

Kindergarten: Module 4: Labs

2 – Practice Stage

Labs: Practice Stage

Days 5–10

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

What stays the same from previous stage(s):

- During the Practice stage, the materials, tasks, and guiding questions remain similar to those of the Launch stage.

What is different from previous stage(s):

- During the Practice stage, students visit two labs per day.



Practice Stage: At-a-Glance

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 materials to create a tree trunk and branches.

Imagine Lab

I can help create an imaginary forest.

Engineer Lab

I can describe a variety of play activities and the parts of a play space.

I can collaborate to design a forest play space.

Research Lab

I can use a variety of resources and research reading strategies to learn about the trees near me.

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)

Practice Stage: Daily Schedule

Lab Component	Time
Storytime	10 minutes
Setting Lab Goals	5 minutes
In the Lab, Part I	20 minutes
In the Lab, Part II	20 minutes
Reflecting on Learning	5 minutes

Practice Stage: Storytime

10 MINUTES

Teaching Notes**Purpose:**

- Review the Storytime Teaching Notes in the Launch stage document as needed.

In advance:

- Choose a text from your classroom library or the 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 (identical during all four stages of Labs)

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

Practice Stage: Setting Lab Goals

5 MINUTES

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.

Logistics:

- During the Practice stage, lab groups visit two workstations for 20 minutes each.

In advance:

- Decide on a system of storage and movement of Labs materials.
- Post:
 - Guiding question for each Lab, learning target(s) for each Lab, and Labs schedule.
 - Labs schedule for students to review as they transition to their second lab.

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!

Practice Stage: In the Labs**40 MINUTES**

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

Practice Stage: Reflecting on Learning**5 MINUTES****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 guiding question 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).



Practice 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 materials to create a tree trunk and branches.

Teaching Notes

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

- Students continue to create 3-D trees using Play-Doh, twigs, leaves, and paper.

What is new about this stage of this lab:

- Students have a greater degree of independence, both in their work in the lab and in their movement during lab time.
- Students continue to practice creating 3-D trees.

Habits of character:

- During the Practice stage of the Create Lab, students continue to practice their perseverance. Similar to the Launch stage, students may have difficulty achieving a “perfect” result right away, leading to a sense of frustration or failure. On the other hand, some students will need to be pushed in their craftsmanship and encouraged to attempt multiple drafts or work carefully and slowly to achieve their personal best.

Logistics:

- During the Practice stage, lab groups spend 20 minutes in the Create Lab. Since students have limited time, they will need a system and space to store their 3-D trees as they continue to work on them in future labs.
- Consider having a designated space for each student’s work in progress and leftover materials.

In advance:

- Prepare four workstations by placing precut leaves of different shapes and sizes (as well as additional construction paper for students to cut themselves), scissors, liquid glue, twigs, and Play-Doh at each workstation.

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)
- ✓ Twigs (one set per workstation)
- ✓ Play-Doh (one container per student)

Additional materials:

- ✓ Popsicle sticks or toothpicks (a few per workstation and one of each for teacher modeling)

Experience

- Welcome students to the Create Lab.
- Remind students that in the Create Lab, they are using Play-Doh and other natural and classroom materials to make 3-D models of trees.
- Tell students that they will continue to use the skill of molding that they added to their Artist's Toolbelt to continue working on their 3-D models.
- Invite students to put on their imaginary Artist's Toolbelt begun in the Launch stage to practice "molding." Tell students that they have a new technique of molding to add to their Artist's Toolbelt using **popsicle sticks** or **toothpicks** to represent the texture of bark in the Play-Doh.
- Demonstrate how to mold and create texture using a popsicle stick or toothpick by scraping it into the Play-Doh to make lines. Ask:

"What do you notice about the texture created with the popsicle stick or toothpick? How does this technique help make the tree look more realistic?" (It creates the texture of bark.)

- Remind them of the materials they already explored during the Launch stage: **tree images, precut leaves, construction paper, scissors, liquid glue, twigs**, and Play-Doh.
- Transition students to their workstations and invite them to begin working.
- Circulate and support them as they work. Reinforce the habit of perseverance as needed.
- As they work, remind students that they do not need to finish their 3-D trees today. They will return to the Create Lab many times over the coming days and weeks.
- 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.



