

Grade 2: 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 2 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

Guiding Question

Create Lab

How can I create pollinator puppets and a setting for my pollinator fable?

Engineer Lab

How can I design an ideal pollinator garden for my school or classroom?

Imagine Lab

How can I write an original fable about pollinators?

Research Lab

How can I use research skills to learn and teach about our local pollinators?

Learning Target(s)

Create Lab

I can create the setting for my pollinator fable.

Engineer Lab

I can create a pollinator garden for my school or classroom based on a shared design.

Imagine Lab

I can add details to my pollinator fable.

Research Lab

I can create signs to help educate my community about unusual pollinators.

Create Lab

Create Lab Checklist (SL.2.1, SL.2.5, SL.2.6)

Engineer Lab

Engineer Lab Checklist (SL.2.1, SL.2.6)

Imagine Lab

Imagine Lab Checklist (W.2.3, SL.2.4, SL.2.5, SL.2.6)

Research Lab

Research Lab Checklist (RI.2.5, RI.2.7, W.2.7, W.2.8)

Extend 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 2: Labs Recommended Storytime and Research Book List (in the Labs Teacher Guide)
- Consider creating a focus question for Storytime.
- 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:

- 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 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 Extend 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

- Review the **learning target(s)** and **Labs schedule** with students.
- Invite students to open their **Labs notebook** and follow the routine established in Modules 1–3 to guide them through setting goals:
 - Review the sentence starters at the top of the page.
 - Invite students to notice what Lab they will visit first and second and to make a goal for each Lab.
 - Direct students to record their goals for the day in their Labs notebook using a **pencil**.
- 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**40 MINUTES**

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

Extend 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 Extend 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.
 - As appropriate, use the corresponding Lab checklist to track student progress toward the targeted literacy standards for this Lab.
- 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.).



Extend Stage: In the Create Lab

Guiding Question

- How can I create pollinator puppets and a setting for my pollinator fable?

Learning Target

- I can create the setting for my pollinator fable.

Teaching Notes

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

- Students continue to create for the fables they are writing in the Imagine Lab.

What is new about this stage of this Lab:

- Students shift from creating a puppet for their fable's character to creating a background that represents their fable's setting.

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.
- Students are introduced to the task and purpose of the Extend stage of the Create Lab. Students work with the teacher to study a model setting from which they create a criteria list. On the transition day, students may begin to create a draft of their setting.

In advance:

- Decide how to best display the model setting (see supporting materials).
- Cut enough 24-inch-wide butcher block paper into 18-inch-long sections so that each student has one piece. If this material is not available, consider using a neutral-colored bulletin board paper or other large piece of paper.

Choose and gather:

- Coloring materials for the setting. Tempera or washable paint is recommended for this project because it provides the most vibrancy, yet is suitable for younger children. If this material is not available, pastels are another good option.
- Outlining tools (e.g., black markers or crayons)
- Set up workstations with paper and pencils for students to begin drafting their settings, if time permits.

Materials

Continued materials:

- ☒ N/A

Additional materials:

- ☑ Model setting (one to display)
- ☑ Paper (white; 8.5 by 11 inches; one piece per student)
- ☑ Paper (butcher block; 24 by 18 inches; one piece per student)
- ☑ Outlining tools (one per student)
- ☑ Coloring materials (one set per student)
- ☑ Setting Criteria List anchor chart (new; co-created with students during Transitioning to the Extend Stage)

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

- Gather students whole group and give them specific, positive feedback on the work they have been doing on their marionette-style puppets.
- Tell students that they will continue to work with their puppet, and to create new puppets, in the coming days; however, for this stage of the Create Lab, they are going to shift to another important element of their fables.
- Using a total participation technique, invite responses from the group:

“What other element of your fable (setting, problem, resolution, or moral) do you think we could make in the Create Lab to really help our readers and viewers?” (The problem, resolution, and moral will all happen in the acting. The setting can be created in the Create Lab.)
- Tell students they will now create a setting for their puppet shows! This setting will hang behind their puppets as they act out their original fables.
- Ask:

