

**Kindergarten:** Module 4: Labs

## 3 – Extend Stage

### Labs: Extend Stage

#### Days 11–22

Labs continue to take place in four stages, and the purposes of each remain the same (see Module 3 Extend stage).

#### 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.



### Extend Stage: At-a-Glance

#### Module 4: Extend Stage

#### Guiding Question

##### Create Lab

How can I create a three-dimensional (3-D) representation of a tree?

##### Imagine Lab

How can I create an imaginative world of play within the trees of my classroom?

##### Engineer Lab

How can I use trees to design a forest play space?

##### Research Lab

How can I discover more about the trees near me?

Learning Target(s)

**Create Lab**

I can use a variety of papers to create a tree trunk, branches, and leaves.

**Imagine Lab**

I can create a world of play within our imaginary forest.

**Engineer Lab**

I can create a final version of my own forest play space.

**Research Lab**

I can create a survey to learn more about the trees near me.

Ongoing Assessment

**Create Lab**

Create Lab Checklist (SL.K.3, SL.K.6)

**Imagine Lab**

Imagine Lab Checklist (SL.K.1, SL.K.1a, SL.K.1b)

**Engineer Lab**

Engineer Lab Checklist (SL.K.1, SL.K.1a, SL.K.1b)

**Research Lab**

Research Lab Checklist (RI.K.1, SL.K.1, SL.K.1a, SL.K.1b, W.K.7, W.K.8)

**Extend Stage: Storytime**

10 MINUTES

**Teaching Notes**

**Purpose:**

- Review the Storytime Teaching Notes in the Launch and Practice stage documents as needed.

**In advance:**

- Choose a text from your classroom library or Grade K: Labs Recommended Storytime and Research Book List (in the Labs Teacher Guide)
- Consider creating a focus question for Storytime (see example in the Experience section below).
- Post: Focus question (optional).

### Materials

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

### Experience

- Follow the routine established in Modules 1–3 to engage students with the **Labs song** and **text for Storytime**.

## Extend Stage: Setting Lab Goals

5 MINUTES

### Teaching Notes

#### Purpose:

- Recall that Setting Lab Goals is a time for students to activate and reinforce executive functioning skills by focusing their attention, making a plan for their time, exhibiting self-regulation, and following instructions.

#### Logistics:

- During the Extend stage, lab groups visit two labs for 20 minutes each.
- On the “Transitioning to the 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)

### Experience

- Tell students that today they will visit two labs.
- Review the **learning target(s)** and **Labs schedule** with students.
- Invite students to follow the routine established in Modules 1–3 to guide them through setting goals:
  - Turn and Talk:

*“Which lab will you visit first? What will your goal be when you are there?” (Responses will vary.)*

— Turn and Talk:

*“Which lab will you visit second? What will your goal be when you are there?”  
(Responses will vary.)*

- Tell students that their most important goals for the day are to think about the learning target, show respect for materials, show respect for other students in their group, and have fun.
- Invite students to put on their imaginary lab coats and goggles to show they are ready for learning and fun!

### Extend Stage: In the Labs

- Refer to the In the Labs section below for detailed plans on each specific lab.

### Extend Stage: Reflecting on Learning

#### Teaching Notes

##### Purpose:

- Similar to Modules 1–3, the cycle of goal-setting and reflecting is meant to increase student ownership and intentionality. Continue to support students with predictable structures of reflection and 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)

#### Experience

- Gather students whole group by singing the (conclusion of) the **Labs song**.
- Remind students of the **learning target(s)** for the specific lab the class focused on today and guide them through their reflection:
  - Ask a reflective question.
  - 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.
- Continue to reinforce specificity in students’ responses (e.g., referring back to their goal, referring back to the learning target(s), giving concrete examples).



### Extend Stage: In the Create Lab

#### Guiding Question

- How can I create a three-dimensional (3-D) representation of a tree?

#### Learning Target

- I can use a variety of papers to create a tree trunk, branches, and leaves.

#### Teaching Notes

##### How this stage of this lab builds on previous stage(s):

- Students continue to mold 3-D representations of trees, but in this stage, they use a variety of paper products.

##### What is new about this stage of this lab:

- Students experiment in using a variety of paper products, both recycled and new, to mold 3-D representations of trees, including the tree parts: trunk, branches, and leaves.
- Students will have to use more liquid glue and scissors to help create the 3-D trees.

##### Logistics:

- Similar to Module 3, on the first day, students work as a whole class to transition to the Extend stage. During the remaining days, they spend 20 minutes each in two labs with their lab groups.

