

**Grade 1:** Module 1: Labs

# 1 – Launch Stage

## Labs: Launch Stage

### Days 1–4

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

1. The Launch stage serves four purposes:

- To introduce and practice the Lab schedule and routines and lay the groundwork for the habits of character that students will 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.

Each Lab launches with a whole group experience and does so on a separate day, so students can experience a full immersion into each Lab.

During their In the Lab time, students break up into smaller Lab groups and go to separate workstations (tables or other work spaces around the classroom).

This structure creates a small collaborative atmosphere in which students will work throughout their Labs experience. It also supports the management of materials (since each workstation has its own materials).

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

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



### Launch Stage: At-a-Glance

#### Guiding Question

##### Create Lab

How can I create a realistic drawing of a tool?

##### Engineer Lab

How can I use classroom tools to create my own magnificent thing?

##### Explore Lab

What's the best tool for the job?

##### Imagine Lab

How can I use my imagination to create a world of play for myself and others?

Learning Target(s)	<p><b>Create Lab</b></p> <p>I can use different kinds of lines to draw tools.</p> <p><b>Engineer Lab</b></p> <p>I can use classroom tools and materials responsibly.</p> <p><b>Explore Lab</b></p> <p>I can build a boat that floats and holds pennies.</p> <p>I can collaborate with a partner in the design and building process.</p> <p>I can show respect for Lab materials and my peers.</p>
Ongoing Assessment	<p><b>Create Lab</b></p> <p>Create Lab Checklist (SL.1.1, SL.1.3, SL.1.4, SL.1.5, SL.1.6)</p> <p><b>Engineer Lab</b></p> <p>Engineer Lab Checklist (SL.1.1, SL.1.3, SL.1.4, SL.1.5, SL.1.6)</p> <p><b>Explore Lab</b></p> <p>Explore Lab Checklist (SL.1.1, SL.1.3, SL.1.4, SL.1.6)</p> <p><b>Imagine Lab</b></p> <p>Imagine Lab Checklist (SL.1.1, SL.1.3, SL.1.4, SL.1.6)</p>

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

Practice Stage: Daily Schedule

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

**Launch Stage: Setting Lab Goals****10 MINUTES****Teaching Notes****Purpose:**

- 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:
  - To increase the time students encounter complex text through read-alouds.
  - To build students' understanding of the structure of narrative and informational texts through read-aloud and oral storytelling.
  - To connect to the content of the labs (and module), as well as to the habits of character that students practice during the labs.
- Students benefit from seeing the text when it is read aloud. Consider displaying the text with a document camera. This is particularly essential if the illustrations are important or beautiful.
- Some students may benefit from time to verbally process a story as it is being read. Consider using discussion protocols such as Turn and Talk to allow them time to verbalize their understanding of stories. Do this judiciously, however; note that Storytime is only 10 minutes.
- During the Launch stage, choose texts that meet the following criteria:
  - Support students' understanding of lines.
  - Illustrate ways that imagination and perseverance can transform something ordinary (materials, spaces, etc.) into something extraordinary.
  - Include a character (fictional or real) who is learning about or demonstrating responsibility.

**In advance:**

- Choose a text from your own classroom library or the K–5 Recommended Text List (stand-alone document).
- Consider creating a focus question for Storytime (see example in the Experience section on the following page).
- Create four heterogeneous Lab groups. Seat students in their Lab groups during Storytime and Setting Lab Goals for easier transitions and more focused discussions. Consider keeping the same Lab groups through the Launch, Practice, and Extend stages of Labs for this module.
- Review the Labs song.
- Post: Focus question (optional).

**Materials**

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

**Experience (identical during all four stages of labs)**

- Gather students whole group by singing the (start of the) **Labs song**.
- Introduce the **text for Storytime**.
- Consider giving students a focusing question with which you would like them to listen, especially as it supports their work in the Labs. (Examples: “While I read aloud this story, think about the ways in which the characters collaborate, or work together” or “While I read aloud this story, think about this question: How does the main character create something beautiful of his/her own?”)
- Read aloud the text for Storytime slowly, fluently, and without interruption.