“Why is it important for us to make a setting for our puppet shows?” (It will help the viewer understand where our fable is happening.)
- Display the **model setting**.
- Tell students that this model setting is for the butterfly model fable they read together during the Launch stage of the Create Lab.
- Using a total participation technique, invite responses from the group:

“What steps do you think the artist took to create this setting?” (Responses will vary, but may include: The artist thought about where the fable took place. The artist made a draft, or drew first in pencil. The artist colored his or her setting.)
- Reaffirm that this setting took several steps to create, including:
 - Thinking about one main, or important, setting of the fable
 - Making a draft of the setting on a draft piece of **paper**
 - Making a pencil drawing on a second, larger piece of butcher block **paper**
 - Making black outlines by tracing over the pencil with an **outlining tool** (e.g., black marker or crayon)
 - Using **coloring materials** (e.g., paints, pastels, crayons, markers) to color the setting

- Think-Pair-Share:

*“What is the main setting, or an important setting, of your fable that you will make?”
(Responses will vary.)*

- Tell students that before they make their own setting for their puppet show, it is important to think about and list what makes a high-quality setting.

- Think-Pair-Share:

“What did the artist of this setting do to make sure it was both beautiful and helpful to the viewer in understanding the fable?”

- As students share out, capture their responses on the **Setting Criteria List anchor chart**. Guide students toward the understanding that settings should:
 - Match the setting written into the fable
 - Be large and oversized to match the size of the puppets
 - Be zoomed in on a piece of the setting, not trying to show a whole landscape
 - Be colorful and fill the space of the paper
- Tell students that today and in the coming days of the Create Lab, they will begin by making a simple draft on a letter-size piece of paper.
- When they have received feedback on their draft and are satisfied with their ideas, they should move to the larger paper.
- Answer clarifying questions.
- Invite students to begin working. Use the Create Lab Checklist to gather evidence of students’ progress toward the targeted Speaking and Listening standards for the Lab.
- 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:

- Students continue to follow the process modeled in the Extend Lab transition day to create their fable setting.
- Consider creating a visual of the process for students to refer to as they work more independently.
- Ensure that students have access to the model if they need a reminder about the finished product.



Extend Stage: In the Engineer Lab

Guiding Question

- How can I design an ideal pollinator garden for my school or classroom?

Learning Target

- I can create a pollinator garden for my school or classroom based on a shared design.

Teaching Notes

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

- Students continue to work toward the creation of an ideal pollinator garden for their classroom or school community.
- Students use their knowledge of local pollinators and pollinator-friendly plants to create labels for their pollinator gardens.

What is new about this stage of this Lab:

- Students progress from the design of an ideal pollinator garden to the implementation and creation of a pollinator garden for their class or school community.

Habits of character:

- Responsibility continues to be a key to the success of this Lab. Students are more intentional with their use of the materials and will need to plan and review their design before creating their pollinator garden.

Logistics:

- During this stage, students may work with their Lab groups to create small pollinator gardens, or students may work as a class toward a larger shared pollinator garden. Consider your preference based on available resources and space. (The sequence below is written for the former option but is easily adaptable for the latter.)
- 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:

- Decide on the location of your students' pollinator gardens. When doing this, consider space, sunlight, water, and the appropriately safe placement to attract pollinators. **This is especially important if you work with students who are allergic to bees or other pollinators.**
- Consider how to laminate or protect the garden labels from elements such as rain, sun, and soil.
- For the Transition to Extend Day, gather and prepare workstations with the following:
 - Containers for planting: disposable cups or clay plant pots (several per Lab group)
 - Seeds for pollinator-friendly plants (various depending on resources and region)

