

**Grade 2:** Module 4: Labs

# 1 – Launch Stage

## Labs: Launch Stage

### Days 1–4

Labs continue to take place in four stages, and the purposes of each remain the same (see Module 2 Launch stage).

1. The Launch stage serves four purposes:
  - To introduce and practice the Labs schedule and routines and lay the groundwork for the habits of character that students practice in each Lab.
  - To orient students to the purpose, guiding questions, and materials of each of the Labs for this module.
  - To establish expectations for each Lab.
  - To build a sense of wonder and excitement around each Lab. Students should be filled with anticipation, questions, and ideas as they continue on to the following, more independent stages of the Labs.



## Launch 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 a marionette-style puppet of a pollinator for my fable.

#### Engineer Lab

I can identify the elements of an ideal pollinator garden for my classroom or school.

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

#### Imagine Lab

I can plan a pollinator fable based on shared criteria, a pollinator character, and a common moral.

I can write a first draft of my pollinator fable.

#### Research Lab

I can create a survey to learn about my community's attitudes toward unusual pollinators.

I can use my research skills to learn 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)

## Launch Stage: Daily Schedule

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

## Launch Stage: Storytime

### Teaching Notes

#### Purpose:

- Recall that the purpose and structure of Storytime is identical across all four stages of the Labs and can include a read-aloud of a text or an oral storytelling experience.
- During the Launch and Practice stages, Storytime should be dedicated to reading, rereading, or retelling narratives about birds, especially those introduced during the module lessons, but it can also include others of the teacher's choice. This supports student work in the Imagine Lab, where they are expected to use materials to plan and write a story based on their knowledge about birds.

#### 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 (see examples in Modules 1–2).
- Create four heterogeneous Lab groups.
- 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**.

## Launch Stage: Setting Lab Goals

5 MINUTES

### Teaching Notes

#### Purpose:

- Recall that Setting Lab Goals is a time to activate and reinforce students' executive functioning skills: focusing their attention, making a plan for their time, exhibiting self-regulation, and following instructions.
- Continue to consider using visual displays (anchor charts, a Labs schedule, a daily agenda, etc.) to help students understand and remember where they are going that day and what is expected of them.

#### In advance:

- Post: Guiding question and learning target(s) for the Lab students will launch that day.

### Materials

- ☑ Learning target(s) (one to display for each Lab; see Launch Stage: At-a-Glance for the specific targets for each Lab)
- ☑ Labs notebooks (one per student)

### Experience

- Gather students in the whole group meeting area.
- Invite students to sit in specified places so they will be close to their Lab group.
- Briefly introduce the Lab that the class will launch today.
- Think-Pair-Share:
  - “What do you already know about the Lab based on your experiences in Modules 1, 2, and 3?” (Responses will vary.)*
- Share the **learning target(s)** for the Lab the class is focused on today.
- Turn and Talk:
  - “What do you think you will be doing in today’s Lab?”*
  - “How can you show respect for materials?”*
  - “How can you show respect for other students in your group?”*

- 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!
- Remind students of the importance of setting goals and follow the routine established in Modules 1–2 to guide them through setting goals:
  - Invite students to think of a goal.
  - Invite students to turn and talk about their goal.
  - Direct students to write their goal in their Labs notebook.
- Invite students to take out their imaginary bow and arrow and then stand up and take aim at the target.
- Invite students to put on their imaginary lab coats and goggles to show they are ready for learning and fun!

### Launch Stage: In the Labs

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

### Launch 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)

#### 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.

## Providing for Pollinators

- 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.



### Launch 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 a marionette-style puppet of a pollinator for my fable.

#### Teaching Notes

##### Purpose:

- In the Create Lab, the Launch stage continues to serve two purposes:
  - Students are introduced to the purpose, materials, and model of the style of puppet they will create during the Launch, Practice, and Choice and Challenge stages.
  - Students create a marionette-style puppet for the main character of the pollinator fable they are writing in the Imagine Lab.

