1.1a, c; SL.1.4; L.1.1b, c, d, f, i, j**)

Research Lab

Research Lab Checklist (**W.1.8; SL.1.1a, c; SL.1.2; SL.1.4; L.1.1b, c, d, f, i, j; L.1.2a, b; L.1.4a**)

Labs are one hour long in all four stages. During the Launch stage, this hour is divided as follows:

Practice Stage: Daily Schedule

Lab Component	Time
Storytime	10 minutes
Setting Lab Goals	5 minutes
In the Lab	40 minutes
Reflecting on Learning	5 minutes

Extend Stage: Storytime

Teaching Notes

Purpose:

- Review the Storytime Teaching Notes in the Launch stage document as needed.
- During the Launch and Practice stages, Storytime should be dedicated to reading, rereading, or retelling narratives about the sky, especially those introduced during the module lessons, but can also include others of the teacher's choice. This will support student work in the Imagine Lab, where they are expected to use materials to collaboratively reenact familiar, content-connected stories.

In advance:

- Choose a text from your classroom library or the K–5 Recommended Text List (stand-alone document).
- Consider creating a focus question for Storytime (see example in the Experience section below).
- Review the Labs song.
- Post: Focus question (optional).

Materials

- ☒ Labs song (one to display)
- ☒ Text for Storytime (chosen by teacher; see Teaching Notes)

Experience

- Gather students whole group by singing the (start of the) **Labs song**.
- Introduce the **text for Storytime**.
- Consider giving students a focus question with which you would like them to listen, especially as it supports their work in the Labs. (Example: “While I read this story aloud, think about the ways in which the characters collaborate or work together.”)
- Read aloud the text for Storytime slowly, fluently, and without interruption.

Extend Stage: Setting Lab Goals

Teaching Notes

Purpose:

- Students continue to use this time to reinforce executive functioning skills by focusing their attention, making a plan for their time, exhibiting self-regulation, and following instructions. All students, but especially primary learners, need to learn and practice the behaviors associated with executive functioning.

- Students may need additional support remembering the second Lab they will be visiting on any given day. Consider posting the Labs schedule in a clearly visible location and pause to review it before students transition to their second Lab.

Logistics:

- During the Extend stage, Lab groups visit two Labs for 20 minutes each.
- On the “Transitioning to Extend stage” day, students’ goals will be based on their knowledge of the Labs thus far. In subsequent days, students’ goals can be more finely tuned to the learning targets, materials, and habits of character unique to the Extend stage.

In advance:

- Post: Guiding question for each Lab, learning target(s) for each Lab, and Labs schedule.

Materials

- ☑ Learning target(s) (one to display for each Lab; see Practice Stage: At-a-Glance for the specific target(s) for each Lab)
- ☑ Labs schedule (one to display)
- ☑ Labs notebook (one per student)
- ☑ Pencils (one per student)

Experience

- Students continue to follow a similar routine for setting Lab goals as they have in the Launch and Practice stages. They will:
 - Review the **learning target(s)** for each Lab.
 - Review the **Labs schedule** with the teacher.
 - Turn and talk with an elbow partner to identify the first Lab they will visit today.
 - Make a goal using a sentence frame. (Example: “Today, I will be visiting the ____ Lab first. When I’m there, I’m going to ____.”)
 - Record their goal in their **Labs notebook** using a **pencil**.
 - Repeat this process to identify the second Lab they will visit today. Tell students that today they will visit two Labs.

Extend Stage: In the Labs

- Refer to the In the Labs section on the following pages for detailed plans on each specific Lab.

Extend Stage: Reflecting on Learning

5 MINUTES

Teaching Notes

Purpose:

- Recall that the reflection portion of Labs serves as a bookend to Setting Lab Goals. This time should invite students to recall how they spent their time in the Labs and to reflect on their experience in the Labs.
- Continue to support students with predictable structures of reflection (such as repeated protocols), as well as familiar sentence frames.

In advance:

- Post: Sentence frames or picture clues for any reflection questions you will use regularly (optional).