- Young and mature pollinator plants (various depending on resources and region)
- Soil: 4-quart bag (one per Lab group)
- Water container: small bowl or dish (one per Lab group)
- Corks (optional)

Materials

Continued materials:

- ☑ Model design of a pollinator garden (from Launch stage; one to display)
- ☑ Pollinator garden designs (from Launch and Practices stages; one per pair)

Additional materials:

- ☑ Containers for planting (several per Lab group)
- ☑ Seeds for pollinator-friendly plants (various depending on resources and region)
- ☑ Soil (one bag per Lab group)
- ☑ Young and mature pollinator plants (various depending on resources and region)
- ☑ Water container (one per Lab group)
- ☑ Corks (optional; to place in water containers to encourage pollinator landing and drinking)
- ☑ Model pollinator garden label 1 and model pollinator garden label 2 (one to display)
- ☑ Index cards (one per student)
- ☑ Colored pencils (variety of colors; one cup to share per Lab group)

Experience

Transitioning to the Extend Stage (Whole Class):

- Welcome students to the Engineer Lab!
- Using a total participation technique, invite students to engage in a reflective conversation about their experience during the Launch and Practice stages:

“What was successful? What was challenging?” (Responses will vary.)

- Give students specific, positive feedback on the great design work they have done so far on a pollinator garden, specifically about their designs being thoughtful, specific to their region, and a product of collaboration with their partners.
- Introduce students to the next phase of this challenge: working with their Lab group to reflect on their designs and then construct a pollinator garden that serves their class or school community and is appropriate to their region or location.
- Share that today they will work with their Lab group to share their partner designs, agree upon a shared Lab group plan moving forward, and then begin the work of constructing their garden.
- Display the **Model Design of a Pollinator Garden** and invite students to consider and discuss the following questions:

“What materials would you need to actually make this garden?”

“Where in our class or school community would you place your garden?”

- Share with students that while they designed their gardens in partnerships, they will build their gardens with their Lab group. This will require some discussion, collaboration, and compromise.
- Within Lab groups, invite partners to share their **pollinator garden designs**.
- Ask:
 - “What elements, or parts, do all of the designs have in common?”*
 - “How do your designs differ from one another?”*
 - “How might you resolve the differences?”*
- Introduce students to the **additional materials** available for the construction of their pollinator garden.
- For each material, briefly review careful handling and responsible use.
- Tell students that people passing their gardens are going to be curious about them, and that this is an opportunity to teach others about their pollinator gardens.
- Display the **model pollinator garden label**.
- Using a total participation technique, invite responses from the group:
 - “What does this label help a passerby to understand?”*
- Guide students toward the understanding that for each plant and other components of their garden, such as the water bowl, they should use an **index card** and **colored pencils** to create a label. This label will inform a passerby of what that plant or element is and its purpose within the garden.
- Tell students that today they will plant the seeds for some of their plants.
- Direct students’ attention to workstations set up with the materials you just reviewed.
 - Review the procedure for planting (or consider modeling with a single container).
 - Review the habits of character necessary for successfully planting as a group.
 - Invite students to begin planting!
- Circulate and support students as they work. Reinforce the habit of planning, reviewing, and respect as needed. Use the Engineer Lab Checklist to track student progress toward SL standards for this Lab.
- At the conclusion of 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 Extend days, students use their designs to first construct their pollinator gardens.
- After they have made their gardens, students care for the plants and can create garden labels.



Extend Stage: In the Imagine Lab

Guiding Question

- How can I write an original fable about pollinators?

Learning Target

- I can add details to my pollinator fable.

Teaching Notes

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

- Students continue to work on drafts of an original fable about a pollinator.

What is new about this stage:

- Students add details to their drafts, specifically actions, feelings, and temporal words.

Logistics:

- Students return to the butterfly model fable and, with guidance, identify specific details the author used to help create a more vivid movie in the minds of readers.
- Students apply this understanding by adding similar details to the drafts of their original pollinator fables.