Practice 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 help create an imaginary forest.

Teaching Notes

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

- Students continue to use a variety of engaging and malleable materials to create an imaginative classroom forest.

What is new about this stage of this lab:

- During the Practice stage, students have access to the various materials in one space, allowing them greater choice.

Habits of character:

- Collaboration and respect continue to be a key to the success of this lab. Students use collaboration to plan and design the Classroom Forest. They productively negotiate with one another as they decide which details to include, how best to create those details, and how to take turns attaching the details to the Classroom Forest. Respect is central to the way they make decisions and use Imagine Lab materials.

Logistics:

- Similar to the Launch stage, students visit the Imagine Lab with their lab group to add forest details to the Classroom Forest.

In advance:

- Prepare four workstations by placing leaf templates, construction paper, crayons, scissors, and glue sticks at each workstation.

Materials

Continued materials:

- ☒ Classroom Forest (begun in the Launch stage of the Create Lab)
- ☒ Leaf templates (one set per workstation)
- ☒ Crayons (a variety of colors per workstation)
- ☒ Construction paper (shades of green, brown, and black; one pile per workstation)
- ☒ Scissors (one pair per student)
- ☒ Glue sticks (one per student)

Experience

- Welcome students to the Imagine Lab.
- Remind students of the primary goal of the Imagine Lab: to work together and use materials of the Imagine Lab to create a Classroom Forest.
- Using a total participation technique, invite responses from the group:

“Look at our Classroom Forest. What other tree parts or forest parts could you add to the forest?” (Responses will vary based on what was previously added to the Classroom Forest.)

“What materials of the Imagine Lab would you like to include in creating the Classroom Forest?” (Responses will vary, but may include: I would like to use the construction paper to create a nest on the big branch; I would like to use the leaf templates to add leaves to the forest floor.)
- Give students specific, positive feedback on their ideas and offer more if they need additional support when thinking of a variety of ways to use the materials of the Imagine Lab.
- Invite students to select a forest animal and stand up in their space and act like that animal (e.g., chatter like a squirrel, flap wings like an owl).
- Remind students that they will have multiple opportunities to add to the Classroom Forest in the Imagine Lab. This means they should be flexible about the materials they choose.
- Point out the materials in the Imagine Lab space: **leaf templates, crayons, construction paper, scissors, and glue sticks.**
- Transition students to workstations and invite them to begin working.
- Circulate and support students as they work. Offer them concrete strategies for working positively and collaboratively with others, specifically providing language that creates a collaborative experience.
- 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.



Practice Stage: In the Engineer Lab

Guiding Question

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

Learning Targets

- I can describe a variety of play activities and the parts of a play space.
- I can collaborate to design a forest play space.

Teaching Notes

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

- Students continue to explore the various materials in the lab as they work with a partner to design forest play spaces.
- The practice stage of this lab continues to be intentionally open to self-differentiation. Some students may opt to color, cut, and paste the play elements into the forest. Other students may use this and a combination of drawing. Finally, some students may choose to simply use the templates as a guide and draw their play space themselves.
- 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).”
- Students continue to have the time and space to experiment with both the materials and the engineering and physics principles involved.

What is new about this stage of this lab:

- During the Practice stage, students build upon their understanding of parts of a play structure and how they might realistically be used in and around trees as they prepare for the creation of a 3-D model of an aspect of their forest play space design.

Habits of character:

- Similar to Modules 1–3, the Engineer Lab helps students build their skills of goal-setting and reflection. The Engineer Lab has a clearly shared goal by the time students reach the Choice and Challenge stage: to create a 3-D model of one aspect of their forest play space. This clearly defined end goal will help students reflect on their own progress and set benchmark goals for their work along the way.

Logistics:

- Similar to Modules 1–3, the teacher and students engage in the design process, specific to the design of a forest play space, by drafting their sketches and revising before creating a 3-D model.

In advance:

- Prepare workstations—each with Forest Scenes—by placing play element templates, pencils, crayons, scissors, and glue sticks at each.