Materials

- ✓ Labs song (one to display)
- ✓ Learning target(s) (one to display for each Lab; see Practice Stage: At-a-Glance for the specific target(s) for each Lab)
- ✓ Labs notebook (one per student)
- ✓ Pencils (one per student)

Experience

- Gather students back together whole group by singing the (conclusion of the) **Labs song**.
- Remind students of the **learning target(s)** for their Labs and invite them to think about the goals they made at the beginning of Lab time.
- Invite students to open their Labs notebooks to the Goal Setting and Reflecting on Learning section.
- Invite them to review the goals they recorded at the beginning of Lab time.
- Ask a reflection question and direct students to the sentence starters at top of their Labs notebook, giving them think time before they respond. This promotes more considerate responses and supports English language learners.
- Invite students to use a silent signal to indicate when they are ready to share.
- Invite students to share with a partner, a small group, or the whole class, as time permits.
- Direct students to use a **pencil** to record one reflection from their Labs experience in their Labs notebook.
- Continue to reinforce specificity in students' responses (e.g., referring back to their goal, referring back to the learning target(s), giving concrete examples, etc.).
- Invite students to give a neighbor a high-five and take off their imaginary lab coat and goggles to indicate the end of the Lab experience.



Extend Stage: In the Create Lab

Guiding Question

- How can I contribute to an “Our Sky” class picture book?

Learning Target

I can paint a watercolor of the sky at a specific time of day.

I can include accurate details, including color and position of the sun, in my sky watercolor.

Teaching Notes

How this stage of this Lab builds on previous stage(s):

- Students continue to blend colors in an attempt to create colors of the sky during various times of day, with the sun at seemingly varying positions in the sky.

What is new about this stage of this Lab:

- Students apply their knowledge of the sky and their skill of blending to create watercolor paintings of the sky at various times of day.
- Students’ paintings go beyond matching and blending a single color; they include the sun at the position matching the time of the day they are painting, incorporate multiple sky colors, and use features such as a horizon line and landscape details.

Logistics:

- On the first day, students work as a whole class to make the transition to the Extend stage of the Labs.
- During the remaining days of the Extend stage, students divide into Lab groups and spend 20 minutes each in two Labs.

In advance:

- Prepare:
 - Create Lab by placing photographs of the sky, watercolor paper, pencils, watercolor paints, paintbrushes, and a cup of water.
 - A model watercolor painting that depicts a specific time of day and includes the sun in an accurate position for a specific time of day, multiple sky colors based on the photograph, a horizon line, and landscape details.
- Choose a photograph of the sky to serve as a model. Students will study this model to discuss the colors and details that would need to be included in a painting of this photograph.
- Consider whether the system previously established for storing student work is working and change as necessary.

Materials

- ✓ Photographs of the sky (one for teacher modeling and several per workstation)
- ✓ Model of a sky painting (one for teacher modeling; see Teaching Notes)
- ✓ Watercolor paper (blank; one piece for teacher modeling and one piece per student)
- ✓ Pencils (one for teacher modeling and one per student)
- ✓ Watercolor paints (one set per student)
- ✓ Paintbrushes (one for teacher modeling and one per student or a cup of paintbrushes to share)
- ✓ Cup of water (one per student)
- ✓ Palettes of sky colors (from Practice stage; one per student)

Experience

Transitioning to the Extend Stage (Whole Class):

- Gather students whole group and give them specific, positive feedback regarding their blending of colors. (Example: “Your color palettes show so many beautiful colors of the sky! The colors look so accurate. This is a result of perseverance and craftsmanship.”)
- Tell students that they will continue to work with blending to create accurate and beautiful sky colors. But now, instead of just creating colors, they will paint beautiful watercolor paintings of the sky and landscape!
- Tell students they will begin by choosing a **photograph of the sky** that they find especially beautiful or interesting.
- Display for students the photograph you chose as a model for your painting.
- Using a total participation technique, invite responses from the group:
 - * ***“If I were to create a painting based on this photograph, what details would I need to include?” (Responses will vary, but may include: You would need to blend the different colors of the sky. You would need to paint the sun. You would need to paint the buildings.)***
 - * ***“If I were to create a painting based on this photograph, where would I place the sun?” (Responses will vary, based on the photograph chosen.)***
- Tell students that placing the sun in an accurate position is a very important part of these paintings.
- Remind them that the sun’s *apparent* position (where the sun *seems* to be) in the sky is so important because, as they have learned, the time of day and the sun’s position are factors that determine the sky’s colors.
- Display the **model of a sky painting**.
- Using a total participation technique, invite responses from the group:
 - * ***“What steps do you think the artist took to create this painting?” (Responses will vary, but may include: He or she studied the photograph of the sky, chose the colors needed to create it, decided on the details to include, and drew the picture first.)***