In advance:

- Consider making an anchor chart listing the three kinds of details that students are working with during this stage of the Imagine Lab: action details, feeling details, and temporal words or phrases.

Materials

Continued materials:

- ☒ Labs notebook (one per student and one to display)
 - Fable writing pages
 - Detail Words page
- ☒ Butterfly model fable (from Launch stage; for teacher modeling)

Additional materials:

- ☒ Back-to-Back and Face-to-Face Protocol anchor chart (begun in Module 1)

Experience

Transitioning to the Extend Stage (Whole Class):

- Welcome students to the Imagine Lab!
- Give students specific, positive feedback about their creative fables about their flying pollinators.

- Tell students that they are now going to share their stories with each other using the Back-to-Back and Face-to-Face protocol. Remind them that they used this protocol in the module lessons and review as necessary using the **Back-to-Back and Face-to-Face Protocol anchor chart**. Refer to the Appendix for the full version of the protocol.
 - Remind students that as they listen to their partner’s story, they should try to identify each of the story elements.
 - Guide students through the protocol using their **fable writing pages** in the **Labs notebook**.
- Gather students back together and, with excitement, tell them that today they will work to bring their fables to an even higher quality. They will do this by adding a variety of details.
- Display the **butterfly model fable**.
- Tell students that you are going to read this familiar fable, and they should read along in their heads.
- Tell students that they are looking and listening for three things as you read:
 - Details that show action
 - Details that show character’s feelings
 - Words that help the reader understand the time or see the passage of time
- Tell students that if they see one of these kinds of details, they should give a silent signal. Consider practicing this silent signal before beginning the story.
- Begin reading the butterfly fable slowly and fluently. Stop whenever students give the silent signal indicating they recognize one of the details they are looking for or when you encounter a detail that the students did not recognize. (If it is the second reason, simply tell students the type of detail you just read and invite them to look again and see if they can find it.)
- When the class encounters important details in the text, underline that section of the text and identify it with the word *action*, *feeling*, or *time* in the margin of the story.
- After completing the fable, tell students it is time for them to do the important work of revising their own fables to include details.
- Tell them they have an important tool to help them in this work already included in their Labs notebook.
- Display the **Detail Words page** of the Labs notebook. Tell students that this page is a helpful tool they can use when trying to add these details to their fables.
- Invite students to pair up and label themselves A and B.
- Tell students they are going to take turns reading just the first two pages of their fables and then give feedback about what details they might add.
- Post and review the following directions:
 1. Partner B opens his or her Labs notebook to the Detail Words page.
 2. Partner A reads his or her first two pages.
 3. Partners A and B discuss where partner A can add at least one new detail.
 4. Switch roles and repeat Steps 1–3.
- Answer clarifying questions.
- Transition students to their workstations to begin revising. Some students may also still be drafting, in which case they can include these details as they write.

- Circulate and support students as they work. Use the Imagine Lab Checklist to track student progress toward the targeted standards for this Lab.
- At the conclusion of 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

- Each day, circulate and support students as they work, focusing on helping them add details to their writing.
- Students should also think about adding details to their illustrations that reflect the details in their words.
- Because students will practice reading and presenting their fables in the Choice and Challenge Stage, it is important for them to complete their narratives during the Extend Stage.
- Use the Imagine Lab Checklist to track student progress toward the targeted standards for this Lab.



Extend Stage: In the Research Lab

Guiding Question

- How can I use research skills to learn and teach about our local pollinators?

Learning Target

- I can create signs to help educate my community about unusual pollinators.

Teaching Notes

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

- During this stage, students reflect on the survey data they collected during the Launch and Practice stages to determine how people perceive the unusual pollinators being studied (bats, lizards, and possums).
- Students consider how people's perceptions of these pollinators compare with the knowledge and understanding they acquired during the Practice stage.