##### Habits of character:

- Similar to Modules 1–3, the Create Lab requires perseverance from students in different ways. For some, the process can be frustrating when their artwork does not match the model or does not meet their own expectations. Guide these students toward the understanding that mastery of skills and materials is a long-term process and that making multiple attempts is a productive and natural part of the process. Other students will feel “done” with their first attempt. Perseverance will be necessary for these students when provided with descriptive feedback and encouraged to make additional drafts to improve their work.

##### Logistics:

- During the Launch stage of the Create Lab, the teacher and students work together to examine an example marionette-style puppet of a flying pollinator (a butterfly).
- The teacher introduces the materials and process for making this style of puppet.
- Students choose which flying pollinator (bat, bee, bird, or butterfly) they will make a puppet of and use as a main character in their fable (in the Imagine Lab).
- Students gather the materials they will need to create their own puppet.
- Students begin working on their puppet.

**In advance:**

- Create a model of a marionette-style puppet of a butterfly using one of the two options in the supporting materials.
- Copy the templates of pollinator body parts onto cardstock (see supporting materials).
- Pre-cut enough 8-inch-long pieces of string that every student has four pieces. This could be string, twine, or clear fishing line, depending on availability. Fishing line is advantageous since it is clear and gives the puppet a greater illusion of “flying.”
- Based on classroom setup and available technology, determine the best way to display the materials students will use, the process for cutting body parts from templates, and the process for attaching the strings to the body and the controls of the puppet.
- Prepare four workstations by placing templates, coloring materials, scissors, tape, and string at each. Consider making a separate workstation for each flying pollinator: the bat, the bee, the bird, and the butterfly. This will help students access the templates they need.
- Consider:
  - Gathering additional materials for adding details to the puppets (e.g., feathers, eyes, tissue paper, etc.).
  - Forming new Lab groups based on students’ progress, strengths, and needs as exhibited in the Module 3 Labs.
  - Forming new Lab groups based on students’ interest expressed by the flying pollinator they choose.

**Materials**

- ✓ Model butterfly puppet (new; teacher-created; see supporting materials)
- ✓ Steps for Creating a Pollinator Puppet anchor chart (new; teacher-created; see supporting materials)
- ✓ Steps for Creating a Pollinator Puppet anchor chart (example, for teacher reference)
- ✓ Pollinator Parts templates (one set per student)
- ✓ Colored pencils (variety of colors; a cup to share per workstation)
- ✓ Scissors (one pair per student)
- ✓ Tape (clear; one roll per workstation)
- ✓ Glue (one bottle per workstation)
- ✓ Craft sticks (two per student)
- ✓ String (8 inches long; four pieces per student; see Teaching Notes)

**Experience**

- Gather students in the whole group meeting area.
- Welcome students to the Create Lab, where they will now be puppeteers!
- Display the **model butterfly puppet**.
- Think-Pair-Share:
 

***“What do you notice about this puppet?” (It is of a butterfly. It is attached by strings. It can move in different ways.)***

*“How do you think the artist made it?” (The artist made the body parts. The artist added details to the body parts. The artist connected strings to control the body.)*

*“How is this style of puppet good for creating flying pollinators?” (It can be controlled so it seems like it is really flying.)*

- Direct students’ attention to the **Steps for Creating a Pollinator Puppet anchor chart** and read it aloud.
  - Tell students that this chart shows the steps the artist used to create this marionette-style puppet. With excitement, share that they too will follow these steps to create their own puppet.
  - Referring to the **Steps for Creating a Pollinator Puppet anchor chart**, display each material as you model the steps listed on the anchor chart:
    1. Choose the **pollinator parts templates** needed to make your pollinator puppet.
    2. Use the **colored pencils** to color the body parts.
    3. Use **scissors** to follow the cutting lines and cut out the body parts.
    4. Use **tape** to attach the body parts together.
    5. Fold along the folding lines. (Marked by a dotted line.)
    6. **Glue** two **craft sticks** together at the center of each and let dry.
    7. Once dry, use tape to attach a piece of **string** to the four ends of the craft sticks.
    8. Use tape to then attach the four ends to the body parts of the puppet: the head, the tail, and the two wings.
- Share with students that the puppet they create will be used to act out the fable they will write in the Imagine Lab.
- Tell students that one of these four flying pollinators—a bat, a bee, a bird, or a butterfly—will be a main character in their fable.
- Turn and Talk:
 

