Work on goals that are personal, relevant, and motivating

What you get from it	When you do it
Help kids overcome obstacles to fulfill dreams	10-15 min., 1x a month

UNBOXED PREPARED PARENTS

Character LAB

Plan

It's important to have a purpose.

Having a purpose is as important for kids as it is for adults. This is why we start each month with ***Plan***, to help kids set and work on goals that are personal, relevant, and motivating. Having goals creates meaning—and with meaning, comes purpose—in school, at home, at work, and in life.

There's more than one way to plan, and each month we present something a little bit different than the last. What's important is not that kids adopt any particular method of planning—though we'll be delighted if one that we provide works best for them! What's really important is that kids see the benefit of setting goals and **make goal-setting a habit**.

Goal-setting is a skill kids can learn and use for life, and knowing they can establish and own their goals is a critical part of self-direction.

This month we're excited to partner with **Character Lab** to offer a different approach: **WOOP**.

WOOP, developed by Gabriele Oettingen and Peter M. Gollwitzer, psychology researchers at New York University, is a science-based mental strategy people of all ages can use to find and fulfill their wishes. It is based on the concept that all dreams must be dreamt with obstacles—and plans for overcoming those obstacles—in mind.

WOOP! We're excited this month to be partnering with **Character Lab** to offer a practical, accessible, evidence based activity that helps students find and fulfill their wishes.

Coach

TIPS

As a parent or pod leader, you can help kids become self-directed by

- ensuring they feel seen, heard, and known, by you and others;
- showing them you care about them and want to help them make this year meaningful for them;
- helping them think about their long-term goals;
- prompting reflection on where they are in relation to those goals;
- giving them the tools to identify obstacles, stay on track, and learn from the challenges they face.

Time to **WOOP** it up!

Last month we offered guiding questions for identifying long-term goals (the destination), for evaluating kids' current status (current location), and for developing short term goals with concrete steps (mapping the route).

IDENTIFY
long term goals

EVALUATE
kids' current status

DEVELOP
short term goals

Wait...What? Dream of Obstacles?

Have you ever heard that positive thinking is the key to success? While it's well-intentioned advice, research has proven it wrong—positive thinking is actually correlated with lower energy, poorer physical and mental health, and decreased well-being.

That's because when we only think positively, we tend to underestimate—and be unprepared for—any obstacles that arise.

How we deal with obstacles is a big part of our success or failure. To reach a big goal, we have to **take obstacles into account** and plan how to overcome them. The three important steps to achieving any goal are to:

1. **ENVISION** the positive future
2. **ACKNOWLEDGE** the obstacles that may arise
3. **PLAN** how we will overcome those obstacles

This is where WOOP comes in. To **WOOP:**

W	O	O	P
Choose a **Wish**	Imagine the **Outcome**	Identify the **Obstacle**	Make a **Plan**

Based on more than 20 years of research, WOOP has been tested in many settings, including in schools, hospitals, and gyms, and has been proven to help people achieve all kinds of goals, from losing weight and eating better to making better grades and sustaining healthy relationships. Expanding on the applications of WOOP, education research nonprofit Character Lab developed WOOP for Classrooms to help students set and achieve school-related goals, such as starting a school newspaper or getting an A in science.

The reason WOOP is so useful in so many settings is it boils down the process for dreaming our future dreams into a set of simple steps, while also forcing us to consider everything that could go wrong and plan for it.

Interestingly, the act of naming and planning for obstacles can be energizing, which helps us to take action and move forward toward our goals.

This, in turn, leads to a greater chance of success in achieving our bigger wishes and dreams. It's a virtuous cycle.

WOOP at Home

Help your kids put WOOP to work on their wishes, whether those pertain to home, school, health, relationships, or hobbies. The activity presented below takes your kid through the four steps of WOOP: choosing a **Wish**, imagining the **Outcome**, identifying the **Obstacle**, and making a **Plan** to be ready when the obstacle arises.

If kids get stuck on a particular step, talk them through.

- **WISHES CAN BE HARD TO DEFINE.**
  Have them think about goals that may feel difficult, but are possible.
  - Ask, "When do you want to achieve your wish? In the next 24 hours, in a week, a month, or beyond?"
  - Have them think about challenges they've faced at home, school, or elsewhere. How do they imagine those things could be different?
  - A wish might be to improve in one of those areas.
- **OBSTACLES CAN BE INTERNAL OR EXTERNAL.**
  Ask kids to think about past goals. What obstacles stood in their way? Were those obstacles from outside influences, or were there personal traits or habits that got in the way of success?
- **REMEMBER WHAT'S WORKED.**
  Prompt kids to remember strategies they've used to overcome obstacles in the past. Could they use one of those as the plan?

Get to **WOOP**ing!

This month, practice WOOP with your kids—perhaps during your weekly 1:1, which we describe in ***Engage***. Use WOOP to describe short- and long-term wishes and the plans you'll use to achieve them. Character Lab's awesome WOOP tool is provided below!

You can WOOP anything and everything, from mastering the four-move checkmate, to keeping your room clean for a week, to acing a math test. You just have to identify the obstacles and make a plan. When it's time to ***Celebrate*** you can look back and see how it worked!

WOOP helps people do the things they really want to do

WISH

What is an important wish that you want to accomplish? Your wish should be challenging but feasible.

1

My wish:

OUTCOME

What will be the best result from accomplishing your wish? How will you feel? Pause and really imagine the outcome.

2

Best outcome:

OBSTACLE

What is the main obstacle inside you that might prevent you from accomplishing your wish? Pause and really imagine the obstacle.

3

My obstacle:

PLAN

What's an effective action to tackle the obstacle? Make a when-then plan.

4

When:

Then I will (my action):

Simple practices that prepare kids for learning

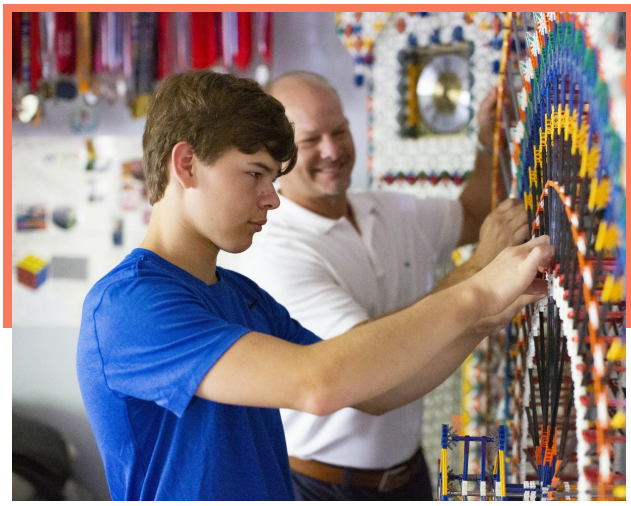
What you get from it	When you do it
Regular, short bursts of 1:1 attention help kids feel they matter.	10-15 min., every week

UNBOXED PREPARED PARENTS

Engage

Establish Routines

Routines unlock learning by helping kids and coaches build predictable patterns. Those patterns create the mental spaces and habits that allow kids to be ready for learning each and every day.



Some routines, like brushing our teeth each morning and night, help us engage in healthy habits, switch gears, and establish a mindset for what comes next. Last month's ***Engage*** introduced a routine like this—Check-In / Check-Out, a daily practice to prepare kids' minds and bodies for learning each day.

Other, less frequent routines—like twice yearly visits to the dentist—provide a different kind of benefit. Those routine visits might help us assess our health, address existing problems, and identify issues that may soon develop. And so, along those lines, this month ***Engage*** offers weekly 1:1s, a way to routinely connect to kids that provides a different kind of benefit.

Regardless of what routines you adopt, remember that having reliable, predictable routines is what's most important!

Routines that provide connection deepen relationships with kids and promote healthy social- emotional development!

Weekly 1:1s — A tested practice that works!

Thousands of students across the country benefit from weekly 1:1s, most notably pioneered for nearly two decades at Summit Public Schools. Through weekly check-ins, teachers serve as long-term mentors for each and every individual student. Through these meetings, the teacher/mentor becomes the student's advocate inside and outside of the classroom, and provides guidance and support, academic or otherwise.

When you adopt this kind of regular, routine 1:1 engagement with kids, you're showing them they're important. It only takes a short time each week for kids to feel safe and secure —these short bursts of 1:1 attention are essential to **helping kids feel they *matter***. Mattering is the belief that we make a difference in the world around us. It's measured by responses to questions like:

- How important am I to others?
- How interested are others in what I have to say?
- How much do other people depend on me?

Letting kids know they matter develops a strong bond, known as ***secure attachment***, and learning science confirms this leads to success not only in school, but in life.

Secure attachment is a deep and enduring emotional bond that connects one person to another across time and space.

Building Secure Attachment

Recognizing the importance of secure attachment, the Search Institute—a nonprofit organization that studies and works to strengthen youth success in schools—put together a five-element framework that supports parents' efforts. This framework enables schools, educators and parents to interact with kids in a positive way.

1. **EXPRESS CARE: Show kids they matter to you by...**
listening. Being dependable. Believing in them. Encouraging them. Being warm.

2. **CHALLENGE GROWTH: Push kids to keep getting better by...**
expecting them to live up to their potential. Holding them accountable. Reflecting on failures. (Along those lines, check out *Grow* to discover the five power behaviors to help your kids power through.)

3. **PROVIDE SUPPORT: Help kids achieve goals by...**
guiding them through hard situations. Building their confidence. Standing up for them. Setting boundaries.

4. **SHARE POWER: Treat kids with respect and give them a say by...**
taking them seriously. Involving them in decisions. Letting them lead.

5. **EXPAND POSSIBILITIES: Connect kids with people and places that broaden their world by...**
inspiring them to see possibilities for the future. Expose them to new ideas, experiences, and places.

Think of these power moves as you plan for your weekly 1:1s and incorporate them into your interactions with kids.

Mentor, Don't Direct

Expert mentors are creative and skilled relationship builders. But mentoring isn't limited to the walls of a school. Think of your role as that of a mentor, helping kids grow the skills they need to thrive, rather than that of a director, telling them what to do.

Taking time out to spend time with kids individually lets them know they matter.

Weekly 1:1s are a great way to establish this kind of relationship with kids, whether at home, in a pod, or through a community organization. Regardless of the setting, routine 1:1s give kids personal, non-judgmental time to talk through the challenges and joys they're experiencing individually.

During 1:1 sessions, let kids do most of the thinking and talking to ensure they are flexing and growing their self-directed learning muscles!

Make It Routine!

Here are three steps to kick off weekly 1:1s.

1 Find your 1:1 time and stick to it.

When is the best time for you to connect with each of your kids? Find a moment in your schedule to spend about 10 uninterrupted minutes together. Ten minutes is a good length of time to let kids feel they matter, while ensuring adequate time for meaningful mentoring.

2 Start with an idea for what you'll discuss each week.

We've offered a guide below to help you plan for different types of weekly 1:1 check-ins. It's not always necessary to have a detailed agenda, but it can be helpful to have a plan and reminders for how best to approach these important conversations.

This month, you might start with WOOP, which we offer in ***Plan,*** and then spend time in your weekly 1:1 returning to wishes, outcomes, obstacles, and plans that came from that activity. **Is everything on track?**

3 Don't be afraid to throw away the script!

While it's okay to use a guide to prep for a routine get-together with kids, remember that every 1:1 should be unique to what a kid needs that day or week.

It's also OK to throw away the script to allow your kid to talk more freely.

Learning how to set goals (using ***Plan***) is key to helping your kids build self-direction skills. Use your weekly 1:1s to check on progress toward those goals, to discuss challenges, and to find strategies to overcome setbacks— like the 5 power behaviors we describe in this month's ***Grow***.

And remember, each get-together doesn't have to be productive in the traditional sense of the word, with goals, to-do lists, and progress reports. **An emotional 1:1 connection, to check in on how kids are doing, can be equally valuable.**

Planning for Weekly 1:1s: How to do it!

Different 1:1s have different purposes, so we're offering simple guides for two types:

- **CONNECTING:** Build foundations for or deepen attachment and trust between adults and kids.
- **PROGRESS:** The weekly "bread-and-butter" check-in agenda using the **self direction cycle**—something we'll dig into in future Unboxed tools.

Start by Connecting and then move on to Progress. We'll cover a third type of 1:1 in a later Unboxed: the **Step-Back**. Each type of check-in has a specific purpose.