**Launch Stage: Setting Lab Goals****5 MINUTES****Teaching Notes****Purpose:**

- 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. All students, but especially primary learners, need to learn and practice the behaviors associated with executive functioning.
- Consider using visual displays (anchor charts, a Labs schedule, a daily agenda, etc.) to support students in understanding and remembering where they are going that day and what is expected of them once they are there.

**In advance:**

- Post: Guiding question and learning target(s) for the Lab students will be launching that day (see detailed plans for each Lab below).

**Materials**

- ✓ Learning target(s) (one to display for each Lab; see Launch Stage: At-a-Glance for the specific targets for each Lab)

**Experience**

- Briefly introduce the Lab that the class will launch today.
- Ask students to Think-Pair-Share something they already know about the name of that Lab to help build background knowledge. (Examples: “Today we are launching the Engineer Lab. What do you already know about engineers?” or “Today, we are launching the Imagine Lab. What does it mean to imagine?”)
- Tell students they will work in small groups, called Lab groups, and today all groups will work on the same task. Students should already be seated in their Lab groups so they can begin to remember with whom they will be working and moving during Labs.
- Share the **learning target(s)** for the Lab the class is focused on today. Ask students to turn and talk about each of these questions with an elbow partner:

- \* *“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!
- 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 on the following pages for detailed plans on each specific Lab.

### Launch Stage: Reflecting on Learning

#### Teaching Notes

##### Purpose:

- The reflection portion of Labs serves as a bookend to Setting Lab Goals. Students both recall how they spent their time in the Lab and reflect on their experience in the Lab.
- This cycle of goal-setting and reflecting leads to greater intentionality by students as well as a sense of ownership in their learning.
- Students will have varying levels of experience with reflection. For those who may need additional support: Consider using predictable structures of reflection (such as protocols) as well as familiar sentence frames to support English language learners.

##### In advance:

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

#### Experience

- Gather students back together 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.
- Ask a reflection question, giving students think time before they respond. This promotes more considerate responses and supports English language learners. Examples:
  - \* *“What is something you did really well in the Lab today?” (Responses will vary, but may include: I helped clean up my workstations.)*

- \* *“What is something you struggled with in the Lab today?” (Responses will vary, but may include: I could not decide what to build in the Engineer Lab.)*
- \* *“How did you get past a difficult obstacle?” (Responses will vary, but may include: I asked a friend to help me when I could not tie the string.)*
- \* *“What is something you want to do better in Lab time tomorrow?” (Responses will vary, but may include: I want to be able to add more details to my drawing.)*
- \* *“What was your favorite part of the Lab today? Why?” (Responses will vary, but may include: I loved building a boat for “make it float.”)*

- 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, etc.).
- Invite students to give a neighbor a high five and take off their imaginary lab coat and goggles to indicate the end of the Lab experience.



## Launch Stage: In the Create Lab

### Guiding question

- How can I create a realistic drawing of a tool?

### Learning targets

*I can use different kinds of lines to draw tools.*

### Teaching Notes

#### Purpose:

- In the Create Lab, the Launch stage serves two purposes:
  - Students recognize the various types of lines that make a tool.
  - Students become familiar with the materials they will use in the Create Lab.

#### Habits of character:

- The Create Lab intentionally avoids the use of some traditional drawing supports such as stencils or tracing materials. Instead, students create their own “Artist’s Toolbelt” of skills. This promotes their independence and self-efficacy as artists and learners.
- During the Launch stage of the Create Lab, students build the habit of character of perseverance as they work through multiple drafts of their drawings.

#### Logistics:

- During the Launch stage of the Create Lab, Lab groups visit two workstations for 20 minutes each.

**In advance:**

- Prepare four workstations by placing pencils, lines cards, and a tool or picture of a tool at each workstation for students to draw tools.
- Consider labeling each workstation (with a name or number) to assist students in transitioning from one to the next.
- Gather a variety of tools such as hammers, wrenches, whisks, stethoscopes, etc. If real tools are not available, use high-quality, realistic pictures of tools.
- Determine the signal (bell, word, silent signal) you will use throughout labs to let students know when it is time to clean up their station.