*“Which of these flying pollinators do you think you would like to write about and make a puppet of?” (Responses will vary.)*
- Select volunteers to share which flying pollinator they will create.
- Direct students to the appropriate workstation for the flying pollinator they chose and invite them to get started.
- Circulate and support students as they work. Encourage them in the process of coloring, cutting, and assembly of the puppet, of respectfully sharing materials with their Lab group, and of showing perseverance when they are having difficulty.
- Use the Create Lab Checklist to monitor and track student progress.
- At the conclusion of In the Lab time, signal students to clean up their Lab space. Cleaning up scraps of paper, scissors, and storing materials may need to be modeled the first time they do this.
- 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.





## Launch Stage: In the Engineer Lab

### Guiding Question

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

### Learning Targets

- I can identify the elements of an ideal pollinator garden for my classroom or school.
- I can design an ideal pollinator garden for my classroom or school.

### Teaching Notes

#### Purpose:

- In the Engineer Lab, the Launch stage continues to serve two purposes:
  - Students are introduced to the purpose, materials, and task of the Engineer Lab.
  - Students are introduced to the common pollinators and pollinator plants of their geographic region.

#### Habits of character:

- Similar to Modules 1–3, the Engineer Lab makes use of a variety of materials, so respect is central to students' success in multiple ways. First, students must learn and exhibit respect for materials as learning tools. Beginning with this “open exploration” time works toward this goal, as it gives students time to use the materials more like toys before creating more prescriptive, guided experiences. Additionally, students must learn and exhibit respect for one another by collaborating and sharing materials and roles equitably.

#### Logistics:

- Teachers and students begin by setting a purpose for the Engineer Lab: to help their local pollinators by designing and planning a pollinator-friendly garden around their classroom or school.
- Students are introduced to the pollinators and pollinator-friendly plants of their geographic region.
- Students study a model design of a pollinator garden.
- Students begin to work with a partner on their own pollinator garden design.

#### In advance:

- Research the common pollinators and pollinator-friendly plants of your geographic region. Consider using online resources such as <http://www.pollinator.org/guides.htm>.
- Print photographs of local pollinator-friendly plants for students to reference as they complete their design.
- Consider forming new Lab groups based on students' progress, strengths, and needs as exhibited in the Module 3 Labs.

## Providing for Pollinators

- Form partnerships within each Lab group. Prepare workstations by placing the following at each for each partnership:
  - Paper, pencils, and colored pencils
  - Photographs of local pollinator-friendly plants
  - Model design of a pollinator garden
  - Pollinator Garden Checklist (see supporting materials)

### Materials

- ☑ Local Pollinators and Pollinator-Friendly Plants anchor chart (new; teacher-created; see supporting materials)
- ☑ Local Pollinators and Pollinator-Friendly Plants anchor chart (example, for teacher reference)
- ☑ Pollinator Garden Checklist (one per pair and one to display)
- ☑ Model design of a pollinator garden (one per pair and one to display)
- ☑ Photographs of local pollinator-friendly plants (one set per pair)
- ☑ Paper (legal size; one piece per student)
- ☑ Pencil (one per student)
- ☑ Colored pencils (variety of colors; one cup to share per pair)