Whichever type of 1:1 you're planning, let these actions guide your time with kids: **Pause, Paraphrase, and Probe!**

Pause	Paraphrase	Probe
• Express Care • Share Power	• Express Care • Provide Support	• Share Power • Challenge Growth • Expand Possibilities

Let kids do most of the thinking and talking to ensure they're getting the maximum opportunity to practice and get feedback on the thinking needed for effective self-direction. Spend the majority of the check-in strategically asking clarifying questions to discern factual information and probing questions to uncover kids' thinking.

1:1 Guide to Connecting for Learning Leaders

Adults and learning leaders can use these guiding questions to get to know the kids in their group, and set goals for a meaningful year. This process will help you build foundations for a secure attachment, as well as build trust between you and the kids in your group. Make sure they know you're there for them, to support them in addressing anything that blocks them—not to clear the path, but to help them obtain the tools they need to clear it for themselves.

Whichever agenda you start with: Share the what, why, and how of 1:1s.

- "This is a judgment free zone"
- "My purpose is to support you and be your ally"

Always begin with a warm greeting.
When possible, refer back to something you discussed last week.

- "How was your soccer game?"

When kids are talking, ask deepening questions.
Ask about things you are genuinely curious about.

- "What does that say about what is important to you? Why?"
- "How does that make you feel?"
- "What do you mean by that?"

Make connections between you and your kids.
Keep as close to student's words as possible, and highlight authentic similarities

- "I heard you say X, that highlights to me that you care about Y, and I connect with that because I..."
- "I have a younger sister too."

In this first 1:1, you are establishing a deeper connection with a kid, so it may take longer than a typical weekly 1:1, or you might spread this conversation over multiple weeks if it's helpful to the kid.

INTRODUCE YOURSELF — 4 min
Share who you are, your hobbies, passions, and how you became a learning leader. Answer any immediate questions.

- Is there anything that's been coming up since your school year started that would be helpful to talk about?

GET TO KNOW YOUR KIDS — 5 min
Ask some get-to-know-you questions.

- What are your passions and interests?
- Who are your biggest supporters in your life?
- What are some of the things you think I'll appreciate about you as I get to know you?

DISCUSS LONG- AND SHORT-TERM GOALS — 10 min
Let kids know you want to help them make this year meaningful.
You can also share that you want to help them identify obstacles on the path ahead, find the tools they need to stay on track, and learn from the challenges they face.

- What's important to you these days?
- Who's someone you want to be more like, and why?
- What's something you're struggling with that you want to overcome?
- What's something you are doing well and want to build on?
- What do you want your experience of learning (and school) this year to include? Now, let's think about how we can make this happen together.

CLOSING — 1 min
Thank the kid for sharing, and preview what's coming next.

- Next week we'll start weekly progress check-ins. We'll look for opportunities to refer to your goals to decide on what weekly goals are most important and to feel really motivated to achieve them!

1:1 Guide to Progress Meeting

CHECK IN — 2 min
Greeting: Ask an opening question like, "What's been a high and a low from the past week?"

- Be careful not to turn the whole check-in into a recap about the week.

DISCUSS THE PAST WEEK'S ACCOMPLISHMENTS — 3 min

- What did you feel most proud of this week?
- What are you excited to share that you accomplished?

Ask probing questions to help kids notice the strategies they used successfully. You can then help students apply this strategy in other situations when that's possible.

DISCUSS THE PAST WEEK'S OBSTACLES — 3 min
What obstacles did you encounter?

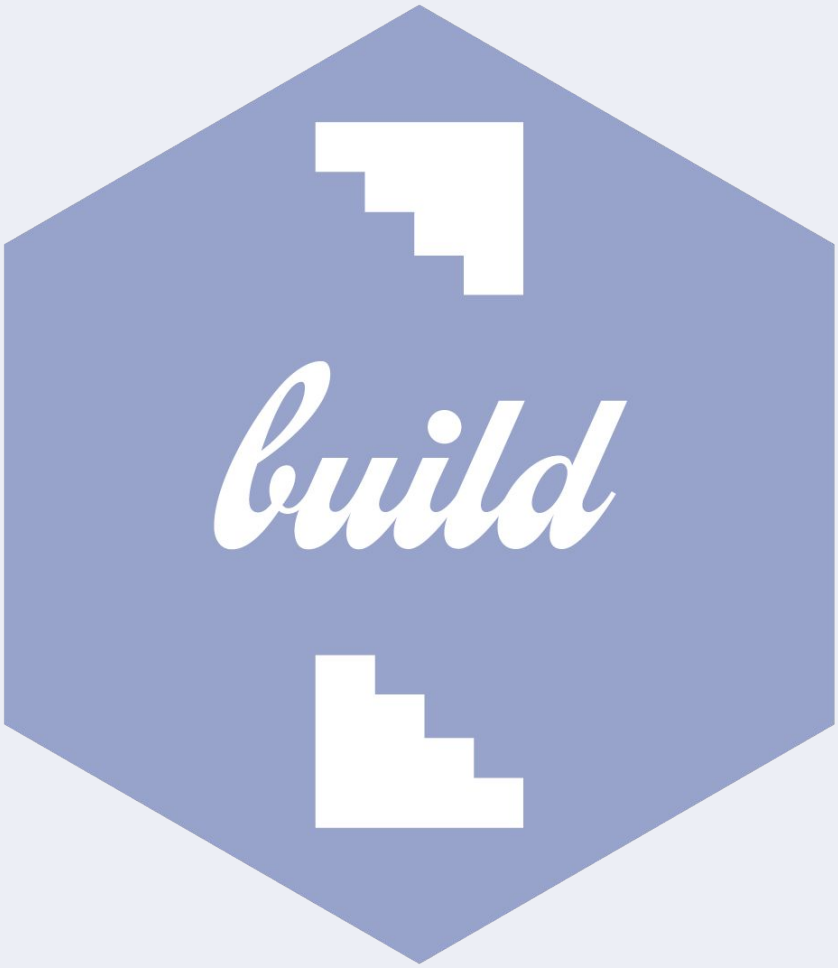
- Try to get to the root cause of obstacles by asking *why* repeatedly.
- Help kids consider when they've faced similar obstacles, what has been successful in overcoming these challenges in the past?
- What power behaviors did you use this week? (See ***Grow*** for more about power behaviors)

When challenging kids to improve, emphasize high expectations and a belief in their ability to meet them.

DISCUSS THE NEXT WEEK — 3 min
Help kids to reflect on the past week's small wins and setbacks and use that learning to prepare for the next week.

- What is happening next week that you want or need to prepare for?
- How is this week helping you to think about your goals next week?
- How do you want to feel by the end of next week? (See ***Plan*** for WOOP — Wish, Outcome, Obstacle, Plan.)

Notice if your kid is consistently missing goals and losing confidence. Help them "chunk" their goals into smaller, achievable steps and set goals around those steps.



Deep knowledge propels future learning. Foundational literacy in reading, writing and math paves the way.

What you get from it	When you do it
Motivate kids to dig deeper	Varies by student.

UNBOXED PREPARED PARENTS

Build

Time to power through.

It's about this time in every school year when the newness wears off, enthusiasm wanes, and we start to look forward to holiday breaks. And with the traditional scaffolds of school looking so different this year, staying motivated to **build those learning superpowers** through foundational skills? It's even more challenging.

As always, we advocate regular, routine practice of foundational reading, writing, and math skills. To help with that practice, we've curated lists of great educational apps and websites to help kids close gaps in their learning, stay on track, or even move ahead. You can find these lists at the end of ***Build.*** But whether you use our recommendations or something else entirely, **make sure regular practice is part of your routine**.

Even better for motivation—connect foundational learning and cognitive skills to the real world to motivate kids to dig deeper. The project in ***Learn*** does just that, and the next page explains a little bit more about how the *Think Globally, Act Locally* project connects to the foundational skills and knowledge all kids need.

How does this month's project align with foundational skills?

When learning feels relevant, kids want to share! But it can feel difficult to connect what a project practices with foundational skills, because sometimes schools can use different terms.

The tables below show how the *Think Globally, Act Locally* project connects to these skills as they might be described by the curriculum in many school settings. Use these terms to talk to parents, kids, teachers, or others about how the Unboxed by Prepared Parents project is helping you make this year meaningful.

	4th–5th Grade Key Terms	6th–9th Grade Key Terms
Interpreting Data/ Information	Represent and interpret data	Represent and interpret data
Making Connections and Inferences	Solve problems based on information in graphs and charts	Investigate patterns of association between variables
Justifying/ Constructing an Explanation	Implement strategies for problem-solving	Model relationships between quantities
Designing Processes and Procedures	Use data, including fractions, to find patterns and make predictions	Make predictions and evaluate outcomes based on data and calculations

Basic Components of Math Literacy		
Number and Operations	Fractions, decimals, and equivalence	Percentages, proportions, and ratios
Algebra	Analyze patterns & relationships	Use variables to represent quantities, solve multi-step problems
Geometry	Coordinate plane and introductory graphing	Modeling using pie charts, donut charts, & stacked bar graphs
Measurement	Dot plots, bar graphs, tables	Frequency tables, histograms
Data Analysis & Probability	Dot plots, bar graphs, tables	Measures of center, range, comparative inferences

Foundational Reading and Writing

How can I make sure my kids are developing the appropriate foundational skills in reading and writing?

All kids should have opportunities to read self-selected, longer works of fiction and non-fiction, ideally spending 20–30 minutes per day reading, either to themselves or out loud.

In addition, the following online tools offer additional opportunities for building foundational knowledge in reading, writing, conventions of language, and speaking and listening.

Reading and Writing Product:	What it is:
BrainPOP	BrainPOP, a trusted learning resource supporting core and supplemental subjects for millions of learners worldwide, offers playful, reflective, and global content for kindergarten through middle school. www.brainpop.com/english
CommonLit	CommonLit offers more than 2,000 high-quality free reading passages for grades 3–12, complemented by aligned interim assessments. Resources are flexible, research-based, effective (as proven by third-party review), aligned to standards, and created by teachers. www.commonlit.org
Khan Academy	Khan Academy's free, personalized learning platform offers reading and vocabulary topics from early learning through 9th grade. Khan Academy has a vast library of lessons and practice created by experts and proven to support learning. www.khanacademy.org/ela
ThinkCERCA	ThinkCERCA is an award-winning program for personalizing literacy instruction for students. Lessons are designed to teach students how to read, write, and think critically across content areas. www.ThinkCERCA.com www.homeschoolbuyersco-op.org/thinkcerca/

Foundational Math

How can I make sure my kids are developing the appropriate foundational skills in math?

The following online tools offer opportunities for building foundational knowledge in math.

Math Product:	What it is:
BrainPOP	BrainPOP, a trusted learning resource supporting core and supplemental subjects for millions of learners worldwide, offers content for kindergarten through middle school. www.brainpop.com/math
DreamBox	An adaptive elementary and middle school math product offering continuous formative assessment in and between lessons, providing the right next lesson at the right time. DreamBox personalizes instruction and uses rich visuals, sound design, and interactivity to support deep math comprehension. www.dreambox.com
Khan Academy	Khan Academy's free, personalized learning platform offers math topics from early math through high school. Khan Academy has a vast library of lessons and practice created by experts and proven to support learning. www.khanacademy.org
Prodigy Math	An adaptive learning platform in which students explore the Prodigy Math Game, where they answer math questions to complete epic quests and earn in-game rewards. Offers a premium version as well as 1-on-1 math tutoring. www.prodigygame.com
Teach to One Roadmap	An adaptive tool for math instruction that starts with a diagnostic assessment, pinpoints the skills a student must master, and provides an academic roadmap to get students to where they need to be. Subscription-based or free with a school-based account. https://teachtoone.org/roadmaps/

Math Project:

Projects use real-world, personally meaningful activities to challenge thinking and inspire action.

What you get from it:	When you do it:
Use the power of numbers to tell stories and influence thinking, decision-making, and behavior.	1 month

UNBOXED PREPARED PARENTS

What is *Learn*?

Learn is a monthly project modeled on a research-based approach to learning called Project-Based Learning (PBL). PBL offers real-world, personally meaningful activities to challenge our thinking and inspire action. We believe that when kids pursue their passions, practice the Habits of Success, and develop strong cognitive skills they will be successful and fulfilled.

Each month, ***Learn*** offers a new project that marries kids' desire to change the world with the best research-based practices and the most important Habits of Success.

The **Appendix** provides additional guidance about how the project relates to skills and additional learning resources.

Better yet, we believe kids want to have a positive impact in the world and that these learning experiences can help make our world a better place.

How does it work?

Each month, we provide about 20–25 days of learning activities to help kids develop an **Impact Project.** Through the project, they'll strengthen their college-ready skills and deepen their knowledge across subjects.

Projects are broken up into "*challenges*" to help kids think, read, write, do experiments, and even build solutions to real problems.