**Materials**

- ✓ Lines card (one per pair, see supporting materials)
- ✓ Paper (blank; two pieces per student)
- ✓ Pencils (one per student or a cup of pencils per workstation)
- ✓ Tools or pictures of tools (one per workstation; see Teaching Notes)

**Experience**

- Tell students that in the Create Lab, they will build their own “Artist’s Toolbelt.” This is not a real belt that they wear, but it is a set of skills that artists have to help them create beautiful art.
- Pretend to put on an imaginary toolbelt and invite students to dramatically do the same with you.
- Tell students that the very first tool artists add to their toolbelt is lines.
- Pretend to hold the idea of “lines” in your hand and add it to your toolbelt. Invite students to do the same.
- Ask students work with an elbow partner to list all the different kinds of lines they already know.
- Share several examples whole group. As students share, invite them to make the various types of lines as “air drawings” with their finger or to try to create the line with their body.
- Introduce students to the **lines card**. Tell them they can use this to help them identify (name) different types of lines, as well as to help them draw lines. Review each line on the lines card.
- Direct students’ attention to the four workstations around the room and the materials at each workstation: **paper**, **pencils**, and **tools** (or **pictures of tools**). Remind them that the tools are serving as their model for drawing and are not to be played with during this time.
- Tell students they will be traveling with their Lab groups to two workstations today, and they will spend 20 minutes at each station.
- Explain that when students arrive at a workstation, they will first work with a partner to look at the tool very closely to identify all the lines they see. Then, using these lines, they will each draw the tool on paper.
- Consider modeling this process, working with a student volunteer and with a tool that is not already at one of the workstations.



- Tell students you will use a signal (bell, word, silent signal) to let them know when it is time to clean up their station. Then, you will use the signal again when it is time to move to a new workstation.
- Consider inviting students to model this process, and then practice it as a whole class. (It will be important for students to internalize this routine as they move on in the Labs experience.)
- Assign each Lab group to one of the workstations.
- Invite students to begin working.
- Circulate and support students as they work, identifying lines and including those lines in their drawings.
- After 18 minutes, signal for cleanup.
- After 2 minutes, signal for students to rotate to a new station, reminding them to use the back of their paper for the next drawing.
- Repeat this process so that each Lab group visits two workstations.
- 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. (Example: “I love that I see this Lab group neatly putting away their papers so they can continue working on them later.”)
- As Lab groups are ready, transition them back to the whole group area for Reflecting on Learning.
- Invite students to imitate their favorite line as they walk back to the whole group area (e.g., walk in a zigzag, walk in a curvy line, etc.)



## Launch Stage: In the Engineer Lab

### Guiding question

- How can I use classroom tools to create my own magnificent thing?

### Learning target

*I can use classroom tools and materials responsibly.*

### Teaching Notes

#### Purpose:

- In the Engineer Lab, the Launch stage lets students explore “found” or everyday materials they will use to build their own magnificent thing.

#### Habits of character:

- For students who may need additional support or feel “stuck” right out of the gate: Gently remind them that their main goal today is to simply try out the materials and persevere. Encourage students to talk with each other to gather ideas as they begin or when they feel stuck.

**Logistics:**

- During the Launch stage of the Engineer Lab, students work in their Lab group at one workstation for 40 minutes.

**In advance:**

- Prepare workstations by placing paper, tape, string, and scissors at each workstation for students to design and build an object of their own.
- Consider:
  - Pre-cutting cardboard that may be too thick for student-friendly scissors in a variety of sizes or shapes.
  - Providing tape dispensers for easier student use.
  - How to store students' projects, since some students may continue to work on the same project for several days or weeks.