### Experience

- Welcome students to the Engineer Lab!
- Tell students you have been thinking a lot about the pollinators you have been studying together during these last weeks.
- Think-Pair-Share:
  - “What is something we could do as a class to help out our new pollinator friends?”***
- Tell students that there are many things we, as people, can do to help pollinators, like not putting dangerous chemicals on our plants, for example. But one of the most helpful things that people can do, and that they will now be doing too, is designing and planting a special garden just for pollinators!
- Think-Pair-Share:
  - “If we were to design and plant our own pollinator garden, what do you think we need to include?”***
- Confirm ideas such as: “We need to plant the kinds of plants that pollinators, such as bees, use for food” or “We need some brightly colored plants to attract pollinators to our garden.”
- Tell students that you have been doing some research about the pollinators and pollinator-friendly plants of your area, and you gathered some important information for them.
- Direct students’ attention to the **Local Pollinators and Pollinator-Friendly Plants anchor chart**.

- Using a total participation technique, invite responses from the group:
  - “Is there any pollinator or plant on this list that you recognize or already know?” (Responses will vary.)*
  - “Is there anything here that surprises you or that you did not know?” (Responses will vary.)*
  - “Is there anything here that you have seen near your home? Near our school?” (Responses will vary.)*
- Refer to the **Local Pollinators and Pollinator-Friendly Plants anchor chart (example, for teacher reference)** as necessary.
- Tell students that their pollinator garden will need to contain a mixture of these plants to be successful in attracting pollinators.
- Display the **Pollinator Garden Checklist** and read it aloud.
- Tell students that this checklist will help guide them in their designs, ensuring that they include the things a pollinator needs.
- Display the **model design of a pollinator garden**, sharing that this is one example of a design for a pollinator garden.
- Turn and Talk:
  - “Did the designer of this garden include everything from the checklist?” (Review each component of the checklist and note that the designer did include everything.)*
  - “Did the designer of this garden include anything additional in the design?” (The designer added labels to each part.)*
- Tell students that they should use the Local Pollinators and Pollinator-Friendly Plants anchor chart, the Pollinator Garden Checklist, and the model design of a pollinator garden to guide them as they design an ideal pollinator garden for their community.
  - Point out the other materials available at their workstations: photographs of local pollinator-friendly plants, paper, pencils, and colored pencils.
  - Tell students that they will work with a pre-determined partner at their workstation. They will need to share the materials and compromise on ideas, so being fair and taking turns with the materials will be important.
  - Direct each Lab group to their workstation for the day and move students into pre-determined pairs.
  - Invite students to begin working with their partner.
  - Circulate and support students as they work, focusing on their sharing and caring for materials. Use the Engineer Lab Checklist to gather evidence of students’ progress toward the targeted SL standards for the Lab.
  - When visiting workstations, guide students toward better collaboration and higher-quality work, asking:
    - “How are you deciding on ideas in a fair way?”*
    - “What materials are you looking at to be sure you are including everything?”*
    - “What types of pollinators do you think would like your garden best?”*
- At the conclusion of In the Lab time, signal students to clean up their Lab space.

## Providing for Pollinators

- 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.



### Launch Stage: In the Imagine Lab

#### Guiding Question

- How can I write an original fable about pollinators?

#### Learning Targets

- I can plan a pollinator fable based on shared criteria, a pollinator character, and a common moral.
- I can write a first draft of my pollinator fable.

#### Teaching Notes

##### Purpose:

- In this module, the Imagine Lab:
  - Allows students to access and show their knowledge of pollinators in a new and creative way.
  - Provides an additional opportunity to make progress toward W.2.3, SL.2.4, SL.2.5, and SL.2.6 as students write an original fable.

##### Habits of character:

- Similar to Modules 1–3, students continue to create imaginative scenes, but this time in writing. As needed, remind them of specific strategies and rationale for planning and executing a written piece.

##### Logistics:

- Teacher and students work together to study a model fable, breaking it down into its elements using a Fable Elements anchor chart.
- Students discuss the common moral the class will be using to build their fables, and then brainstorm various characters, problems, and solutions that could teach that common moral.
- Students begin planning their fables using the Fable Elements planner.