- To start, there is one **essential question** for kids to explore. (Don't worry, we'll explain that term in a moment.)
- Next, we ask kids to **"find their why"**—this allows kids to make projects more personal and meaningful.
- And then kids dive into the **project** where they research, experiment, solve problems, and ultimately produce a final project they can proudly share.

You are not alone!

Unboxed *Learning Support Tools*, and *Coaching Moments* throughout this tool provide additional support along the way.

Make sure you check out the **Learning Support Tool**, which has extra resources for kids and parents. We all learn differently!

This month’s project is...

Think Globally, Act Locally

Project Overview

This is the question we'll think about this month:

How do people use the power of numbers to tell stories and influence thinking, decision-making, and behavior?

Essential questions are questions with no one, right answer. These are questions that never get old. And the answers you find will evolve over your lifetime. Each month we'll share an essential question that ties the skills you are learning to the impact you are making in the world. This will help you reflect in meaningful ways on your academic work, but also on your strengths and capabilities as a global citizen.

Explore the Essential Question

LEARNING SUPPORT tools

Quick Links

CHALLENGE 1
Identify Your Project Focus

CHALLENGE 2
Research Your Product

CHALLENGE 3
Research Your Market

CHALLENGE 4
Create a Business Model

CHALLENGE 5
Pitch Your Idea

Consider the Essential Question...

You will **dream up a product or service** that can benefit your local community and beyond. Then you will create an **entrepreneur's pitch deck** to engage customers and helpers to make it happen!

As you build your pitch, you will also learn how data and statistics (a collection of facts that gives us information) can be used to identify problems, tell stories, make predictions, and influence decision-making.

What's the goal this month?

To harness the power of numbers to influence people in your community

What Cognitive Skills will you focus on this month?

- Interpreting Data/Info
- Making connections and interferences
- Justifying/constructing an explanation

What Habits of Success will be reinforced this month?

Executive Function

Self-Efficacy

Agency

Curiosity

Your project culminates in a final product you create and share.

In this project you will create an entrepreneur's pitch deck. This is a slide presentation entrepreneurs use to tell customers or investors about their idea.

You'll complete 5 challenges.

1. Identify a product or service that benefits others.
2. Understand how the product or service might be used in your customers' lives to solve problems or bring joy.
3. Understand how many people might use it and their current behaviors.
4. Understand the costs of the project.
5. Create and share your pitch!

Your pitch deck will include these components:

Don't worry, we will teach you how to do this!

- Problem You're Solving
- Your Product/Service/Solution
- How It Works
- Target Market
- Price of Product/Service
- Your Costs (Time + Money!)
- Plan for Selling
- Plan for What You'll Do with the Proceeds
- Summary and Founder Information

If math seems scary, don't worry! We'll help you become fearless. Really.

If you worry that math is an obstacle to making a pitch, here's a plan to overcome it:

1. **Instruction is provided**. We'll teach you everything you need to know.

2. Many challenges also have **practice opportunities** for your level of readiness using sample data from another business idea. This is a great way to review and stretch your data muscles for math and science.

3. You'll also have a chance to **work with your own data**, which you will collect and analyze. Don't worry, we'll walk you through the steps!

No matter what, you will be a pro at data when you are done.

This project is broken into 5 challenges to complete over the month.

Identify Your Project Focus

1

A business idea and a list of potential customers

- 4 hours -

Research Your Product

2

A survey and several solid ideas about this product, backed up by data

- 5 hours -

Research Your Market

3

Research on the number of customers and the amount of spending in that market

- 4 hours -

Create a Business Model

4

Hard facts about the cost of the product or service and its pricing

- 3 hours -

Pitch Your Idea

5

A pitch deck full of powerful numbers

- 3 hours -

This calendar shows you how the steps fit into a month of learning and exploration.

DAY 1 Explore the Essential Question & Project Overview	DAY 2 **Challenge 1** Step a: Brainstorm your business ideas	DAY 3 **Challenge 1** Step b: Pick your favorite idea	DAY 4 **Challenge 1** Step c: Role play to understand more	DAY 5 **Challenge 1** Step d: Make a list of potential customers
DAY 6 **Challenge 2** Step a: Create and send your survey	DAY 7 **Challenge 2** Step b: Learn about data analysis tools	DAY 8 **Challenge 2** Step c: Analyze your data	DAY 9 **Challenge 3** Step a: Understand why percentages rock	DAY 10 **Challenge 3** Step b: Send a follow-up survey and do your research
DAY 11 **Challenge 3** Step c: Analyze your data and identify key statistics	DAY 12 **Challenge 4** Step a: Calculate your costs	DAY 13 **Challenge 4** Step b: Learn about mean, median, and mode	DAY 14 **Challenge 4** Step c: Complete your price analysis	DAY 15 **Challenge 4** Step d: Name your selling points
DAY 16 **Challenge 5** Step a: Draft your pitch deck	DAY 17 **Challenge 5** Step b: Find a trusted partner to review	DAY 18 **Challenge 5** Step c: Pitch your idea!	DAY 19	DAY 20

[Plan Your Project Milestones]

LEARNING SUPPORT tools

INSPIRATION

Entrepreneurship in the real world!

Let's see how someone else used entrepreneurship to help solve an important problem:

Mikaila's Story

Bee Fearless is the memoir of Mikaila Ulmer who learned honey bees were being threatened with extinction. So, as a child, she refashioned her grandmother's flax lemonade recipe and built a whole business using her love of honey to help save the bees. Her story is an example of a great entrepreneur both sharing her joy locally (now nationally) and raising awareness about a global problem.

Watch this video about Mikaila Ulmer, founder and CEO of Me & The Bees lemonade.

1

CHALLENGE 1

Identify Your Project Focus

Challenge 1: Identify Your Project Focus

1

- 4 hours -

The first challenge is to **identify a product or service that will make other people's lives better.** Whether your product or service solves a problem or just brings joy to people, or both, there may be an opportunity for entrepreneurship.

In this challenge, you'll dream up a product or service to build a business around.

KEY TERM

An **entrepreneur** is a person who takes the risk of starting a new business.

How do these steps help you?

Objectives: To determine a product or service worth building a business around. To create a list of people who might be good first customers, so you can do effective research.

a Brainstorm your business ideas

You'll think about your joys and challenges and how they might inspire a product or service.

What will you have at the end of this step? A list of product or service ideas.

- 30-60 minutes -

b Pick your favorite idea

You'll use a handy tool called a *decision quadrant* to choose a product or service to focus on.

What will you have at the end of this step? A winning idea for your business.

- 20-40 minutes -

c Role-play to understand more

You'll use your imagination to envision how your product or service will work.

What will you have at the end of this step? A clearer vision for your product or service.

- 60 minutes -

d Make a list of potential customers

You'll think about who might benefit from your product or service and gather their contact information.

What will you have at the end of this step? A list of potential customers.

- 20-40 minutes -

Businesses often come from an entrepreneur's personal joys or challenges.

Mikaila Ulmer found joy in her grandmother's flax lemonade, so she decided to share that joy.

Mikaila also knew her lemonade business could help solve a problem—saving honey bees—by calling attention to the plight of disappearing bees.

Here's another example:

Imagine **Sam**, an 8th grader who lives in Springfield, Ohio.

We'll follow Sam through the entire project, as he learns the tools of entrepreneurship and builds his pitch deck.

Look for Sam's examples every step of the way!

LEARNING SUPPORT tools

Finding Your Inspiration

Let's Brainstorm Your Business Ideas

List 3-5 of your everyday joys and challenges. Recreate this table or use the one provided in the **Learning Support Tool** to evaluate each idea.

Who has this joy or challenge?	What is it?	Why is this a joy or a challenge?	Could other people benefit from this joy or a solution to this challenge?	What product or service can you create to share this?

Brainstorming Joys and Challenges

LEARNING SUPPORT tools

Here is Sam's brainstorm.

Sam thought about what he'd like to share and brainstormed other businesses he could look to as examples.

Who has this joy or challenge?	What is it?	Why is this a joy or a challenge?	Could other people benefit from this joy or a solution to this challenge?	What product or service can you create to share this?
My whole family	Joy: Abuelita's cookies	Our family recipe is better than every other cookie, ever. That's a fact.	No one else has this recipe, only us, so we could sell them.	We could sell Abuelita's cookies, like Mikaila Ulmer sold lemonade!
Me	Challenge: My dog tracks mud in the house	I have to clean up multiple times daily.	Anyone with a four-legged pet probably has this problem, so people would probably want to solve it.	We could make a paw scrubber to keep paws clean, just like the tools for cleaning we see on TV.
Us and our neighbors	Challenge: Raccoons	Raccoons and other animals keep throwing garbage everywhere.	This is causing a huge mess, so a way to stop it would be valuable.	We could make an alarm for garbage cans so squirrels and raccoons would stay away like a house alarm.

Narrowing down your ideas

Brainstorming can produce a lot of ideas, but not all of them will work. To help one idea rise to the top, we need to think critically about a couple of questions so you can choose your best idea from the bunch.

Thinking about the products or services you brainstormed, ask yourself:

Is there a market for this?

Does the product or service have a market—potential customers—who will be willing to spend their money on it?

At first, you'll just have to **guess**. That's called an **"assumption,"** and it's a good place to start. Your data will prove or disprove assumptions.

&

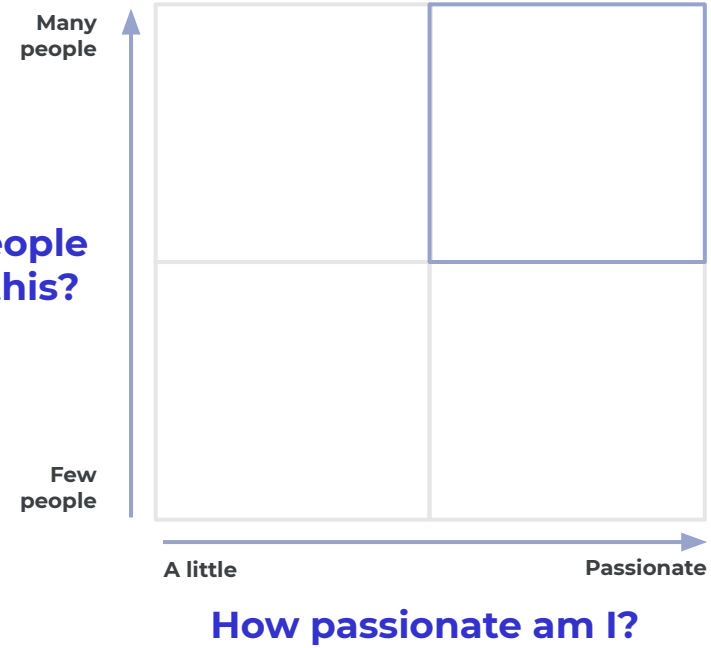
Do I have a passion for it?

Being passionate is important in entrepreneurship because you will spend a lot of time with your business.

You'll want to use your passion as you pitch to customers and anyone else who can help you!

Let's pick your favorite idea!

- **Write each idea** in one square of the box. Place it low if few people want it and high if you can assume many people want it; place it to the left if *you're* not that passionate, and to the right if you are passionate about it.
- **What product or service** might make a good business?

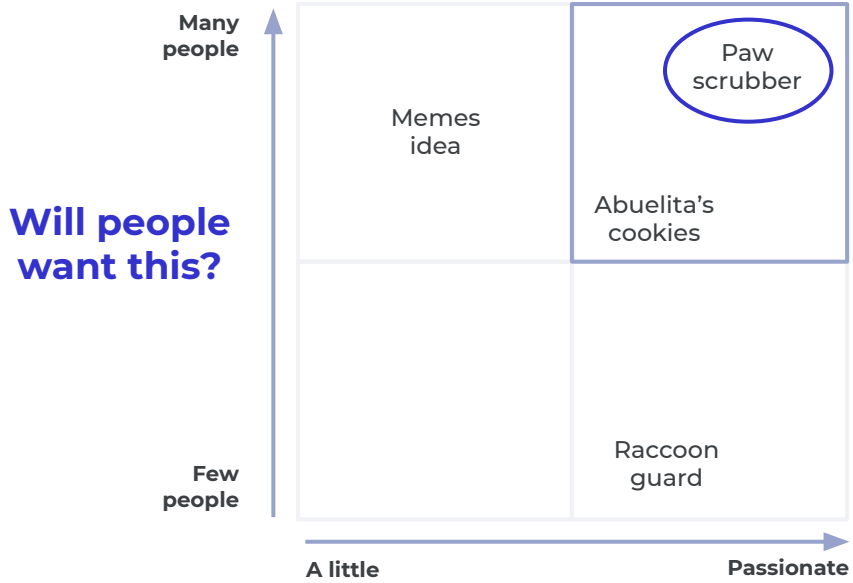


The idea closest to the top right corner could be the winner because you are passionate about it and people want it!