What is new about this stage of this Lab:

- Students use the creation of informational posters to try to correct their community's misunderstandings or dispel any misperceptions they discovered about bats, lizards, and possums.

Habits of character:

- Students collaborate with their partner in designing, revising, and creating an informational "Did You Know?" poster about one or more of the unusual pollinators they researched.

Logistics:

- On the first day of the Extend stage, students work in Lab groups to look at and reflect on the survey data collected within their community.

In advance:

- Pre-determine partnerships or triads based on students' interest in the various pollinators—for example, two or three students interested in dispelling the myths about possums.
- Collect the survey charts from around the school and hang them where students can see them.
- Create a model “Did You Know?” poster about bees (see supporting materials).

Materials

- ✓ Survey charts (from Launch stage; to display)
- ✓ Sticky notes (three per pair or triad)
- ✓ Model “Did You Know?” poster (new; teacher-created; see supporting materials)
- ✓ Markers (various colors; one set per pair or triad)
- ✓ Labs notebook (one per student and one to display)
 - “Did you know?” poster draft

Experience

- Welcome students to the Research Lab!
- Move students into pre-determined pairs or triads.
- Remind students of their three big goals for the Research Lab:
 - To find out how their community perceives, or understands and feels about, some unusual pollinators.
 - To learn more themselves, through research, about these unusual pollinators.
 - To educate their community about any misperceptions they may have regarding these unusual pollinators.
- Tell them that during the Extend stage of the Research Lab, they will focus on the third goal:
 - “To educate their community about any misperceptions they may have regarding these unusual pollinators.”
- Share that to do this, it is necessary to first identify what those misperceptions, or gaps of knowledge, within their community are.
- Direct students' attention to the six **survey charts** hanging up.
- Tell students that members of their community have had multiple days, or weeks, to respond to their questions in the form of tally marks; however, this data does not mean anything if students do not take the time to reflect on the results and determine what they mean.
- Distribute **sticky notes**.
- Post and review the following directions.
 1. Visit a survey chart for one animal (bat, lizard, or possum).
 2. Discuss what you see about the data with your partner or triad.
 3. Write something you noticed or realized by studying the data on a sticky note.
 4. Visit a survey chart about a different animal.
 5. Repeat Steps 1–4 until you have visited the surveys for all three animals (bat, lizard, and possum).
- Remind students that if a chart already has several students standing in front of it, they should choose another and come back when it is less busy.

- Answer clarifying questions.
- Give students approximately 5 or 6 minutes to complete this task.
- Gather students whole group.
- Invite each partnership or triad to share one of their ideas, beginning with the phrases “we realized” or “we noticed.”
- Also encourage students to make their statement about the data by using phrases like: “Most people responded ...” or “Many people felt that ...”
- Tell students that they will be able to look at these charts more as they work on their posters.
- Display the **model “Did You Know?” poster** about bees and ask:

“What do you notice about this poster?” (Responses will vary, but may include: It’s about bees. It tells facts about bees. It includes some myths about bees, but then corrects those myths. It includes images of bees. It is clear and easy to read.)
- Tell students that they will use the next few days in the Research Lab to create their own “Did You Know?” posters about the unusual pollinators they have been researching.
- They will think about the misconceptions or gaps in knowledge their community has, and then use their posters to help educate their community about these pollinators.
- Display the **“Did You Know?” poster draft** page of the **Labs notebook**.
- Tell students that in their own Labs notebooks, they will make a first draft of their poster. Then, once they have received feedback, they will work with their partner or triad to create a final poster with **markers**.
- Answer clarifying questions.
- Dismiss students to their workstations.
- Invite students to begin working.
- Circulate and support students as they work. Reinforce that the posters should include information to teach their community about the pollinators.
- At the conclusion of 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

- Students first complete the draft of their “Did you Know?” posters and then receive on their work.
- After they receive feedback, they create their final draft posters.
- Ensure that students have access to the model “Did you Know?” poster as they create their own posters.