##### In advance:

- Preview the butterfly model fable that will be studied as a mentor text to both identify the elements of and build criteria for a fable.
- Consider forming new Lab groups based on students' progress, strengths, and needs as exhibited in the Module 3 Labs.

## Materials

- ☑ Fable Elements anchor chart (new; teacher-created; see supporting materials)
- ☑ Fable Elements anchor chart (example, for teacher reference)
- ☑ Butterfly model fable (one to display; for teacher read-aloud)
- ☑ Shared Moral and Common Problems anchor chart (new; co-created with students; see supporting materials)
- ☑ Shared Moral and Common Problems anchor chart (example, for teacher reference)
- ☑ Labs notebook (new; one per student and one to display)
  - Fable Elements planner
  - Fable writing pages

## Experience

- Welcome students to the Imagine Lab!
- Using a total participation technique, invite responses from the group:
 

*“Of all the things you have done in the Imagine Lab, what has been your favorite so far?” (Responses will vary.)*
- Give students specific, positive feedback about the time they have spent in the Imagine Lab already this year.
- Tell them that they will continue to use all those great Imagine Lab materials, including their imaginations.
- Say:
 

*“I think that, because you have been so successful in the Imagine Lab, it is time for a new challenge! Do you agree? I have been loving all of the different pollinators we have learned about. It would be fun to imagine and write a fable about what we have learned about them! When you became pollinator experts, you learned so much about birds, butterflies, and bees. Now you will get to write a fable about a pollinator of your choice!”*
- Share with students that they will use their wonderful imaginations to write a fable that brings to life the story of their pollinator, a challenge it faces, and a lesson it learns.
- Remind students that to write a fable, writers have to include certain elements or pieces. It’s kind of like pieces to a puzzle, and once all the pieces are in place, a fable is born. Remind students that the fables they read have those same pieces.
- Think-Pair-Share:
 

*“What are some pieces of a great fable?” (characters, setting, problem, resolution, end, and moral)*
- Direct students’ attention to the **Fable Elements anchor chart**.
- Emphasize and review the different elements necessary to make a good fable (characters, setting, problem, resolution, end, and moral). Emphasize that every fable has these things in common. Refer to the **Fable Elements anchor chart (example, for teacher reference)** as necessary.

- Display the **butterfly model fable** and tell students that you have a fable to share with them about a butterfly.
- Tell students that as they listen to the fable, they should think about the setting, characters, problem, resolution, end, and moral.
- While still displaying the butterfly model fable, read it aloud.
- Using a total participation technique, invite responses from the group. As students share out, capture their responses on the Fable Elements anchor chart.

*“Who are the main characters in the story?” (a butterfly and a bee)*

*“Where does the story take place?” (on a farm, in the spring and the autumn)*

*“What is the butterfly’s problem?” (It’s time to prepare the garden so there will be food, but the butterfly does not want to help.)*

*“How does the story resolve?” (The butterfly does not have food in the autumn. The bee will share only if the butterfly does the harvest alone.)*

*“How does the fable end?” (The butterfly does his part to help, and then is the first one to come help the next year.)*

*“What is the moral, or lesson, of this fable?” (Everyone has to do his or her part of the work.)*

- Tell students that in this Lab they will be challenged to use their imagination to include all of these fable elements in their own original narrative.
- Because they know so much about pollinators, their fables will center on a pollinator, specifically a flying pollinator (a bat, a bee, a bird, or a butterfly).
- Remind students that their writing in the Imagine Lab connects to their creations in the Create Lab, as they are creating a puppet for their characters, as well as a setting.
- Direct students’ attention to the **Shared Moral and Common Problems anchor chart**.
- Tell students that all of their narratives will be unique, but they will all have one thing that is the same, that is shared: the moral of their fables.
- The butterfly fable taught us that each character must do his or her fair share of the work, but all of the student fables are going to teach that “every member of a community, despite size or difference, can play an important part.”
- Think-Pair-Share:

*“What kinds of differences might a character, a pollinator or person, have that makes others think they cannot be the hero, or even be helpful?” (The character is too small. The character is too slow. The character cannot fly. The character is a different color or gender than the others in the group or game.)*

- As students share out, capture their responses on the Shared Moral and Common Problems anchor chart. Refer to the **Shared Moral and Common Problems anchor chart (example, for teacher reference)** as necessary.
- Once five or six problems have been recorded, give students think time to decide on a first story idea. Invite them to share with a partner and whole group (given time) their idea for their first story.
- Display the **Fable Elements planner** in the **Labs notebook** and share that students will plan their story idea using this planner, which looks just like the one on the anchor chart.



- Remind students that they will write their fable about a pollinator, so they should think about a setting and problem that might relate to their pollinator.
- Transition students to their workstations and point out the Lab notebooks already there.
- Invite students to take one and begin planning.
- Circulate and support students as they work, focusing on using the Fable Elements planner. Refer to the **Labs notebook (example, for teacher reference)** as necessary.
- At the conclusion of the Lab time, signal students to clean up their Lab space.
- Bring students back to the whole group meeting area to share their plans.
- Display the **fable writing pages** in the Labs notebook. Tell students that this is where they will draft their fable.
- Give Lab groups or individual students specific, positive feedback for responsible and respectful cleanup behaviors.



### Launch Stage: In the Research Lab

#### Guiding Question

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

#### Learning Targets

- I can create a survey to learn about my community's attitudes toward unusual pollinators.
- I can use my research skills to learn about unusual pollinators.

#### Teaching Notes

##### Purpose:

- In the Research Lab, the Launch stage serves two purposes:
  - Students are introduced to the purpose and materials they will use in the Lab.
  - Students create an interactive survey to post in a public area of the school.

##### Habits of character:

- Similar to Module 3, the Research Lab helps students build their skills of responsibility and collaboration. Students are expected to remain focused on the research materials, recording facts and questions as they read. They are also encouraged to collaborate with their peers, sharing interesting things they learned, and to support one another in solving tricky words or understanding new, complex ideas.

## Providing for Pollinators

### Logistics:

- Students are introduced, or reintroduced, to three “unusual” pollinators: bats, possums, and lizards. These three were chosen due to the often negative ways people see them. (Icky! Scary!)
- Students work in small groups to create a survey for their school community. The purpose of this survey is to see what their community knows and feels about these unusual pollinators.
- Using a set of provided research materials (articles, note-catchers, and text-dependent questions), students begin to build background knowledge about these three animals, and perhaps also begin to change their own perceptions.

### In advance:

- Preview the Labs notebook and note the research materials about unusual pollinators included in each. Each set includes the articles and accompanying note-catchers and text-dependent questions: “Pollinating Possums!” “Beneficial Bats!” and “Leapin’ Lizards!”
- Based on availability, collect any additional research, at an appropriate reading level and with supportive text features, about bats, possums, and lizards.
- Identify a location, or multiple locations, in the school, preferably with high walking traffic, to post the interactive surveys students will create during the Launch stage.
- Next to the interactive chart, consider hanging a marker on a string for participants to use in marking their answer choices.
- This sequence recommends the use of tally marks; 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.
- Prepare workstations by placing the following at each one:
  - One set of research materials
  - One piece of chart paper for creating an interactive survey
  - Markers
- Consider:
  - Forming six small research groups (two groups for each of the three unusual pollinators being studied). This keeps group sizes smaller and, therefore, individual participation higher.
  - Setting up the six survey charts similar to the “Unusual Pollinators: Community Survey.” This guides students toward appropriate questions and responses, as well as saves them time.