LEARNING SUPPORT tools

Use a Decision Quadrant

Sam narrowed down his ideas.



And the winner is...

Sam's Dog Product!

Sam figures his idea will appeal to many others because so many people have dogs and cats.

And he's very passionate about it, because he loves his dog, Pumpkin, but *can't stand* cleaning up Pumpkin's mess.

Let's role play to understand more.

In the next hour, try to test your idea by imagining someone using your product or service.
Think about (or go to!) the place where your customer will use your product or service. Imagine the motions your customer will have to go through to use your product or service.

- How does it work?
- What are the obstacles?
- How does using the product make them feel?

What have you learned about your customer and product through role playing?

What sam learned from role play:

- Sam went to his back door, **where Pumpkin enters the house.**
- He **imagined the product**: a container filled with warm soapy sponges he could use to dip Pumpkin's paws in when she comes in.
- **To make the experience real**, he found an empty plastic container close to the right size for paw washing. He put it near the back door where she came in and out. **He didn't have all the details yet, but he was confident he would find them with more role play.**
- He **discovered an obstacle**. Pumpkin's paws would still be wet after washing. So, he imagined a small, fast-drying towel he could store with the paw scrubber and hang to dry between cleanings.

Sam just has to **work out the details** of how to make a sample paw scrubber so he can try it out with customers!

Role Play Your Product or Service

LEARNING SUPPORT tools

Let's make a list of potential customers.

Build a table like the one below to create a list of potential customers.

Who can benefit from your product or service?	Total # of people in this group	Number likely to benefit from your product or service	Make a list of these people. (These are potential customers, and you'll need to survey them.)
Family			
Friends			
Immediate neighbors			
School community			
Community or religious organization			
Local business			

TIPS

As you make a list of people, add their contact information so you can reach them later.

Make a List of Potential Customers

LEARNING SUPPORT tools

1

You just finished your first challenge!

Nicely done!

You may be wondering,

“When do I start building my pitch deck?”

You can start now!

Challenge 5 will focus on drafting the deck, but you’ll be ready to start putting pieces together after each challenge.

Start keeping notes to remember ideas for your deck, using what you’ve learned in this challenge:

- A possible name of your company, product, or solution
- The challenge you’re solving or joy you’re sharing
- Your product idea—what you know so far

If you can’t do that last one yet, don’t worry. We are only getting started!

2

CHALLENGE 2

Research Your Product

Challenge 2: Research Your Product

2

- 5 hours -

As you complete this challenge, you will be **Researching Your Product**. That means you will learn more about why your customers might value your product or service to make sure your product or service works well for your customers.

KEY TERM

Data is a collection of facts that gives us information.

How do these steps help you?

Objectives: To better understand your customer and their needs by analyzing data effectively. To learn how data analysis helps you meet their needs.

a Create and send your survey

You'll learn why entrepreneurs use data. Then you'll learn how to create survey questions to collect data from your first potential customers by asking great questions.

What will you have at the end of this step? A survey

- 30-60 minutes -

b Learn about data analysis tools

While you wait for your data to come back, you'll learn about data analysis tools and practice these tools using sample data.

What will you have at the end of this step? Four new ways to analyze your survey data

- 20-40 minutes -

c Analyze your data

You'll use the answers you receive from surveys to understand your customer and their needs.

What will you have at the end of this step? Information for building your product or service offering

- 60 minutes -

Why do entrepreneurs need data?

Data is a collection of facts—numbers, measurements, or descriptive words—that give us information.

Surveys and research will give you data on important questions:

- **Who** might use the product or service and **how many** people are in that group?
- **How** can you make the product or service **most appealing** to them?
- Can this product or service be the **basis of a business**?
- How much would it **cost to make** the product or service?
- **How much should you charge** for the product or service?

TIPS

Convincing others using data is an important skill in many areas of life today.

It is especially important in entrepreneurship. You want customers to trust you. The power of numbers can help make that happen. But to use numbers, you need to collect data! That's why surveying customers is important.

How do surveys help us gather data?

By asking careful questions!

Data is just a collection of facts! The questions you ask will be used to make a better product or service for the people you serve.

There are two main types of questions you can ask:

1. **NUMERICAL** — a question where the response will be numbers (25, 32, 10, etc.)
2. **CATEGORICAL** — a question where the response fits into a category but isn't a number (yes, no, long, short, etc.)

LEARNING SUPPORT tools

Create and Send Your Survey

How do these questions differ?

NUMERICAL	CATEGORICAL
• How many ...? • How many times per month do you...? • How often...? • How much...? • How many ... per day do you...? • How many minutes does it take you to...? • How much would you pay for...?	• Who do you..? • Where do you...? • How do you...? • Why do you...? • Which of these...? • Do you prefer...?

Let’s create and send your survey.

You have already imagined ***who*** can benefit from your product or service. **Write 3–5 questions** to help you better understand ***what*** their wants and needs might be. Craft questions to help you answer:

- Do they have the problem you solve or would they appreciate the joyful experience you want to share?
- Do they have a favorite product or service that does the same thing?
- What do they like about that product or service?
- What do they dislike about that product or service?
- What details would help you understand what they need from your product or service? Is there a specific feature of your product or aspect of service you are curious about?

Write a brief note, explaining your project and ask politely for your customers to share their advice and ideas through your survey.

Why might you use digital survey tools?

While there are many ways to conduct surveys, there are a few benefits to using digital surveys.

- A digital survey tool, such as Google Forms, can be sent via email or text.
- You receive your survey answers in the form of a Google spreadsheet, which makes it easy to organize the responses.
- Spreadsheets allow you to create all sorts of charts automatically.

What did Sam ask in his survey to all the dog owners he knew?

For each dog in your household:

- What's your dog's name?
- About how much does the dog weigh? (numerical)
- Is your dog a short-haired dog or a long-haired dog? (categorical)

We'll look at Sam's results soon!

You might be wondering...

“OK, I’ve sent out my survey questions. What now?”

You’ll have to give people a few days to respond. In the meantime, we’re going to think about displaying data!

Different ways of displaying data help us see information more clearly. Understanding tables, dot plots, bar graphs, and histograms can help you analyze the data you’re collecting in this challenge.

Each of these ways of looking at data provides interesting insights. Next, we’ll look at some examples.

What do entrepreneurs do with the data they collect?

Entrepreneurs analyze data in many different ways to understand their customers.

We will help you learn how to analyze data by making it visual.

- We'll introduce **4 types of data visualizations**, some of which you may already know.
- For each type of visualization, **we'll show you why it's useful**.
- We'll show you **how to create these visualizations** using sample data.
- We'll give you a chance to **practice using sample data**.

TIPS

Learning data analysis tools might seem scary, but remember with practice, **these are skills you can build!** In fact, that's one of the most important goals of this project—helping you grow the power of numbers!

Remember Google Sheets and other tools like Math is Fun can help you too!

Let's learn about data analysis tools.

A table organizes data in rows and columns. It allows you to sort and analyze information effectively.

What did Sam's table look like?

- Sam organized the answers from his survey into a table so he could see the names, weights, and fur type for each dog.
- But how might this help Sam design his product?
- Sam wants to better understand the size and type of dogs his friends and family have. He needs to look at this data another way.

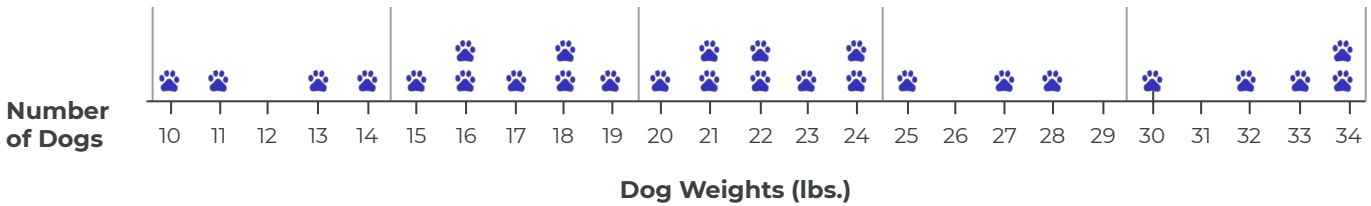
Dog Name	Weight (lbs)	Long Hair or Short Hair?
Duke	33	Long
Coco	20	Short
Pierre	24	Long
Ginger	21	Long
Lucky	28	Long
Daisy	15	Long
Buster	34	Short
Pepper	24	Short
Rocky	16	Short
Lady	23	Long
Yaya	17	Long
Spot	14	Long
Charlie	22	Short
Bella	27	Long
Ruby	11	Short
Ollie	21	Short
Archie	14	Short
Milo	18	Short
Luna	30	Long
Oscar	22	Long
Scout	13	Long
Moose	32	Long
Koda	24	Long
Pinguino	10	Short
Nala	19	Long
Jax	25	Short
Bandit	16	Long
Copper	22	Long
Oreo	18	Long
Simba	34	Long

Tool 1: Dot Plots

A **dot plot** shows items represented as dots above a number line, allowing you to **easily see where there are more or fewer items** along the line.

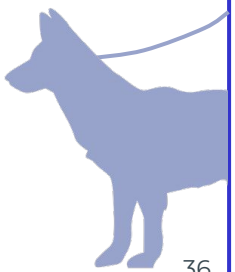
Sam made a dot plot to look at the data about the size of dogs. Each dot represents one dog, and the numbers along the line show all of the different weights of dogs in the data.

- Is there anything that stands out to you seeing the data represented this way?
- In what range are there the most dogs?
- Can that help Sam decide something about his paw scrubber?



WHAT IS A DOT PLOT USED FOR?

A dot plot helps us see groupings or gaps in the data along the number line.



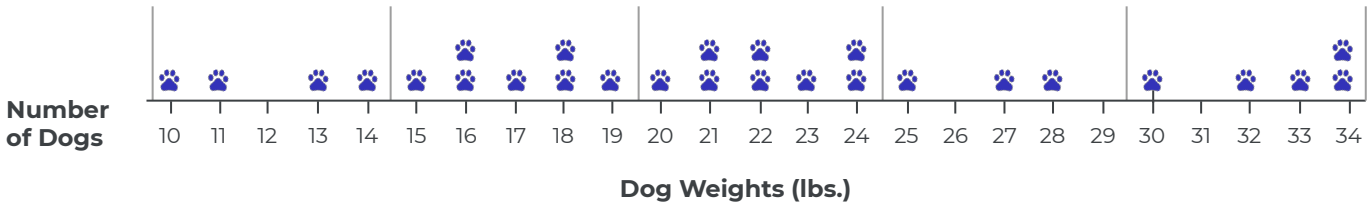
Tool 2: Frequency Tables

A **frequency table** (right) shows us how often an item appears within a range of numbers.

Using Sam's data, the frequency table tells us how many dogs fit into each weight grouping. Notice that this time, the weights are in **bins**, or **ranges**, rather than exact numbers.

This frequency table can help Sam figure out which **bin** of weight is the **most common**, so he can start serving customers with dogs that size.

Weights (lbs)	Frequency
10 to less than 15	4
15 to less than 20	7
20 to less than 25	10
25 to less than 30	3
30 to less than 35	5



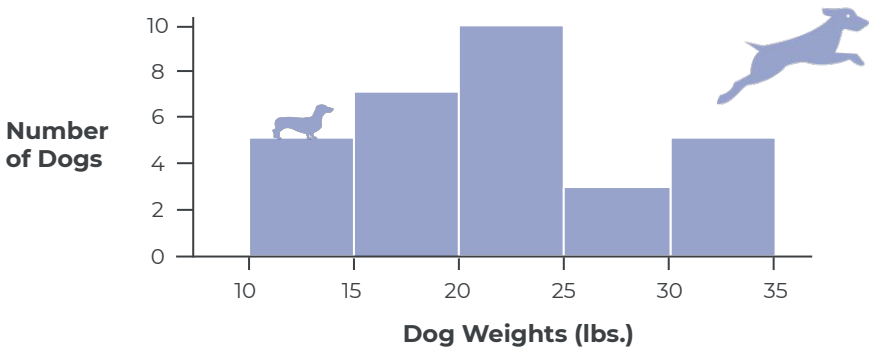
Notice that this dot plot is broken into the same **bins** as the frequency table

Tool 3: Histograms

The **histogram** gives us another way to easily see how values are spread out. A histogram allows us to see a frequency table represented with bars, so we can see how many items are in a range.