**Materials**

- ☑ Cardboard (various sizes; two or three pieces per student)
- ☑ Paper (blank; various types, colors, and sizes; several pieces per student)
- ☑ Tape (one roll per workstation or pre-cut 6-inch strips)
- ☑ String (one roll per workstation or pre-cut 12-inch strips)
- ☑ Scissors (one per pair)

**Experience**

- Tell students that in the Engineer Lab, their primary purpose is to explore the various materials available to them to build. The only limitations are their imagination and space. (Student projects need to be a manageable size for storage; this size is determined by classroom space availability.)
- Tell students that in the Engineer Lab, they will think a lot about things in their life that they might want or need. Then they will build these things, either real or imagined, in the Engineer Lab.
- Using a total participation technique, invite responses from the group:
  - \* ***“What is something that you want or need that you could try to build today?” (Responses will vary, but may include: electronics, building toys, action figures, etc.)***
- Point out that some things can actually be built with the materials in the Engineer Lab (building toys and action figures) and for some things, students can build replicas, or imagined representations (such as computers, phones, etc.).
- Direct students' attention to the workstations around the room and the materials at each workstation: **cardboard, paper, tape, string, and scissors.**
- Tell students they will travel with their Lab groups to one workstation today, and the materials in the workstation should be shared among all the members of their Lab group.
- Using a total participation technique, invite responses from the group:
  - \* ***“What does it look like to be fair when sharing materials? What does it sound like to be fair when sharing materials?” (passing materials to members in my Lab group; saying “please” and “thank you”)***

- Remind students of the rules that help them stay safe when using scissors.
- Direct their attention to the learning target and read it aloud:
  - ***“I can use classroom tools and materials responsibly.”***
- Using a total participation technique, invite responses from the group:
  - \* ***“What does it mean to use materials responsibly?” (holding materials gently; putting materials where they belong when I am finished using them)***
- Invite students to “switch on” their engineer brains by flipping an imaginary switch on their heads. Tell them that this is a designing, building, and problem-solving brain.
- Direct each Lab group to their workstation for the day.
- Invite students to begin working.
- As they work, remind students that they do not need to finish their project today. They will return to the Engineer Lab many times over the next days and weeks.
- Circulate and support students as they work, focusing on their sharing and caring for materials.
- 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. (Example: “I notice this Lab group is handling each material carefully as they put it away. This keeps the materials in good shape for the next group that works here.”)
- As Lab groups are ready, transition them back to the whole group area for Reflecting on Learning.



## Launch Stage: In the Explore Lab

### Guiding question

- What’s the best tool for the job?

### Learning target

***I can build a boat that floats and holds pennies.***

***I can collaborate with a partner in the design and building process.***

### Teaching Notes

#### Purpose:

- In the Explore Lab, the Launch stage immerses students in a design challenge that encourages them to work collaboratively and think creatively.
- This design challenge prepares students for future experiences in the Explore Lab, in which they must collaboratively solve design challenges.

**Habits of character:**

- During the Launch stage of the Explore Lab, students work in their Lab groups to solve a design challenge. Students will have multiple ideas of how to best design and execute solutions; therefore, collaboration and communication are central to the success of this Lab experience.

**Logistics:**

- After introducing students to the challenge and the materials available, they spend the remainder of the Lab time with their Lab group at one workstation.
- Once at their workstations, students work with a partner to design and build a boat. Create supportive partnerships in which students may work.
- For students who may need additional support: Consider providing images of a variety of boats to give ideas about shape and construction.

**In advance:**

- Consider:
  - Covering workstations with cloth or plastic.
  - Forming partnerships within Lab groups to create a smaller, more supportive experience (optional).
- Fill containers about halfway with water.
- Prepare workstations by placing containers (halfway filled with water), aluminum foil, and pennies.