##### In advance:

- Prepare:
  - 3-D Paper Tree Model to use during the transition into the Extend stage (see supporting materials for an example).
  - Four workstations by placing paper products, scissors, and liquid glue at each workstation.
- Based on classroom setup and available technology, determine the best way to display the 3-D Paper Tree Model and photograph.
- Consider:
  - Showing pictures of 3-D paper art from various artists or students as alternative models.
  - Designating a space in the classroom for each student's work in progress and leftover materials.
  - Providing some precut leaves of different shapes and sizes for students to use.

#### Materials

##### Continued materials:

- ☒ Tree images (one set per workstation)
- ☒ Precut leaves (one set per workstation)
- ☒ Construction paper (shades of green; one pile per workstation)

- ✓ Scissors (one pair per student)
- ✓ Liquid glue (a few bottles per workstation)

**Additional materials:**

- ✓ 3-D Paper Tree Model (new; teacher-created; one for teacher modeling)
- ✓ 3-D Paper Tree Model photographs (example, for teacher reference)

**Consider the following paper products:**

- ✓ Newspaper (a few sheets per workstation)
- ✓ Butcher block paper (a few pieces per workstation)
- ✓ Paper towel rolls (a few per workstation)
- ✓ Toilet paper rolls (a few per workstation)
- ✓ Paper bags (a few per workstation)
- ✓ Cardboard (a few pieces per workstation)

## Experience

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

- Gather students whole group and give them specific, positive feedback regarding their molding to create 3-D trees with Play-Doh.
- Tell students that they will continue to work with molding to create 3-D tree representations. Now, they will use new materials: different paper products.
- Display the **3-D Paper Tree Model** and focus students on the different colors covering the different parts of the flower. Refer to the **3-D Paper Tree Model photographs** as necessary.
- Using a total participation technique, invite responses from the group:

***“What do you notice about this piece of 3-D art?” (Responses will vary, but may include: It is a tree made with different paper products, like newspaper and cardboard.)***

***“How do you think the artist made it?” (by molding paper into the shape that was needed and gluing the pieces together)***

- Reaffirm for students that this 3-D paper tree took several steps to create, including:
  - Choosing a tree image that they find especially beautiful or interesting.
  - Studying the **tree image** very closely.
  - Noticing the shape and texture of the different parts of the tree that you would need to mold using different paper products.
  - Selecting the best **paper product** for a strong trunk and molding it into the needed shape.
  - Tearing and/or using **scissors** to cut small pieces of paper and mold them into branches, and using **liquid glue** to attach them to the trunk.
  - Tearing and/or using scissors to cut **construction paper** into small **leaves** and using liquid glue to attach them to the branches.
- Direct students’ attention back to the 3-D Paper Tree Model.
- Tell students that over the next several days, they will have the opportunity to use perseverance to work on one 3-D paper tree.

- Invite students to begin working.
- Circulate and support students as they work.
- 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.

### Remaining Days of the Extend Stage:

- During the remaining days in the Create Lab, invite students to follow this process as they create 3-D paper tree models:
  - Choosing a tree image that they find especially beautiful or interesting.
  - Studying the **tree image** very closely.
  - Noticing the shape and texture of the different parts of the tree that you would need to mold using different paper products.
  - Selecting the best **paper product** for a strong trunk and molding it into the needed shape.
  - Tearing and/or using **scissors** to cut small pieces of paper and mold them into branches, and using **liquid glue** to attach them to the trunk.
  - Tearing and/or using scissors to cut **construction paper** into small **leaves** and using liquid glue to attach them to the branches.



## Extend Stage: In the Imagine Lab

### Guiding Question

- How can I create an imaginative world of play within the trees of my classroom?

### Learning Target

- I can create a world of play within our imaginary forest.

### Teaching Notes

#### How this stage of this lab builds on previous stage(s):

- Students use the classroom forest created during the Launch and Practice stages to engage in imaginative play and role-play within the forest setting.
- Students continue to use the habit of collaboration to plan, execute, negotiate, compromise, and cooperate as they play.

#### What is new about this stage:

- During the Extend stage, students are invited to use their imaginations to enjoy the classroom forest space they created.
- Students can dramatically express all that they know about trees and how people interact with and enjoy trees.



**Logistics:**

- Similar to Modules 2–3, on the first day, students work as a whole class to transition to the Extend stage. During the remaining days, they spend 20 minutes each in two labs with their lab groups.

**In advance:**

- Prepare the Imagine Lab space with materials necessary for students to become “characters” in their forest (e.g., dress-up clothes, baskets for “picnics” and “foraging,” manipulatives such as linking cubes for students to represent seeds, fruit, leaves).