Sam's histogram here shows us how many dogs are in each bin of weight.

It seems that dogs in the range of 20–25 pounds are most common in this group. That can help Sam make design decisions about his first product.



TIPS

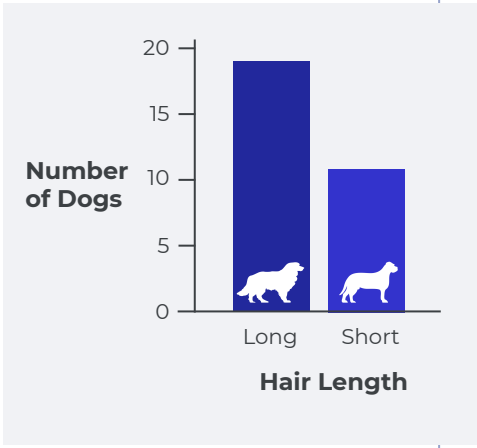
A histogram is different than a bar graph. A histogram shows us how many are in a range or bin. A bar chart shows how many are in a category.

Tool 4: Bar Graph

A **bar graph** is used to **compare** quantities across **different categories**. Seeing data represented in a bar graph makes drawing new conclusions easier than it would be just looking at the table.

For example, **Sam had a theory** that long-haired dogs are messier pets. He'd collected that data, so he created a bar graph to compare the dogs by hair type.

The bar graph shows not only are **there are more dogs with long hair**; we can see that there are **significantly more**.



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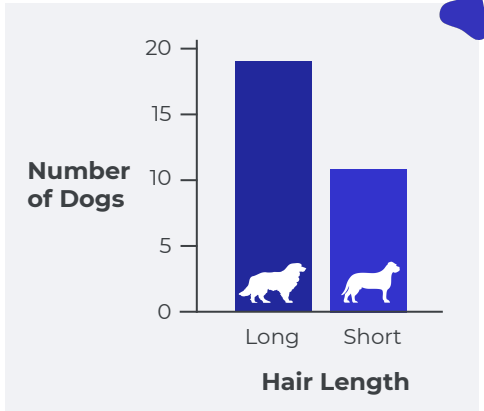
Yaya	17	Long
Spot	14	Long
Charlie	22	Short
Bella	27	Long
Ruby	11	Short
Ollie	21	Short
Archie	14	Short
Milo	18	Short
Luna	30	Long
Oscar	22	Long
Scout	13	Long
Moose	32	Long
Koda	24	Long
Pinguino	10	Short
Nala	19	Long
Jax	25	Short
Bandit	16	Long
Copper	22	Long
Oreo	18	Long
Simba	34	Long

What happens when we look at displays of data together?

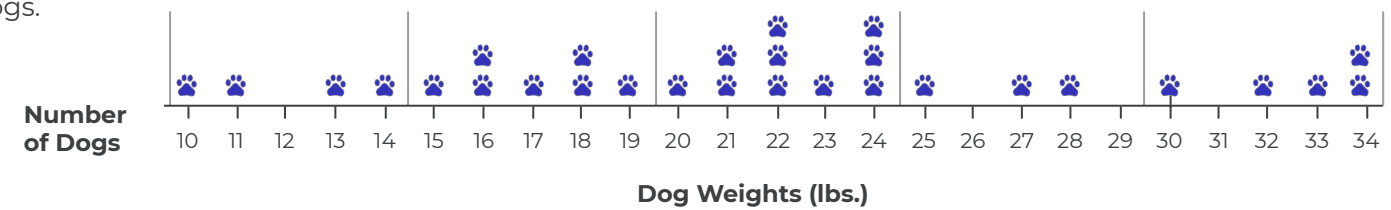
Looking at different **types** of data and looking at data in different **ways** allows us to draw more complex conclusions and make better decisions.



Sam's idea is to make a product that gets muddy paws clean. Looking at this data, he wants to know two things:

- What **kind of fur** should he make the product for?
- What **size dog** should he make the product for?

Sam learned the largest group of potential customers own medium-sized, long-haired dogs.



Phew!

Visualizations are FUN!

Let's practice now.

Why practice problems?

Using practice problems will help you **build your data superpowers**, so you understand how to create and use data visualizations first hand.

Practice **using sample data** will help you focus on learning the skills related to the data tool versus analyzing your own data.

With each practice problem...

...you will see how Sam uses these data tools to understand something about his business.

Sam's examples will help you understand the kinds of questions you can answer with each type of visualization.

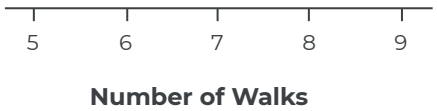
Practice Visualizing Data

Practice 1: Dot Plots

The frequency table shows the number of walks this set of dogs took in the last week.

Use the data provided to create a dot plot showing the number of walks these dogs went on.

Number of Walks	Number of Dogs
5	1
6	2
7	3
8	1
9	1



What does it show?

Now Sam can understand how often his paw scrubber might be used by each pet owner each day.

The **dot plot** can help you, as an entrepreneur, understand data **about your customer's most common experiences.**

TIPS

See Line and Dot Plots — (Khan Academy Video) to learn more!

Practice 2: Frequency Tables

Complete the frequency table using the data provided to show the amount of time most dog owners spend cleaning.

Here are the lengths of time, in minutes, that dog owners in Sam's neighborhood spend cleaning up after walking their dogs:

12 13 15 16 18 19 24 25 26
26 26 29 32 34 35 38 40
41 41 42 44 47 48 51 56

Complete the frequency table to show the amount of time most dog owners spend cleaning.

Length	Frequency
0 minutes to less than 10 minutes	
10 minutes to less than 20 minutes	
20 minutes to less than 30 minutes	
30 minutes to less than 40 minutes	
40 minutes to less than 50 minutes	
50 minutes to less than 60 minutes	

What does it show?

Now Sam can understand **how much time pet owners spend cleaning** up after each walk.

The **frequency table** can help you, as an entrepreneur, understand data about **how big** a customer's **problem might be** or **how often they enjoy a similar** product or service.

Practice 3: Bar Graph

Make a bar graph for each dog age group, with a bar each for morning and evening.

Sam wants to consider when dogs are taking most of their walks, so he found this data table that shows the walking time preferences for each age of dogs.

Dog Age	Morning	Evening	Total
Puppies (2 years or younger)	20	15	35
Middle-aged dogs (2 to 7 years)	17	23	40
Old dogs (over 7 years old)	9	16	25
Total	**46**	**54**	**100**

What does it show?

Now Sam can compare the **walking preferences for dogs of different ages**, which helps him understand his customer's needs even better.

The **bar graph** can help you, as an entrepreneur, compare quantities about **any aspect of your customer's experience**.

Now let's look at your data!

But what are we looking for? By asking a few questions and using these data displays as tools for critical thinking, you can be more strategic.

Data can **inform decisions about your product or service** and the **strategies for selling your customer** on your idea.

Exploring your data in different ways **may tell you things that aren't immediately obvious** in a table full of survey data.

Sam has concrete facts about his customer and their needs.

- **Most** of his friends and family have long-haired, medium-sized dogs.
- Most of his friends and family take their dogs for at least one walk **daily**.
- People spend a lot of time cleaning up. One in four people spends between 10 and 20 minutes a day, while **over half of them spend 30–60 minutes**. Every! Day!
- Walks and clean-up **take even more time when dogs are younger**.

You may be wondering,

“What if I don’t have data yet?”

That’s OK. You can come back to this step when you do!

It’s possible that you sent out your survey so recently the responses aren’t back yet. That’s fine. Don’t be afraid to follow up with people every other day and remind them that it will only take them less than a minute to help out a kid entrepreneur.

Who could say no to that?

Let’s analyze your data

What insights does it offer?

Remember the tools you know how to use now:

- Use your **table** to create a **dot plot** of your numeric data to see what experience is most common.
- Break your dot plot into **bins**, and create a **histogram** to compare quantities.
- Create a **bar graph** to compare categories.

After reflecting on this data, consider how you will improve or refine your product or service.

TIPS

Use free data analysis tools to increase your number powers.

Chances are, you will need these skills for life, so take a few minutes and check out free tools like Google Sheets, Google Slides and Math is Fun!

Visualize Your Own Data

LEARNING SUPPORT tools

You may be wondering,

“How will all this impact my pitch?”

Data will strengthen your pitch!

Again, Challenge 5 will focus on drafting the deck, but if you’ve already gotten started, you can revisit what you added to the template to make it stronger.

You have data now, can you **add some facts** about the problem you’re solving or the joy you’re sharing to your notes for developing your pitch?

Can you **illustrate these facts in a chart**?

3

CHALLENGE 3

Research Your Market

Challenge 3: Research Your Market

3

- 5 hours -

As you complete this challenge, you will be **Researching Your Target Market**. That means you will learn more about the many possible customers who might benefit most from your great product or service. You will also learn how much money they spend on products or services like yours today.

KEY TERM

Market refers to an actual place, such as the U.S. market, or a group of people who buy your product.

How do these steps help you?

Objectives: To understand the potential of the opportunity for your business—how big it can really get.

a Understand why percentages rock

You'll learn why and how entrepreneurs use percentages to make assumptions about their market size.

What will you have at the end of this step? An idea of the size of your market and its needs.

- 30-60 minutes -

b Send a follow-up survey and do your research

You'll ask more specific questions and use available data about your product or service.

What will you have at the end of this step? Survey data and research about your market.

- 20-40 minutes -

c Analyze your data and identify key statistics

You'll use your data and research to visualize your numbers in different ways.

What will you have at the end of this step? A clear idea of your market size and great data visualizations for your pitch!

- 60 minutes -

Why do entrepreneurs research their markets?

It is important to learn exactly **who might benefit** from your product or service and why, so you can start to **estimate the size of the market**—that is, the number of people who might use your product or service—and the total size of the opportunity.

In the first challenge, you made a list of specific people who were likely to enjoy your product or service—you sent them the survey! **We're going to call this group of people your sample.**

What you learned from your sample can help you **make predictions** about your market, assuming that the overall market—your whole school, your whole town, a whole country—would **respond in the same way** your family or friends did.

TIPS

Sometimes grocery stores offer **samples**—small bites to give an idea of what something tastes like. In the same way, **a sample of your market** is a small group that suggests how a larger group would respond.

Why do percentages rock for this kind of research?

Fractions and **percentages** can be helpful, because we can't include the whole world in our surveys. We have to **make guesses** about **how a large group will behave** based on **how a smaller fraction of people behave**.

How do percentages help Sam think about markets?

Eight of his 10 neighbors have dogs or cats. As a fraction, that is 8/10.

To see a fraction as a percentage, we make the denominator 100. In this case, we multiply by 10. When we say percent, we mean "out of 100."

8 x 10 = 80

10 X 10 = 100

Dive into Percentages

LEARNING SUPPORT tools

Practice 1: Fraction to Percent

The **fractions** in this table show the number of pet owners in a group that own only dogs, only cats, and both dogs and cats.

Use this table to figure out what percentage of people belong in each group.

- First, multiply the original fractions to create a new fraction with a denominator of 100.
- Using the fraction over 100, write the percent for each row.

Types of Pets	Original Fraction	Fraction over 100	Percent
Only Dogs	3 / 5		
Only Cats	1 / 4		
Dogs and Cats	3 / 20		

What does it show?

Sam realized that, in addition to dog owners, **his paw scrubber could also be helpful for cat owners!**

The percentages help him think about the potential of the feline additions to his market.

Practice 2: Another Percentage

There were 20 people who responded to Sam's survey question asking what they spent the most money on.

Fill out the rest of this table to show the fraction of respondents and the percent of respondents in each row.

Remember, **20 dog owners responded**.

Biggest Expense for Dog Owners	Respondents	Fractions	Percent
Grooming	6		
Toys	1		
Food	10		
Furniture	3		

What does it show?

The data show that the **biggest segment** of the group **spends the most money on pet food**.

Because Sam's product is in the grooming category, what percentage of his target market would he predict will spend the most money on grooming?

What do you think he can learn from that statistic?

Practice 3: Percentage to Dollar Amount

Sam found most households with pets spend around **$500 per year on their pets**. The table shows the percentage of that $500 they spend on each category.

Use the percentages to figure out how many dollars per year Americans typically spend on each category.

- First, turn the percentage into fractions over 100.
- Use the fraction to find the dollars spent in each row.

Category	Percentage	Fraction Over 100	Fraction Over 500	Dollars Spent Per Year
Pet Food	45.7%			
Pet Supplies	40.6%			
Pet Services	9%			
Live Animals	4.7%			

What does it show?