- Reaffirm for students that this painting took several steps to create, including:
 - Studying the photograph of the sky very closely.
 - Noticing the colors of the sky that you would need to blend.
 - Noticing the sun’s position and the details of the landscape that you would need to include.
 - Drawing a sketch of the picture before painting.
 - Painting the picture.
- Tell students that an important tool of their “Artist’s Toolbelt” when creating a drawing like this is the *horizon line*.
- Pretend to hold the idea of horizon line in your hand, making the motion of a horizon line with your finger, inviting students to do the same with their hands.
- Dramatically add the idea of horizon line to your “Artist’s Toolbelt,” inviting students to do the same.
- Refer to the photograph of the sky being used as a model. Tell students the horizon line is the line where the sky appears to meet the earth.
- Show students where to find the horizon line on the photograph.
- Use your fingers to approximate how far above the bottom of the photograph the horizon line begins. (Say, for example, “The horizon line on this photograph begins about three fingers above the bottom of the page.”)
- Dramatically trace your finger along the horizon line.
- Using a total participation technique, invite responses from the group:
 - * *“What kind of line is the horizon line? Straight? Curvy? Zigzag?” (Responses will vary, based on the photograph chosen, but may include: It’s a straight line. It’s a curvy line because there are hills.)*
- Invite students to use their index finger to draw the horizon line in the air.
- Display the **watercolor paper**.
- Use your fingers to find the approximate place the horizon line should start (three fingers above the bottom of the page, for example).
- Using a **pencil**, lightly draw the horizon line.
- Say, “Now I want to include the sun in my picture, but I need to make sure it is in the right place. The horizon line is a great way to figure out where to draw the sun. Maybe it is very close to the horizon line, on the left side of the page. Or maybe it is far above the horizon line, near the center and top of my page.”
- Using a total participation technique, invite responses from the group:
 - * *“Because of the time of day, where does the sun appear in my photograph?” (Responses will vary, but may include: It is almost sunset, so the sun is close the horizon line, near the right side of the page.)*
- Using pencil, lightly sketch the sun in its proper place.
- Using a total participation technique, invite responses from the group:
 - * *“What other details of the photograph should I include in my picture?” (Responses will vary, based on the photograph chosen, but may include: You need to include the buildings. You need to include the trees.)*

- Using pencil, lightly sketch additional details, placing them on the horizon line.
- Tell students that only once their pencil draft is complete should they begin painting.
- Tell students that over the next several days, they may complete several different sky paintings.
- Invite students to begin working.
- Circulate and support students as they work.
- If students feel they are finished with one drawing, they may put it away in the designated storage space and begin a new one.
- At the conclusion of In the Lab time, signal students to clean up their Lab space.
- As Lab groups are ready, transition them back to the whole group area for Reflecting on Learning.



Extend Stage: In the Explore Lab

Guiding Question

- How can I explore light and shadow?

Learning Target

I can create shadow pictures using my hands and other materials.

Teaching Notes

How this stage of this Lab builds on previous stage(s):

- Students continue to create shadows using flashlights and various other tools.

What is new about this stage of this Lab:

- During the Extend stage of the Explore Lab, students build upon their knowledge of light and shadow to try to create more specific “shadow pictures.” Instead of creating “long shadows” or “short shadows,” students use their hands and other objects to try to create more detailed representations of objects, animals, and places.

Habits of character:

- Some students may need additional support with perseverance as they struggle with various components of the objects they are building. Invite students to formulate a plan before they begin or to collaborate with a student partner in problem solving; this will help them persevere through these moments.