**Materials****Continued materials:**

- ✓ Building blocks (one set of wood or linking blocks)
- ✓ White board (large one to share or several small ones)
- ✓ White board markers (one per student)
- ✓ Hand or finger puppets (several to share)
- ✓ Dress-up materials (several to share)
- ✓ Animal masks (from Module 3; one per student)

**Additional materials:**

- ✓ Badge templates (a few per workstation)
- ✓ Mask templates (a few per workstation)
- ✓ Baskets (a few per workstation)
- ✓ Crayons (a variety of colors per workstations)

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

- Welcome students to the Imagine Lab.
- Give students specific, positive feedback about the beautiful and creative classroom forest they created during the Launch and Practice stages.
- Turn and Talk:

***“What part of the classroom forest are you proud of having created?” (Responses will vary.)***

- Select students to share out.
- Tell students that they will now have the opportunity to play in the classroom forest and will have different materials to help them imagine different stories and scenarios as they play.
- Point out the **badge templates, mask templates, baskets, and crayons**. Tell students that these are just some of the materials that will be available for them to use.
- Turn and Talk:

***“What badge could you make to pretend to be a person in the forest?” (Responses will vary.)***

*“What mask could you make to pretend to be something in the forest?” (Responses will vary.)*

*“How could you use the baskets to pretend in the classroom forest?” (Responses will vary.)*

- Give students specific, positive feedback on their ideas and offer more if they struggle to think of a variety of ways in which to use the materials of the Imagine Lab.
- Remind students that they will have multiple opportunities to act and pretend in the Imagine Lab. This means they should be flexible in the materials their group chooses.
- Tell students that they may also choose to use the continued Imagine Lab materials: **building blocks, white board, white board markers, hand or finger puppets, dress-up materials, and animal masks.**
- Remind students that if they are making a new mask or badge, they need to be patient and ask an adult to staple the mask to the correct size or attach the badge to themselves.
- Invite students to get to work playing together in the classroom forest.
- Circulate and support students, specifically in the area of negotiating collaborative play.
- 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.

### Remaining Days of the Extend Stage:

- During the remaining days of the Extend Stage, students may continue to engage in imaginative play in their classroom forest.
- As necessary, provide additional materials for students to create additional props.
- Invite students to think about stories and scenarios to inspire their imaginary world and offer suggestions as needed to support students.



## Extend Stage: In the Engineer Lab

### Guiding Question

- How can I use trees to design a forest play space?

### Learning Target

- I can create a final version of my own forest play space.

### Teaching Notes

#### Purpose:

- Students continue to explore planning a forest play space, but in this stage, they work independently to create a plan that will later be used to create a model.
- Recall that this Engineer Lab connects to Next Generation Science Standard KLS-1. While designing a model of a forest play space, students “develop and/or use a model to represent

amounts, relationships, relative scales (bigger, smaller), and/or patterns in the natural and designed world(s).”

#### What is new about this stage:

- During the Extend stage, students work independently to plan a final forest play space. Students then have the option to create a model of this play space during the Choice and Challenge stage.

#### Logistics:

- Similar to Modules 2–3, on the first day, students work as a whole class to transition to the Extend stage. During the remaining days, they spend 20 minutes each in two labs with their lab groups.

#### In advance:

- Prepare Engineer Lab space by placing Forest Scenes, Play Elements templates, pencils, crayons, scissors, and glue sticks at each workstation.

### Materials

#### Continued materials:

- ☑ Forest Scene (one per student)
- ☑ Play Elements template (one per student)
- ☑ Pencils (one per student)
- ☑ Scissors (one pair per student)
- ☑ Glue sticks (one per student)

### Experience

- Welcome students to the Engineer Lab.
- Remind students of the guiding question:
  - “How can I use trees to design a forest play space?”
- Remind students that in the previous stages, they worked with a partner to plan a forest play space. Tell them that in this stage, they will work independently to plan a final forest play space that they will then have the option to create a model of during the Choice and Challenge stage.
- Turn and Talk:

***“What are two or three play elements you definitely want to include in your forest play space? Why?” (Responses will vary.)***

***“Are there any play elements you do not want to include? Why?” (Responses will vary.)***

- Point out the materials in the Engineer Lab space: **Forest Scene, Play Elements template, pencils, scissors, and glue sticks.**
- Tell students that they will have the opportunity to make a few different forest play space plans, but that they should think strategically about their play spaces and work carefully to make sure that their forest play space makes sense (e.g., no upside-down slides, ladders that float in the air).
- Transition students to workstations.