Sam's product is in the pet supplies category. His calculation shows him how much money each of his customers might spend on that category each year.

Supplies for caring for pets is almost as large as the food category.

That's a lot of dollars! It seems reasonable that some money could go to a daily problem like dirty paws.

You might be wondering...

“How does all this relate to my business?”

Remember, you’re practicing these skills so you can measure your market.

Before you or anyone else invests time and money in your business, you need to know if there is really a market for your idea. Making estimates based on percentages will help you prove it.

Say you learned people spend $100 on the type of product or service you offer. Out of that $100 they spend 40 percent—or $40—on the exact kind of offering you want to sell. That data shows it’s close to half of what they spend overall.

Will they be willing to spend money on your product? Seems like you have data to guess: **YES, people will buy your product!**

Let's send a follow-up survey!

Think about how you can determine what customers like yours spend money on today, and turn those ideas into 3 to 5 questions, numerical and categorical.

- How much do they spend on similar products?
- How important are products like yours to them?
- What would they be willing to pay for this?

Send out your survey and ask people to respond within a couple of days.

LEARNING SUPPORT tools

Market Research Questions

For example, Sam has started with his neighborhood to answer some questions:

- What kinds of muddy pets do you have?
- How much money are you spending already on pet supplies?
- What kinds of products are you spending money on already for your pets?
- Might you be willing to spend money on my product? If so, how much?

While you are waiting for responses, you can also do good, old-fashioned research!

Think like an entrepreneur:
What information will help you learn about the needs and desires of people in your market? If you could find out how many people were like your neighbors, you could guess how big your business could be!

For example:

- How many people in my school, city, or country have muddy cats and dogs like the people in my original sample?
- How much money do Americans spend on pets?
- What kinds of pet things do they spend money on?

LEARNING SUPPORT tools

Search the Internet for Reliable Data

Take a look at your raw numbers

Based on your first look at the survey data and your research, what jumps out at you? **Think like an entrepreneur:** Can you answer any of these questions?

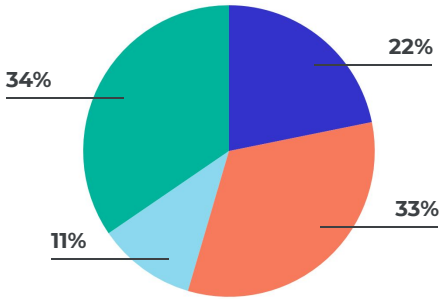
- **How many people** would be interested in buying your product or service locally? How many similar people are there in your state? Nationwide?
- **How much money are people already spending** on similar products or services?
- How much would your ideal **customers be willing to pay** for this product or service?

Visualizing this data in **different ways** will help you gain new insights.

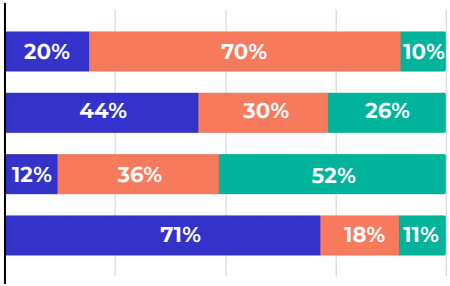
Make Guesses Using Data and Research

Three easy ways to display percentages

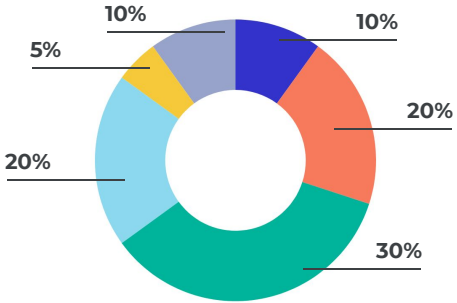
Pie charts, stacked bar charts, and **donut charts** allow you to see and easily show percentages as pieces of a whole — that is, out of 100% — to make easy comparisons.



A **pie chart** shows you different percentages as slices of a pie.



A **stacked bar chart** shows the different percentages as sections of a line.



A **donut chart** is like a pie chart, but with a hole in the middle.

Let's dig into your data!

Analyze your data in different ways to see what it tells you.

Remember all the tools in your kit:

- Fractions & Percents
- Pie Charts
- Stacked Bar Charts
- Donut Charts
- Dot plots
- Frequency Tables
- Histograms
- Bar Graphs

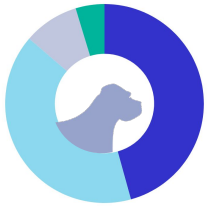
Don't forget to use the recommended digital data tools. What are yc
learning as you look at all of these different slices of data?

LEARNING SUPPORT tools

Visualize Your Own Data

For example:

Sam was also wondering:
how much do people spend when buying things for their pets?



He gathered some data about the pet industry in the U.S. and put the numbers into a **donut chart**. The chart showed just over **40 percent** of pet owners' purchases fit into the pet supplies category. It's less than they spend on pet food, but more than 4 times what they spend on services like grooming.

Because his product also fits into the category of **pet supplies**, he's excited!

You may be wondering...

“What do I do with my market research statistics?”

Statistics will be useful throughout your pitch!

Statistics can be powerful. Not only do they give you a set of tools to think critically, but they can also help you build confidence around your idea when you include them in your pitch.

Whether it is a small, local market or a large, national market, you have numbers that help explain the exciting opportunity ahead.

Later, you might also use statistics to help your customer better understand the problems your product solves and the benefits your solution provides.

Celebration of Learning Reminder

The Celebration of Learning is a great opportunity to pitch! Here are a few preparation reminders for your upcoming Celebration:

- If you haven't done so already, check out this month's ***Celebrate*** tool and finalize the date, time, and virtual location.
- Invite friends and family, especially those who have contributed to your surveys or might be interested in your product or service! Be sure to include information about how to join your virtual presentation.

4

CHALLENGE 4

Create a Business Model

Challenge 4: Create a Business Model

4

- 5 hours -

Now that you know more about your product and your customer, you need to think about how your business will work. A key part of that is understanding **how much it will cost** you to deliver this beneficial product or service and **what price your customers will see as fair**.

KEY TERM

Business model refers to your plan for creating your product or service (what it costs) and selling it (your pricing).

How do these steps help you?

Objectives: To figure out how much your product costs and how much you can charge, so customers believe they paid a fair price for the value you offer.

a Calculate your costs

Simply put, you have to figure out how much every item, including your time, will cost.

What will you have at the end of this step? A list of your costs.

- 60 minutes -

b Learn about mean, median, and mode

Learn about and use mean, median, and mode to understand pricing.

What will you have at the end of this step? Mean, median, and mode skills.

- 20-40 minutes -

c Complete your price analysis

You will consider prices in the market and your costs.

What will you have at the end of this step? Pricing data points to consider.

- 30 minutes -

d Name your selling points

Determine the price, and decide how you will advertise to your customers.

What will you have at the end of this step? A price and key selling points.

- 30–60 minutes -

What goes into a business model?

A business model is a detailed description of how your business will deliver its product or service and make money doing it. For your pitch deck, we're going to focus on two things: costs and pricing.

There are a few ways entrepreneurs think about pricing:

How much does it cost you to build and sell your product?	**What do similar products or other solutions to the same problem cost?**	**What do people see as a fair price in exchange for the value they are receiving?**

A few data analysis tools can help you understand this information better.

Looking at Costs

Your costs include the money you'll spend to create, build, and deliver your product or service. **Costs** can include a lot of different things:

- **Materials** or **supplies**
- The ways you let people know about and value your offering (this is called **marketing**)
- **Packaging**
- **Delivery**
- Your **time**

Let's look at Sam's costs:

Sam started with a large paw scrubber for customers with medium sized, long-haired dog(s).

For one paw scrubber, Sam needed a container, a sponge, two fast-drying cloths for multiple walks per day, and a labeled storage bag. He wanted everything to be reusable and dishwasher safe, so people can reduce waste and easily clean up on really muddy days! Finally, he needed some cool labels for the logo he designed.

Let's calculate your costs

Calculate your costs to build your product or deliver your service.

How do you do that?

- **Research your costs**—what you will have to spend to deliver the product or service.
- Consider the cost of delivering to a single customer. While you will sell more than one, you need to know the **exact cost of one** first.
- Be sure to **consider all the great data** you collected and analyzed.

LEARNING SUPPORT tools

Find Your Costs

For example: How much will it cost Sam to make his product?

Item	Cost per paw scrubber
Deli Containers	**$0.70**
Silicone Sponges	**$2.48**
Labels	**$0.05**
Storage Bags	**$5.19**
Fast-drying Cloths (2 per bag)	**$2.55**
Total Cost of Materials	**$10.97**
+$10.00 for Sam's time	**$20.97**

Now you know how much your project costs, but how much can you charge?

To see what people are willing to pay, you have to see what they pay now.

Look at categories:

- If your product or service were for sale in a store, what department would it be in?
- What else would be on the shelves with it?
- Answering those questions can tell you what category to put it in.

Look at direct competitors:

- How much are people spending to solve the problem or find the joy today?

For each of these, examine the **mean, median, and mode**.

These “middle” numbers will help you understand how your customer might perceive your solution’s pricing compared to others.

Using mean, median, and mode to analyze a range of numbers

To know how much you can charge, you need to see how much people are willing to pay. You'll find that prices can range widely. These tools can help.

Mean	Also called the average. It's found by adding up a set of numbers and dividing by the number of items in the set. If you added up the prices of **ten** different dog foods and divided by **ten**, you would get the mean, or average, price.
Median	The median is the number in the **middle** when we list the numbers from least to greatest.
Mode	The mode is the number that occurs the **most often** in a data set.

TIPS

These **"middle numbers" may be telling!**

Understanding the middle gives another insight into knowing what people are willing to spend.

Examining Prices in the Same Category

You want customers to see your price as reasonable or fair:

- How much do **other products** or services in the same category cost?
- Based on that, what **price range** seems reasonable?

You should be able to find a price people will see as **fair for the value** they will receive.

How much is dog shampoo?	
Brand A	$5.39
Brand B	$39.95
Brand C	$6.99
Brand D	$17.61
Brand E	$6.99
Brand F	$18.00
Brand G	$25.00
Brand H	$21.66
Brand I	$17.00

Sam realized the range of prices was huge, so it was hard to make a good guess.

Sam's mean, median, and mode

Sam analyzed shampoo prices in the dog grooming category.

How much does dog shampoo cost before tax?	
Brand A	$5.39
Brand B	$39.95
Brand C	$6.99
Brand D	$17.61
Brand E	$6.99
Brand F	$18.00
Brand G	$25.00
Brand H	$21.66
Brand I	$17.00
Total	**$158.59**

	What is that again? And how do you figure that out?	Answer
Mean	**The average number** The total ($158.59) divided by the number of different products (9)	$17.62
Median	**The center number** Line up the items from most expensive to cheapest and find the one in the middle.	$17.61
Mode	**Number that occurs most often** Just like it sounds; which number do you see most often in the data set?	$6.99

Why are these numbers meaningful?

And what's the most meaningful for our example, Sam?

Mean

The mean, $17.62, shows how much people on **average** pay for dog shampoo.

Median

The median, $17.61 shows how much people pay for the shampoo in the **middle of the data** set between the cheapest and most expensive.

Mode

The mode, $6.99 shows the price people see **most frequently** on the store shelf.

The median and mean let Sam know how much people are spending, so he can set his price to avoid his customers seeing it as too high or too low.

Let's examine prices in your category.

Look at similar products or services within the **same category** as yours. Put together a list of products or services and prices. Build a table like the one below.

Then, calculate the **mean**, **median**, and **mode** values.

Think about what makes these numbers meaningful to you.

Items in the Category of your Offering	Price

TIPS

Imagine walking through a store and seeing your offering on the shelf next to each of the others.

How might your customer respond based on these comparisons?

Category Price Analysis

LEARNING SUPPORT tools

Examining Prices of Direct Competitors

You can also look at what people spend to solve the same challenge or experience a similar joyful experience.

Sam looked at a few different methods his friends and family use to clean paws. He compared those prices to see what people are currently paying to solve the problem of muddy paws. People were spending a lot of money! Also, they were often doing things that were bad for the environment and inconvenient.

Current Product	Price of Item	Quantity Needed Per Month?	Total Cost Per Month
Roll of Paper Towels	$3.84	5	$19.20
Disinfectant Wipes	$10	3	$30
Doggie Towels	$10	4	$40

Let's examine your competitors' prices.

Look at products or services that solve the same problem or share the same joy. Put together a list with prices. Build a table like the one below.

Then, calculate the **mean**, **median**, and **mode** values.

Think about what makes these numbers meaningful to you.