Logistics:

- On the first day, the teacher will introduce the task, the materials, and the expectations to help students make the transition to the Extend stage of the Labs.
- During the remaining days of the Extend stage, students divide into Lab groups and spend 20 minutes each in two Labs.

In advance:

- Prepare the Explore Lab by:
 - Placing all materials to explore light and shadow to create shadow pictures.
 - Deciding on a system for casting shadows (e.g., a blank wall space and table that can be shared, or a blank chart paper with a desk set in front of it for each partnership). Consider that students will need to use their hands as well as set up small objects or scenes when creating shadow pictures.
 - Creating supportive partnerships within Lab groups.
- Consider whether to choose a Shadow Picture task card in advance to ensure that it can be easily modeled.
- Monitor the various materials students are choosing to use in their work. Some materials may be more popular than others, and will need to be replenished.

Materials

- ☑ Flashlights (one per pair)
- ☑ 3-D blocks (several of various shapes and sizes)
- ☑ Paper (blank; various types, colors, and levels of translucence; several pieces in the Explore Lab)
- ☑ Scissors (one pair per student)

Additional materials:

- ☑ Shadow Picture task cards (one container for teacher modeling and one container per pair)
- ☑ Shadow Puppet image cards (one to model; several in the Explore Lab; see supporting materials)

Experience**Transitioning to the Extend Stage (Whole Class):**

- Explain that the biggest difference between the Practice stage and Extend stage for the Explore Lab is that students are no longer exploring light and shadow to create “short shadows” and “long shadows” or “light shadows” and “dark shadows.”
- Tell students they will now use **flashlights**, **3-D blocks**, their bodies, a variety of **papers**, and **scissors** to create shadow pictures.
- Using a total participation technique, invite responses from the group:
 - * *“How many of you have created ‘shadow puppets?’” (Take a quick survey of responses to determine background knowledge of this practice.)*
 - * *“What kind of shadow puppets do you know how to make?” (a dog, a bird, etc.)*
- Consider inviting a couple of volunteers to show shadow puppets they know.
- Tell students that shadow puppets are one type of shadow picture.
- Define *shadow pictures* (representation of an animal, object, or place created by using light and shadow).
- Display a container of **Shadow Picture task cards**.

- Tell students that they will use these task cards as a way to get started and be inspired, but they may also go beyond these task cards if they have ideas.
- Pull one task card from the container and display it.
- Read the task card aloud, or invite a student to read it aloud, to the whole group. (Example: “Use a flashlight or your hand to create a shadow picture of a dog.”)
- Invite students to turn and talk with an elbow partner:
 - * *“Using this task card as a guide, how might you create a shadow picture of a dog?” (Responses will vary.)*
- Give students time to explore with a partner.
- Listen in to various conversations, identifying one or two partnerships to share their ideas with the whole group.
- Turn off the classroom lights and invite the selected partnerships to experiment in front of the whole group, with one student holding the flashlight while the other student uses his or her hands to make the shadow pictures.
- Point out how it is possible to make the shadow picture more focused, larger, or smaller by changing the distance between your body (or other materials being used) and the blank surface upon which the shadow is cast, or by changing the position of the flashlight.
- Invite feedback from the whole group on how the modeling partnership may make their shadow picture better or more detailed.
- Display a **Shadow Puppet image card**.
- Tell students that these images come from very old books, over 100 years old! People have been playing with shadow puppets for a very long time.
- Tell students that these Shadow Puppet image cards are meant to help them make their own shadow pictures.
- Explain that some shadow pictures may require students to just use their bodies. Other shadow pictures may require them to use scissors to cut out shapes or objects to complete them.
- Show students the Explore Lab space. Point out the space upon which they can cast their shadows. Point out that this is a shared space, and, therefore, they will need to be respectful of other students using the Explore Lab.
- Invite students to begin exploring!
- Circulate and support students as they work in pairs. Reinforce the habit of respect as needed.
- At the conclusion of In the Lab time, signal students to clean up their Lab space.
- As Lab groups are ready, transition them back to the whole group area for Reflecting on Learning.
- As students arrive to the whole group, invite them to congratulate or compliment as many of their peers as they can for 15–30 seconds before being seated. Model an example as necessary: “Great job in Labs today!” “Way to go!” “I’m proud of you!”