Materials

Continued materials:

- ☑ Forest Play Space Model (one to display)
- ☑ Forest Scene (one per student and one for teacher modeling)
- ☑ Play Elements template (one per pair)
- ☑ Pencils (one per student)
- ☑ Scissors (one pair per student)
- ☑ Glue sticks (one per student)

Experience

- Welcome students to the Engineer Lab.
- Remind students that their goal in the Engineer Lab is to answer the question: “How can I use trees to design a forest play space?”
- Display the **Forest Play Space Model** and think aloud about the spatial choices made in creating the model:

“I can see that in the model, the creator made sure the slide was pointing down because you slide down, not up!”

“I can see that in the model, the creator placed the ladder attached to a tree branch because why climb up a ladder if it goes nowhere?”

- Turn and Talk:

“What do you notice about other choices that were made to create the model?”
(Responses will vary, but may include: They decided to hang a swing from the branch. They decided to place a rope coming down from the treehouse.)
- Remind students that their goal is to create a forest play space, so during the Practice labs, they will continue to work with a partner to create a plan.
- Point out the materials in the Engineer Lab space: **Forest Scene, Play Elements template, pencils, scissors, and glue sticks.**
- Transition students to workstations and invite them to begin working.
- Circulate and support students as they work, focusing on their sharing and caring for materials and perseverance in creating a model.
- 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.



Practice Stage: In the Research Lab

Guiding Question

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

Learning Target

- I can use a variety of resources and research reading strategies to learn about the trees near me.

Teaching Notes

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

- Students continue to research local trees around their school and community using photographs, artifacts, and possibly video clips.

What is new about this stage of this lab:

- All Research Lab materials will now be in one space, giving students the option of which local tree they would like to explore during this time.

Habits of character:

- The Research Lab requires both responsibility and collaboration on the part of students. Students are expected to remain focused on the research materials, recording facts and questions as they research. They are also encouraged to collaborate with their peers, share interesting things they learned, and support one another in solving tricky words or understanding new, complex ideas.

Logistics:

- Because students now have access to all Research Lab materials, it is important that they set a clear goal for how they want to spend their time in the Research Lab.

In advance:

- Prepare research baskets in the Research Lab space:
 - Basket 1: Tree 1
 - Basket 2: Tree 2
 - Basket 3: Tree 3
 - Basket 4: Tree 4
- Label each basket and each material (with words or pictures) to assist students in the proper storage and organization of research materials.

Materials

Continued materials:

- ✓ Baskets of research materials (one per topic)
- ✓ Pencils (one per student)
- ✓ What Researchers Do student copy (one in the Research Lab)

New materials:

- ✓ Local Trees Research note-catcher (page 2; one per student and one for teacher modeling)

Experience

- Welcome students to the Research Lab.
- Turn and Talk:

“What is the important work of a researcher?” (A researcher discovers new and interesting information about a topic. Researchers ask important questions about the materials they are working with.)

“How can we help fellow researchers?” (share new and interesting facts you have learned; help each other with tricky new words)

- Tell students that today they will have 20 minutes in the Research Lab.
- Display page 2 of the **Local Trees Research note-catcher** and think aloud to model selecting a tree you are interested in learning more about:

“I think I will choose the (pine tree) to learn more about because pine cones are very interesting.”
- Tell students that because all the research baskets are now together in one workstation, they have a choice about what tree they want to research. They should choose one tree to research for that day in the Research Lab.
- Direct students’ attention back to page 2 of the Local Trees Research note-catcher and model how to record your selected tree on the line at the top of the paper.
- Tell students that the rest of the note-catcher will be used to record any new and interesting information you learn about your specific tree to answer the three questions.
- While still displaying the note-catcher, model how to complete each section using information from the **basket of research materials**.
- Point out that the baskets of research materials, note-catchers, and **pencils** are within the lab space and invite students to begin exploring the materials, learning exciting new information, and asking important new questions.
- Circulate to support students’ comprehension as they work by referencing the **What Researchers Do student copy** and encouraging students to ask and answer questions about the captions.

- Consider using the Research Labs Checklist to track students' progress towards **RI.K.1**, **SL.K.1a**, **SL.K.1b**, **W.K.7**, and **W.K.8**.
- 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.