Direct Competition	Price

TIPS

When thinking about your customer's spending, consider size and frequency, so you can make fair comparisons to your product (for example, per month or per 2 oz. serving).

Competition Price Analysis

LEARNING SUPPORT tools

Let's name your price, based on your business model data

To understand what you can charge, you have to think through all of these numbers. Then, name your price!

Consider This...	Determine This...
• Average price of products in the category. • Average price of the current solution/competition. • Your costs	• What is the average price of similar products? • What are people spending today to solve the problem you solve or to enjoy a similar experience? • What are your costs per delivered item or per service?

TIPS

You can always change your price later, but you have to start with a price you can test with customers, and all of the analysis you have done should make you feel confident with your price.

Sam's pricing thought process

Let's look at how Sam used his cost and price analysis to think through pricing.

What Sam Considered	Data Point	What Sam Determined
He considered the average cost of dog shampoo; it showed how much people pay for clean pets.	$17.61	$17.61 is slightly less than what Sam would have to charge to cover his costs, but it's not that far off.
He considered the average monthly cost of current solutions, so he understood the actual spending on direct competitors in the clean paw space.	$29.73	$29.73 This is a lot more than what Sam would have to charge to cover his costs. But his product would last 4 months, and it's more convenient.
He considered what it took to make and deliver the product, which should last for 4 months. During that process, he also realized his product reduces waste.	$20.97	$21 dollars covers Sam's costs, but it lasts 4 months, which makes the real monthly cost a little over $5 per month, **a fraction of the current spending**. And it is more convenient! If Sam charged $26 per scrubber, he would be able to donate $5 to a local rescue service too!

The final step is making sure your value is clear to your customer!

Customers have many choices in the marketplace. How do you increase your chances that they will pick your offering?

This is called a **value proposition**.

Value propositions tell your customer why your product is valuable and why it is better than other options they have.

Sam came up with his selling points too.
Here is what Sam's sales pitch sounded like.

- Customers save valuable cleaning time every day by stopping muddy paws more quickly and easily right at the door. (Saves time)
- Paw scrubber kit cleans paws for a fraction of the cost—about $5 per month compared to the average cost of $30 every month for wipes and paper towels. (Saves money)
- Customers stop creating waste from paper towels and wipes, and we're donating $5 to our local rescue organization for every paw scrubber kit we sell. (Contributes to a good cause)

Let’s name your selling points!

Consider emphasizing 3–4 benefits—**your unique value propositions**—in your customer pitches. For example:

- Problem solved (describe in hours)/Joy shared (describe experience)
- Money saved (describe in relation to current solutions)
- Pollution or waste avoided
- People served
- Good feeling experienced (less stress, more joy, pride, etc.)
- Profits donated

Adding a few of these data points can make your business model even **more powerful**.

Selling Your Value Proposition

LEARNING SUPPORT tools

You may be wondering...

“Do I write my pitch deck now?”

Yes, it’s time!

The next challenge will have you draft and share your awesome business idea, and now you have tools and information you need to do it well.

This is going to be challenging and fun! You’ll get to use your creativity and show off your data superpowers!

5

CHALLENGE 5

Pitch Your Idea

Challenge 5: Pitch Your Idea

5

- 5 hours -

You'll practice sharing your pitch with at least one reviewer before the final revision and editing.

Be open to the ideas your reviewers share. Their questions may be the same as other audience members, and **your response to their feedback may clinch the success of your business!**

How do these steps help you?

Objectives: To make and deliver a winning presentation for customers and supporters who want to see your product or service come to life!

a Draft your pitch

You will put all you have learned into a simple and short presentation!

What will you have at the end of this step? A pitch for your product or service.

- 60 minutes -

b Find a trusted partner to review it

You will find a fresh set of eyes, someone who can give you honest and helpful feedback!

What will you have at the end of this step? Great feedback for revisions.

- 20-40 minutes -

c Pitch your idea!

You will present your pitch to friends and family, reflecting on all you have learned and achieved!

What will you have at the end of this step? Support for your project!

- 30 minutes -

This is where you put it all together.

Remember your goal is to pitch a business, so you can create a product or solution that provides a benefit to customers.

Use the power of numbers to tell your story and influence thinking, decision-making, and behavior!

Remember you have done all of the research and have data to back up everything you say, so be confident in your pitch!

Tools for your deck!

Creating a Pitch Deck

- Check out templates on Google Slides or Powerpoint.
- Canva has free tools for visuals and templates for presentations!

Visualizing Data

- Explore your slide and spreadsheet apps.
- Check out Math is Fun to build charts and graphs!

Get Inspiration

Get inspired! See how other kid entrepreneurs constructed their pitches. See examples from the Young Entrepreneurs Academy

Don’t forget to feature your numbers!

As you write your draft, see if there are ways to use your data to make your pitch more powerful. Here are some some sentence stems to help you show off your data ninja skills and win over your audience!

Dot plot	There are more ____ than any other ____.
Frequency table	The most common ____.
Histogram	More than any other ____, the ____.
Bar graph	One of the biggest problems is ____.
Pie chart	On average, people spend ____ (dollars, minutes, hours, days).
Donut chart	The largest percentage of ___ is spent on __.
Stacked bar chart	Imagine the amount of ___ we could save if ___.
Mean, median, mode	The mean ___ is, ___while the median is ____, which means___.

Let's introduce your idea!

Create three slides to explain your reason for pitching this new idea.

1

Slide 1:

Problem You're Solving or Joy You're Sharing

Pictures are worth a thousand words here.

2

Slide 2:

Your Product/ Service/Solution

Pictures are worth a thousand words here, too.

3

Slide 3:

How it Works

Sometimes spelling out the process is helpful in a diagram showing the steps.

Let's back your idea with data!

The numbers show you've done your research and considered the details!

4

Slide 4:

The Size of the Target Market

Showing how big your business can become gets people excited to help.

5

Slide 5:

Price of Product/Service

You can even show how many people could pay that price in the U.S., based on your research about the target market.

6

Slide 6:

Your Costs (Time + Money!)

How much you'll need to get started.

X

Show the size of your market multiplied by the price of your product—that's the opportunity.

Let’s share your plan and inspiration!

Share your plan to sell, and get your audience rooting for you!

7

Slide 7:

Sales Strategy

Explain your value proposition—the appealing benefits of your product or service. Do you have survey data that proves this is likely?

8

Slide 8:

Plan for What You’ll Do with the Proceeds

If you build the business, what will you do with the money? Will you give back to others?

9

Slide 9:

Include your own story as a founder, and explain why everyone can believe in you!

Feedback can help perfect your deck!

Getting feedback from others can help you refine your pitch. Entrepreneurs look for feedback to help understand:

- What questions did the reviewer have about the topic?
- Was my plan clear and specific?
- Did the charts and graphs make sense?
- Which slides seemed most compelling?

TIPS

Find a reviewer who is willing to share their feedback on your pitch.

Practice presenting, or ask them to read through your slides.

Let's get feedback!

Find a trusted reviewer to read or listen to your pitch.

Explain that your pitch is a slide presentation used to share your business idea with helpers or potential customers.

Ask the reviewer to make sure the pitch deck contains the components listed here.

Share the tips for providing feedback in this month's ***Celebrate!***

Your pitch deck should include these components:

- Problem You're Solving
- Your Product/Service/Solution
- How It Works
- Target Market
- Price of Product/Service
- Your Costs (Time + Money)
- Sales Strategy
- Plan for What You'll Do with the Proceeds
- Summary and Founder Information

Revise your numbers!

Just about there! Use your reviewer feedback and everything you've learned to polish your pitch.

- If your **tables and charts** weren't understood easily, revise to make them more clear. Check labels and measurements to make sure they're accurate.
- Be sure each number you provide is the best one to **prove your point**.
- You need not use all the data you have collected, so **take it out** if it doesn't make the story compelling.

Revise your language!

- Use as few words as possible to say what you need to say. **Less is more**!
- **Strengthen your headlines** to say exactly what you want your audience to take away from each slide. Reading the headlines as one long narrative is often helpful.
- **Paint a picture** of a great experience, a strong business model, and an amazing founder!

Polish it up!

You don't want minor issues distracting from your pitch!

- Clean up any remaining errors in grammar, mechanics, and style.
- Check any links you've added to make sure they're working.
- Review your visuals to make sure they're clear and appropriately labeled.

Time to Pitch!

Friends and family are a wonderful first market for your product or service. We're pretty sure they are as impressed as we are with your number powers and your product or service.

- Savor the accomplishment, and take time to think about all you've done and learned.
- As you reflect on the power of numbers, reflect on how they work in your own life and how you can now use them moving forward!

TIPS

Creating a first product and having a real customer use it, however rough the actual product might seem, is the best way to continue learning and building your company. Go forth and build!

You did it!

All 5 challenges complete.
Time to *Celebrate*!

[Prepare for Your Celebration]

LEARNING SUPPORT tools

Celebration of Learning Reminder!

Remember, a **celebration of learning** is an opportunity for you to showcase your work, feel pride in your accomplishments, and expand your comfort zone to present to family, friends, and the community.

The celebration is a terrific opportunity to share your final product and everything you've learned in making it. So, let's celebrate! Everyone is excited to see what you've learned.

Appendix

Appendix A: Answer Keys

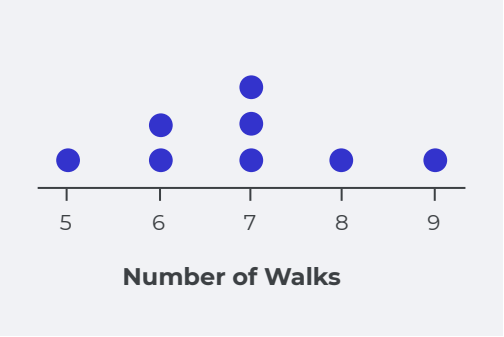
Sample answers to practice problems. Remember, “wrong” answers can be as helpful as “right” answers. Use these keys, not to judge yourself, but to help you learn the concept. You can do this!

Appendix B: Resources

These tables summarize, in one handy location, additional instructional resources and Learning Support Tools provided throughout the project—handy for finding things later, don’t you think? In addition, the tables describe the cognitive and academic skills used in each step, so you can share with others all the great things you’re learning.

Challenge 2: Research Your Product

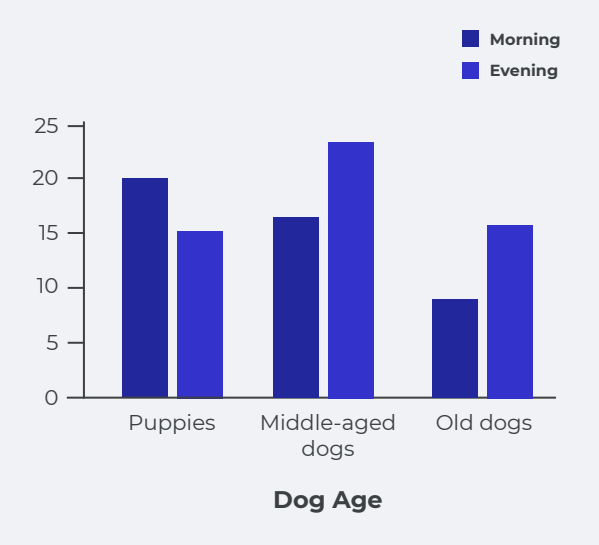
Practice 1: Dot Plots



Practice 2: Frequency Tables

Length	Frequency
0 minutes to less than 10 minutes	0
10 minutes to less than 20 minutes	6
20 minutes to less than 30 minutes	6
30 minutes to less than 40 minutes	4
40 minutes to less than 50 minutes	7
50 minutes to less than 60 minutes	2

Practice 3: Bar Graphs



Challenge 3: Propose a Solution

Practice 1: Fraction to Percent

Types of Pets	Original Fraction	Fraction over 100	Percent
Only Dogs	3 / 5	60 / 100	60%
Only Cats	1 / 4	25 / 100	25%
Dogs and Cats	3 / 20	15 / 100	15%

Practice 2: Another Percentage

Biggest Expense for Dog Owners	Respondents	Fractions	Percent
Grooming	6	6 / 20 or 3 / 10	30%
Toys	1	1 / 20	5%
Food	10	10 / 20 or 1 / 2	50%
Furniture	3	3 / 20	15%

Practice 3: Percentage to Dollar Amount

Category	Percentage	Fraction Over 100	Fraction Over 500	Dollars Spent Per Year
Pet Food	45.7%	45.7 / 100	228.5 / 500	$228.50
Pet Supplies	40.6%	40.6 / 100	203 / 500	$203
Pet Services	9%	9 / 100	45 / 500	$45
Live Animals	4.7%	4.7 / 100	23.5 / 500	$23.50

Challenge 1: Identify Your Project Focus

The table below provides concepts, resources, and learning support tools used throughout the first challenge. Use this table as a reference as needed. Links to resources and learning supports are also provided within the project pages.