Extend Stage: In the Imagine Lab

Guiding Question

- How can I use Imagine Lab materials and my imagination to bring our sky stories to life?

Learning Target

I can create stories about our sky.

I can act out original stories about the sky.

Teaching Notes

How this stage of this Lab builds on previous stage(s):

- Students continue to act out stories about the sky.
- Students have the option to continue retelling or reenacting familiar sky-related stories from the module lessons.

What is new about this stage:

- During the Extend stage, students are invited, if so desired, to create their own sky-related stories.

Logistics:

- On the first day, the teacher will introduce the challenge, the materials, and the expectations to help students make the transition to the Extend stage of the Labs.
- During the remaining days of the Extend stage, students will work with their Lab groups to reenact familiar stories or create and reenact original stories about the sky.

In advance:

- Create a sun prop and a moon prop using paper, paints, or fabric. Students will use these props as they create and act out their own stories.
- Prepare the Imagine Lab space with a variety of imaginative play materials (other possible materials might include modeling clay or felt or magnet boards).

Materials

- ✓ Building blocks (one set of wood or linking blocks)
- ✓ White board (one large to share or several small) and dry erase markers (one per student)
- ✓ Hand or finger puppets (several to share)
- ✓ Dress-up materials (several to share)

Additional materials:

- ✓ Sun prop (one to share)
- ✓ Moon prop (one to share)

Experience

Transitioning to the Extend Stage (Whole Class):

- Welcome students to the Imagine Lab!
- Give students specific, positive feedback about their work in the Imagine Lab thus far. (Example: “I love how you have been working together to include all the different parts of a story as you reenact them: the characters, the important events, and even the setting!”)
- Using a total participation technique, invite responses from the group:
 - * *“What has been your favorite book to reenact in the Imagine Lab? Why?” (Responses will vary.)*
 - * *“What materials of the Imagine Lab have been your favorite when reenacting stories?” (Responses will vary, but may include: building blocks, white boards, hand or finger puppets, dress-up materials.)*
- Tell students that they will still have the opportunity to act out familiar and beloved stories about the sky, if they wish.
- Tell students that they now also have the opportunity to use their imaginations in even bigger and more exciting ways!
- In the Imagine Lab, they now can choose to collaboratively create their own stories based on the sun and the moon.
- Display the **sun prop** and the **moon prop**.
- Tell students that they can use these new materials, in addition to the materials they have already been using, to create and act out their own stories that involve the sun and/or the moon.
- Explain that there are two types of possible stories students might want to create and act out:
 - Stories that show what different characters are doing and experiencing as the sun and moon “move” through the sky
 - Stories in which the sun and/or the moon are the characters
- Invite students to silently consider:
 - * *“Who is one person in your life about whom you would like to create a story?” (mom, dad, cousin, teacher, friend, etc.)*
- Tell students that today the class will work together to create a story about their teacher because that is someone they all know.
- Choose a student to play the part of the sun.
- Tell students that, in this story, the sun will have a big responsibility. It is going to help mark the passage of time throughout the story. As the sun appears to change position, the story and the character’s actions will need to match.
- Tell students that they will be playing the role of the “narrator.” It will be their job to tell what is happening in the story.
- Invite the student playing the sun to hold the sun prop near to the ground, and then slowly move to just above the horizon.
- Dramatically put your finger to your head, as it is time to imagine. Invite students to do the same.