### Materials

- ☑ Photographs of the unusual pollinators (a possum, a lizard, and a bat; one each to display)
- ☑ Unusual Pollinators: Community Survey anchor chart (new; teacher-created; see supporting materials)
- ☑ Unusual Pollinators: Community Survey anchor chart (example, for teacher reference)
- ☑ Chart paper (six pieces; used by groups to record their survey question)
- ☑ Markers (various colors; used by students to create their survey question charts)
- ☑ String (24 inches long; one piece per piece of chart paper)
- ☑ Tape (12 to 15 pieces; to hang survey charts and markers)



## Experience

- Welcome students to the Research Lab!
- Tell students that their goal in the Research Lab for the next several weeks has three parts:
  - 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.
- Show students the **photographs of unusual pollinators** one at a time.
- Between each photograph, Turn and Talk:
 

*“What is this animal? How would you feel if this animal walked or flew up to you outside of your home in the morning? What if it came inside of your home?” (Responses will vary.)*
- Confirm that they are looking at pictures of a possum, a bat, and a lizard.
- Using a total participation technique, invite responses from the group:
 

*“Based on your conversations and what you already know, what do these three animals have in common?” (Responses will vary.)*
- Confirm:
  - Each of these animals, like bees, butterflies, and birds, are pollinators. These pollinators are just a little more unusual because we do not usually think of them this way.
  - For many people, the perception of these animals can be negative. (Give the example of a person’s reaction to a butterfly fluttering near them vs. a bat flying near them. The reaction would be quite different.)
- Tell students that their first job is to find out what members of their local community (i.e., their school) know about these unusual pollinators and how they feel about them. They will do this by conducting a survey.
- Remind students that they did this kind of data collection in the beginning of the school year as they learned about members of their classroom community. This time, however, they cannot ask every community member the questions personally. They will have to leave their survey hanging in a public place and let people respond.
- Direct students’ attention to the **Unusual Pollinators: Community Survey anchor chart**.
- Ask:
 

*“What do you notice about the way this survey is organized?” (It has spaces for questions and answers. It has directions for the responders. Each question has three answer choices.)*
- Tell students that because they will not be there to explain their survey, it is important that it is designed and written very clearly for people. For this reason, students will follow the structure of this anchor chart. It is also important that the questions have clear multiple choice responses for people to add their tally marks.
- Think-Pair-Share:
 

*“What questions could you ask people to learn about our community’s knowledge of and feelings about possums?”*

## Providing for Pollinators

- As students share, guide them in understanding the importance of writing clear, simple questions that can have multiple choice responses. Provide examples as necessary: “How would you feel touching a possum?” “Is a possum helpful or harmful?” “Do you know ways possums are helpful?”
- Use one of the suggested questions to model filling in the first survey question on the Unusual Pollinators: Community Survey anchor chart. Refer to the **Unusual Pollinators: Community Survey anchor chart (example, for teacher reference)** as necessary.
- With students, brainstorm the possible responses that would be appropriate to this question. (Responses should give people a variety of choices. Responses should be a single word or short phrase.)
- Use suggested responses to model filling in the first survey question on the Unusual Pollinators: Community Survey anchor chart.
- Point out the workstations set up around the room. Share that each workstation has a piece of **chart paper** for them to create a survey about one of the unusual pollinators using the **markers** provided. Each pollinator has two groups creating questions.
- Give students directions for their small group work:
  1. Brainstorm questions you might ask to help find out what people know and how they feel about the unusual pollinators.
  2. Decide three questions to ask.
  3. Write the questions on the chart.
  4. For each question, brainstorm possible answers people may choose from.
  5. Write the answer choices on the chart.
- Transition students to workstations.
- Circulate and support students as they work, focusing on the full participation of each group member, the questions they are formulating, and the responses they are offering.
- Use the Research Lab Checklist to track students’ progress toward the targeted literacy standards for this Lab.
- When visiting workstations, guide students’ reasoning and thinking by asking probing questions such as:
  - “Will this question help you understand what people know about your unusual pollinator?”*
  - “Will this question help you understand what people feel about your unusual pollinator?”*
  - “Do your responses offer a variety of choices?”*
- 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.
- Use **tape** to post the surveys and markers in a high-traffic area of the school.
- Attach markers to **string** and hang next to each poster for participants to use.