**Materials**

- ☑ Aluminum foil (6-inch squares; eight to 10 per workstation)
- ☑ Containers (a deep baking dish or shallow bucket; one per workstation)
- ☑ Pennies (two or three per workstation)

**Experience**

- Tell students that today they will win a design challenge called “Make It Float.”
- Direct students’ attention to the first learning target and read it aloud:
  - ***“I can build a bloat that floats and holds pennies.”***
- Clarify any unfamiliar vocabulary in this learning target as necessary.
- Using a total participation technique, invite responses from the group:
  - \* ***“What are the two goals of our challenge today?” (The boat should float. The boat should hold pennies.)***
- Direct students’ attention to the second learning target and read it aloud:
  - ***“I can collaborate with a partner in the design and building process.”***
- Using a total participation technique, invite responses from the group:
  - \* ***“What does it mean to collaborate?” (to work as a team and make sure nobody gets lefts out)***

- Tell students that when they work with a partner, they might have different ideas about the best way to solve a problem. It is very important that both partners have a chance to explain their idea. It is also possible to try out both partners' ideas and then discuss which way worked best and why.
- Gather students around one of the workstations.
- Show students one square of the **aluminum foil**. Inform them that this is the only material they have to build with today. They may use multiple squares of aluminum foil in their construction, but this is the only material they can use to build their boat.
- Direct students' attention to the **container** halfway filled with water. Tell them that this is the body of water on which their boat must float and hold a penny. Tell students that the container of water must remain in a central location, so the whole Lab group can use it.
- Review expectations of proper use of the water.
- Assign each Lab group to one of the workstations.
- Move students into predetermined partnerships.
- Invite students to begin building and testing their boats.
- Circulate and support groups as they work.
- If students are able to "make it float" with time remaining in the Lab, invite them to try out more than one penny or multiple boat designs. This will prepare them for the design challenge during the Practice stage.
- 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. (Example: "I appreciate how this group is working together to clean up their workstation.")
- 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 use my imagination to create a world of play for myself and others?

#### Learning target

*I can show respect for Lab materials and my peers.*

## Teaching Notes

### Purpose:

- In the Imagine Lab, the Launch stage serves two purposes:
  - Students are introduced to the purpose of the Imagine Lab.
  - Students are given time to explore the various materials they will use in the Imagine Lab and begin to formulate ideas about how they might use these materials in the future.

### Habits of character:

- The Imagine Lab incorporates multiple types of materials to allow students to create a world of play for themselves and others. Respect for these materials and respect for peers is necessary for the success of the Imagine Lab.

### Logistics:

- During the Launch stage of the Imagine Lab, students work in their Lab groups and rotate among four workstations, spending 10 minutes at each one. Since students are at each workstation for only 10 minutes, they have a limited amount of time to be introduced to each material.

### In advance:

- Prepare workstations, each with a different type of imaginative play material that will be housed in the Imagine Lab (other possible materials might include modeling clay, common kitchen materials and safe cooking utensils, and felt or magnet boards):
  - Workstation 1: building blocks (one set of wood or linking blocks)
  - Workstation 2: white board (one large to share or several small) and dry erase markers (one per student)
  - Workstation 3: hand or finger puppets (several to share)
  - Workstation 4: dress-up materials (several to share)
- Consider labeling each workstation with a name or number to assist students in transitioning from one to the next.

## Materials

- ☑ Workstation materials (for students to use to create a world of play for themselves and others; see Teaching Notes)

## Experience

- After setting goals for the Imagine Lab, consider walking students as a whole group to each workstation. Remind them that each Lab group will visit all four workstations.
- While at each workstation:
  - Review the proper use and care of materials, as well as the way materials should be stored when students are finished.
  - Invite students to share their ideas of what they might imagine or what they might play when using that workstation's materials.

- Consider suggesting imaginative play ideas based on the anchor texts of the module. (Example: Students might consider playacting characters from literary texts they are reading during the module lessons.)
- Assign each Lab group to one of the workstations.
- Tell students that today they will have 9 minutes of exploration time at each workstation. Invite them to begin exploring and imagining.
- As students work, circulate and support them, specifically in the area of respect toward materials and peers.
- After 9 minutes, give the cleanup signal. Take a quick survey of each workstation to be sure students have carefully stored all materials and are ready to rotate.
- Remind students which workstation they will visit next. Invite them to rotate.
- Repeat this process until students have visited each of the four workstations.
- 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. (Example: “It is wonderful to see this group storing materials neatly where they found them.”)
- As Lab groups are ready, transition them back to the whole group area for Reflecting on Learning.