- Using a total participation technique, invite responses from the group:
 - * *“When the sun is just peeking up above the horizon, what time of day is it?” (Responses will vary, but may include: It is sunrise. It is early in the morning.)*
 - * *“What do you think the teacher is doing as the sun appears in this position?” (Responses will vary, but may include: She is sleeping. She is waking up.)*
- Invite a student to come to the “stage” and play the part of the teacher. This student should act out whatever it is the class decides the teacher is doing at this time of day, as they are playing the part of the narrator.
- This process should repeat as the sun moves to various positions in the sky, with various volunteers playing the teacher.
 - What is the teacher doing when the sun is high above the sky around noon?
 - What is the teacher doing in the evening as the sun is lower in the sky?
 - What is the teacher doing when the moon appears?
- Other students can play other parts as needed (the teacher’s students, the teacher’s friends, etc.).
- When the story ends, invite students to give a big, appreciative round of applause for all the brave volunteers and to pat themselves on the back for their hard work as story creators and storytellers.
- Remind students:
 - This is one kind of story they can create and act out for a variety of characters. Another option is to pretend to be the sun or pretend to be the moon and act out the kinds of things they think the sun and moon might say and do if they were able to think and talk.
 - They have many options for materials in creating stories. They do not have to act them out with their bodies. They can use blocks, white boards, puppets, etc.
- Invite students to get to work imagining and creating stories!
- Circulate and support students, specifically in the area of generating story ideas and being creative in how they might act out stories.
- At the conclusion of In the Lab time, signal students to clean up their Lab space.
- As Lab groups are ready, transition them back to the whole group area for Reflecting on Learning.



Extend Stage: In the Research Lab

Guiding Question

- How can I use research skills to learn and wonder about our sky?

Learning Target

I can learn new information about the sky using my research materials.

I can ask questions about the sky based on my research materials.

Teaching Notes

How this stage of this Lab builds on previous stage(s):

- Students continue to use a variety of research materials to discover new information and answer their questions about the sky.

What is new about this stage of this Lab:

- Students focus their line of inquiry and research into a specific area of expertise: the sun, the moon, the stars, or the planets.
- Facts that students learn about their specific area of expertise will be used in their final product during the Choice and Challenge stage.

Logistics:

- On the first day of the Extend stage, students decide on a specific area of research about which they would like to become an expert.
- During the remaining days of the Extend stage, students record interesting facts and research-based questions about their topic.

In advance:

- Gather baskets from the Practice stage, each with a set of research materials on a different sky-related topic:
 - Basket 1: The planets
 - Basket 2: The sun
 - Basket 3: The moon
 - Basket 4: The stars
- Label each basket and each material (with words or pictures) to assist students in the proper storage and organization of research materials.

Materials

- ✓ Labs notebook (one for teacher modeling and one per student)
- ✓ Pencils (one per student)
- ✓ Baskets of research materials (from the Practice stage; one basket per sky-related topic)

Experience

Transitioning to the Extend Stage (Whole Class):

- Give students specific, positive feedback for behaviors you have noticed in the Research Lab during previous stages. (Example: “I have seen students recording interesting new facts in their Labs notebooks. I have seen students recording questions based on things they have seen or read in the research materials. I have seen students cooperating with one another by sharing materials and teaching each other about their topic.”)
- Remind students that, until now, they have been freely exploring among four different sky-related topics: the sun, the moon, the planets, and the stars. They have found many facts, and they have asked many questions.

- Invite students to turn and talk with an elbow partner:
 - * *“After reading about these different topics, which do you find most interesting: the sun, the moon, the planets, or the stars? Why?” (Responses will vary.)*
- Listen in to conversations, encouraging students to support their opinion with specific evidence about the topic.
- Invite a few pre-selected students to share their thinking whole group to model an evidence-based opinion.
- Tell students that during the Extend stage, they will have the chance to become an expert on one of the four sky-related topics. They should choose the topic for which they have the most interest and about which they continue to have the most questions.
- Display a copy of the **Labs notebook** and turn to the next blank research page. Invite students to do the same.
- Invite students to use a **pencil** to circle, at the top of the next blank research page, which sky-related topic they want to learn more about.
- Tell students that they should explore the **basket of research materials** only for that specific topic, continuing to record new, interesting facts and important questions related to the research materials in the Labs notebooks.
- Invite students to begin researching.
- Circulate to support students, specifically in the area of recording new facts and questions.
- At the conclusion of In the Lab time, signal students to clean up their Lab space.
- As Lab groups are ready, transition them back to the whole group area for Reflecting on Learning.