- Circulate and support students as they work, focusing on their sharing and caring for materials and strategically planning a forest play space.
- At the conclusion of In the Lab time, signal students to clean up their lab space.
- Give lab groups or individual students specific, positive feedback for responsible and respectful cleanup behaviors.
- As lab groups are ready, transition them back to the whole group area for Reflecting on Learning.

### **Remaining Days of the Extend Stage:**

- During the remaining days of the Extend Stage, students may continue to engage in imaginative play in their classroom forest.
- As necessary, provide additional materials for students to create additional props.
- Invite students to think about stories and scenarios to inspire their imaginary world and offer suggestions as needed to support students.



## **Extend Stage: In the Research Lab**

### **Guiding Question**

- How can I discover more about the trees near me?

### **Learning Target**

- I can create a survey to learn more about the trees near me.

### **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 local trees.

#### **What is new about this stage of this lab:**

- Students focus their line of inquiry and research into a specific question and collect data and information from the school community.

#### **Logistics:**

- On the first day of the Extend stage, students decide on a specific research question to ask the school community.
- During the remaining days of the Extend stage, students collect and record data from asking the research question.
- This lesson recommends the use of tally marks for people to mark their choice; however, there are many different ways to collect data. Consider referencing your math curriculum to see which form of data collection is familiar and comfortable for you and your students.

**In advance:**

- Predetermine four groups that will each decide on a research question and create a research question chart for their assigned tree.
- Gather baskets from the Practice stage:
  - Basket 1: Tree 1
  - Basket 2: Tree 2
  - Basket 3: Tree 3
  - Basket 4: Tree 4

**Materials****Continued materials:**

- ✓ Local Trees Research note-catcher (from Launch and Practice stages; pages 1–2; one per student)
- ✓ Baskets of research materials (from the Practice stage; one basket per tree)

**Additional materials:**

- ✓ Research Question Chart model (one to display)
- ✓ Markers (one per workstation and one per Research Question chart)
- ✓ Chart paper (blank; one piece per workstation; used by students to create a Research Question chart)
- ✓ Data Question cards (one set for the Research Lab space)

**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.
- Remind students that, until now, they have been freely researching about four different local trees. They have found many facts, and they have asked many questions.
- Turn and Talk:
 

***“After reading about these different trees, which do you find most interesting? Why?”***  
***(Responses will vary.)***
- Circulate while students discuss and preselect a few students with opinions grounded in evidence to share out when the group comes back together.
- After 3 minutes, invite preselected students to share out.
- Tell students that during the Extend stage, they will have the chance to bring their research questions to the whole school by selecting four research questions about the local trees to display outside the classroom to collect information, or data, from the school community.
- Display the **Research Question Chart model** and read the question and multiple choice response aloud:
  - “How would you enjoy the \_\_\_\_\_ tree? Relax in the shade. Swing on the branches. Look for birds and squirrels.”

- Using a total participation technique, invite responses from the group:  
*“How would you enjoy the \_\_\_\_\_ tree? Remember, you must choose one of the three options.” (Responses will vary, but must include one of the above three options.)*
- Model how to use a **marker** to put a tally mark, or small line, in the column of students’ selected choice. Emphasize that tally marks should be *small* lines so that there is plenty of space left for others to mark their choice. (See Teaching Notes for considerations about marking data.)
- Tell students that their first job will be to review what they have learned about their assigned tree, decide on a research question, and create a Research Question chart for that tree using **chart paper**.
- Tell students that they can reference their **Local Trees Research note-catchers** as well as the **baskets of research materials** to review what they know and the questions they still have.
- Point out these materials at their workstations.
- Move students into their predetermined groups and transition them to their workstations to begin working.
- Circulate to support students, specifically in the area of deciding on a research question and designating who will write the question and answer choices on the chart.
- At the conclusion of In the Lab time, signal students to clean up their lab space and bring their Research Question charts to the whole group area.
- Transition students to Reflecting on Learning.
- Tell students that these Research Question charts will be posted outside of the classroom so different members of the school community can respond to the questions.

### Remaining Days of the Extend Stage:

- During the remaining Extend Stage of the Research Lab, tell students that you will bring in the Research Question charts and have students reflect upon the responses using the **Data Question cards**.
- Model how to read the question (e.g., Which answer has the most?), and use the data from the Research Question chart to determine the answer (e.g., by counting the tally marks and seeing which has the most).
- Tell students that in the following Extend Stage days, they will use these cards to think about and discuss the information they’ve collected on the Research Question charts. While students discuss, circulate and use the Research Lab Checklist to track student progress towards the targeted standards for this Lab.
- After students have analyzed the data using the Data Question cards, they may also create simple visuals of the data analysis to display outside of the classroom for the school community to view.