Cognitive Skills	Words Your School Might Use to Describe This	Linked Instructional Resources	Provided Learning Support Tool
Step a: Brainstorm your business ideas			
Asking Questions	• Making Lists • Mind-mapping		Finding Your Inspiration Brainstorming Joys and Challenges
Step b: Pick your favorite idea			
Organizing & Representing Information	• Graphic Organizers • Problem-Solving		Use a Decision Quadrant Role-Play Your Product or Service
Step c: Role-play to understand more			
Defining a Design Problem	• Predictions • Acting it Out		Extension Activity: Craft Your Elevator Pitch
Step d: Make a list of potential customers			
Designing a Solution	• Writing Concisely • Synthesizing		Make a List of Potential Customers

Challenge 2: Research Your Product

The table below provides concepts, resources, and learning support tools used throughout the first challenge. Use this table as a reference as needed. Links to resources and learning supports are also provided within the project pages.

Cognitive Skills	Words Your School Might Use to Describe This	Linked Instructional Resources	Provided Learning Support Tool
Step a: Create and send your survey			
Asking Questions & Modeling	• Estimation • Categorizing Information	Estimating decimal addition	Create and Send Your Survey
Step b: Learn about data analysis tools			
Planning & Carrying Out Investigations	• Writing Specific Questions	How to Do a Survey	Practice Visualizing Data
Step c: Analyze your data			
• Organizing and representing information • Identifying patterns and relationships	• Tables • Graphs • Sense-Making	• Representing data • Setting up a frequency distribution table-Middle School Math • Guided practice for 'Make inferences about a population by analyzing random samples'	Visualize Your Own Data

Challenge 3: Research Your Market

The table below provides concepts, resources, and learning support tools used throughout the first challenge. Use this table as a reference as needed. Links to resources and learning supports are also provided within the project pages.

Cognitive Skills	Words Your School Might Use to Describe This	Linked Instructional Resources	Provided Learning Support Tool
Step a: Understand why percentages rock			
Identifying Patterns and Relationships	• Calculating Percentages from Fractions • Using Percentages to Make Predictions	Math Antics - What Are Percentages?	Dive Into Percentages
Step b: Send a follow-up survey and do your research			
Planning & Carrying Out Investigations	• Collecting Data • Conducting Research	Writing Good Survey Questions	• Market Research Questions • Search the Internet for Reliable Data
Step c: Analyze your data and identify key statistics			
Predicting/ Hypothesizing	• Reading Graphs • Creating Graphs from Data	• Reading pie graphs (circle graphs) • Types of Graphs and when to use them	• Make Guesses Using Data and Research • Visualize Your Own Data

Challenge 4: Create a Business Model

The table below provides concepts, resources, and learning support tools used throughout the first challenge. Use this table as a reference as needed. Links to resources and learning supports are also provided within the project pages.

Cognitive Skills	Words Your School Might Use to Describe This	Linked Instructional Resources	Provided Learning Support Tool
Step a: Calculate your costs			
Organizing and Representing Information	• Data Analysis • Estimation		Find Costs
Step b: Learn about mean, median, and mode			
Comparing and Contrasting	• Measures of Center • Summarizing	• Mean, median, & mode example • Central Tendency-Mean Median Mode Range- Math	Category Price Analysis Competition Price Analysis
Step c: Complete your price analysis			
Interpreting Data/Info to Make Valid Claims	• Measures of Center • Putting Numbers in Context	7th Grade Math Topic 6 Lesson 2- Draw Inferences from Data	Selling Your Value Proposition
Step d: Name your selling points			
Evaluating Competing Design Solutions	• Data Analysis • Synthesizing Multiple Sources		

Think Globally, Act Locally: Day-at-a-Glance

What does a day look like? Each month, Unboxed by Prepared Parents walks kids through six tools: ***Plan***, ***Engage***, ***Build***, ***Learn***, ***Grow***, and ***Celebrate***. We have designed the tools to provide a complete experience, one that can complement and enrich your school schedule. You can always mix-and-match, skip, or double down on a specific tool.

Check out what a day with Unboxed could look like:

Time	Tool	Description
8:50am	***Engage*:** Check-In	Practice a routine of checking in. (5–10 minutes)
8:55am	***Plan*:** Set Goals for the Day	Make a plan for your day. (5 minutes)
9:00am–1:00pm	School/Remote Learning	Attend classes and complete required coursework. (3–4 hours)
1:00pm–2:00pm	Break	Rest, refuel, and refresh. (1 hour)
2:00pm–2:30pm	***Build*:** Reading and Writing Practice	Strengthen foundational skills in reading and language arts. (30 minutes)
2:30pm–3:00pm	***Build*:** Math Practice	Strengthen foundational skills in math. (30 minutes)
3:00pm–4:00pm	***Learn*:** Project Time	Make progress on your Unboxed project. (60 minutes)
4:00pm	***Engage*:** Check Out	End the day with a reflection on how the day went. (3–5 minutes)

Think Globally: Month-at-a-Glance

How does this project fit into a month? Each challenge in the ***Learn*** monthly project is broken into manageable steps. One or more steps can be tackled each day. **Every student works at a unique pace**; the calendar below is just one example of how the project might fit into a month of learning.

Explore the Essential Question & Project Overview	**Challenge 1** **Step a:** Brainstorm your business ideas	**Challenge 1** **Step b:** Pick your favorite idea	**Challenge 1** **Step c:** Role play to understand more	**Challenge 1** **Step d:** Make a list of potential customers
Challenge 2 **Step a:** Create and send your survey	**Challenge 2** **Step b:** Learn about data analysis tools	**Challenge 2** **Step c:** Analyze your data	**Challenge 3** **Step a:** Understand why percentages rock	**Challenge 3** **Step b:** Send a follow-up survey and do your research
Challenge 3 **Step c:** Analyze your data and identify key statistics	**Challenge 4** **Step a:** Calculate your costs	**Challenge 4** **Step b:** Learn about mean, median, and mode	**Challenge 4** **Step c:** Complete your price analysis	**Challenge 4** **Step d:** Name your selling points
Challenge 5 **Step a:** Draft your pitch deck	**Challenge 5** **Step b:** Find a trusted partner to review	**Challenge 5** **Step c:** Pitch your idea!		

Learning Support Tools are designed to provide kids support for carrying out the Challenges in the ***Learn*** project. These additional explanations, activities, guides, and examples can help accelerate learning.

Learning Support Tools are also our printables. If you prefer printed material, we recommend you print Learning Support Tools, instead of the *Learn* project.

UNBOXED PREPARED PARENTS

Print

Think Globally: Learning Support Tools

What will I find here?
The tools you will use here provide additional support to help you get inspired, develop a plan, research, draft, and finalize a final product through the "Think Globally, Act Locally" project.

Planning Your Project

- Day-at-a-Glance
- Month-at-a-Glance
- Materials List
- Explore the Essential Question
- Plan Your Project Milestones

Challenge 1: Identify Your Project Focus

- a Finding Your Inspiration
- a Brainstorming Joys and Challenges
- b Use a Decision Quadrant
- b Role Play Your Product or Service
- c Extension Activity: Craft Your Elevator Pitch
- d Make a List of Potential Customers

Challenge 2: Research Your Product

- a Create and Send Your Survey
- b Practice Visualizing Data
- c Visualize Your Own Data

Challenge 3: Research Your Market

- a Dive Into Percentages
- b Market Research Questions
- b Search the Internet for Reliable Data
- c Make Guesses Using Data and Research
- c Visualize Your Own Data

Challenge 4: Create a Business Model

- a Find Costs
- b Category Price Analysis
- b Competition Price Analysis
- c Selling Your Value Proposition

Challenge 5: Pitch Your Idea

- Prepare for Your Celebration

Planning and Introduction

Before you dive into the project's challenges, the introductory slides offer a brief look at **what** you'll do to complete the project and **how** and **when** you'll do these things, along with some inspiration to help you find your **why**. The tools below provide support for these introductory steps.

Planning

- **Materials List**

Introductory Activities

- **Explore the Essential Question**
- **Plan Your Project Milestones**

Materials List

What else do you need to complete the project?

The steps in the project assume you have ready access to the Internet and basic materials, like pencils and paper. The optional materials listed on the right may be useful, depending on your interest and chosen product.

Required

- Paper
- Pen/pencil
- Internet access
- Device for online research and learning resources
- Application for developing a slide presentation, like Google Slides or PowerPoint

Optional

- *Bee Fearless* (Book)
- Dedicated notebook
- Camera/video camera
- Sticky notes
- Markers

Name _____ Date _____

Explore the Essential Question

Use this tool to record your thoughts and feelings as you consider the essential question.

The Essential Question:

How do people use the power of numbers to tell stories and influence thinking, decision-making, and behavior?

1. Have you ever seen someone use numbers to tell a story or change someone's thinking, decision-making, or behavior? What was the most memorable instance of this?

_____

_____

2. As you complete this project, use this table to record specific examples you experience or observe of people using numbers successfully or unsuccessfully to motivate others to engage with a story, or change thinking, decision-making, or behavior.

Experience or Observation	Description	What role did the power of numbers play in success or failure?

Name _____ Date _____

Plan Your Project Milestones

Use this tool to plan completion dates for each step in the **Think Globally Project**.

Activity	Estimated Time	Complete By Date
Introduction		
Finding Your Inspiration	20–40 min	
Challenge 1: Identify Your Project Focus		
Step a: Brainstorm your business ideas	30–60 min	
Step b: Pick your favorite idea	20–40 min	
Step c: Role-play to understand more	60 min	
Step d: Make a list of potential customers	20–40 min	
Challenge 2: Research Your Product		
Step a: Create and send your survey	30–60 min	
Step b: Learn about data analysis tools	20–40 min	
Step c: Analyze your data	60 min	

Name _____ Date _____

Plan Your Project Milestones

Activity	Estimated Time	Complete By Date
Challenge 3: Research Your Market		
Step a: Understand why percentages rock	30–60 min	
Step b: Send a follow-up survey and do your research	20–40 min	
Step c: Analyze your data and identify key statistics	60 min	
Challenge 4: Create a Business Model		
Step a: Calculate your costs	60 min	
Step b: Learn about mean, median, and mode	20–40 min	
Step c: Complete your price analysis	30 min	
Step d: Name your selling points	30–60 min	
Challenge 5: Pitch your idea		
Step a: Draft your pitch	60 min	
Step b: Find a trusted partner to review it	20–40 min	
Step c: Pitch your idea!	30 min	

Print

Challenge 1: Identify Your Project Focus

Step a

- FINDING YOUR INSPIRATION
- BRAINSTORMING JOYS AND CHALLENGES

Step b

- USE A DECISION QUADRANT
- ROLE-PLAY YOUR PRODUCT OR SERVICE

Step c

- EXTENSION ACTIVITY: CRAFT YOUR ELEVATOR PITCH

Step d

- MAKE A LIST OF POTENTIAL CUSTOMERS

Finding Your Inspiration

All around us there are examples of great businesses built by people who were passionate about solving a problem or sharing an enjoyable experience with others. The story of Mikaila Ulmer in *Bee Fearless* describes how she did both. She shared a great pleasure (her grandmother's lemonade) and contributed to saving honeybees, a global problem that affects us all.

Enjoy the book as part of your foundational knowledge building routine. You can also search online to find Mikaila's many appearances on video, including her appearance on "Shark Tank" when she was just 10 years old!

Optional Activity or Discussion Prompt: As you watch videos about Mikaila Ulmer or read her book *Bee Fearless*, take notes about when and how Mikala uses numbers to communicate the story of her business.

- What problem was Mikaila seeking to solve with her business?
- How did she find out it was a problem?
- How did she make a business out of sharing her joy?
- How is Mikaila making an impact both locally and globally?

What is your *why*?

As you consider your long-term goals and the things you can do this year or this month that will help you reach them, how do you think being able to use data in powerful ways might help you?

Name _____ Date _____

Brainstorming Joys and Challenges

To build a business, you have to create value. It is valuable to solve a problem or to share an enjoyable experience. What problems can you solve? What joys can you share?

Directions: List 3-5 challenges or joyful experiences you have and consider whether or not you might be able to build a business around them.

Who has this joy or challenge?	What is it?	Why is this a joy or a challenge?	Could other people benefit from this joy or a solution to this challenge?	What product or service can you create to share this?

Name _____ Date _____

Use a Decision Quadrant

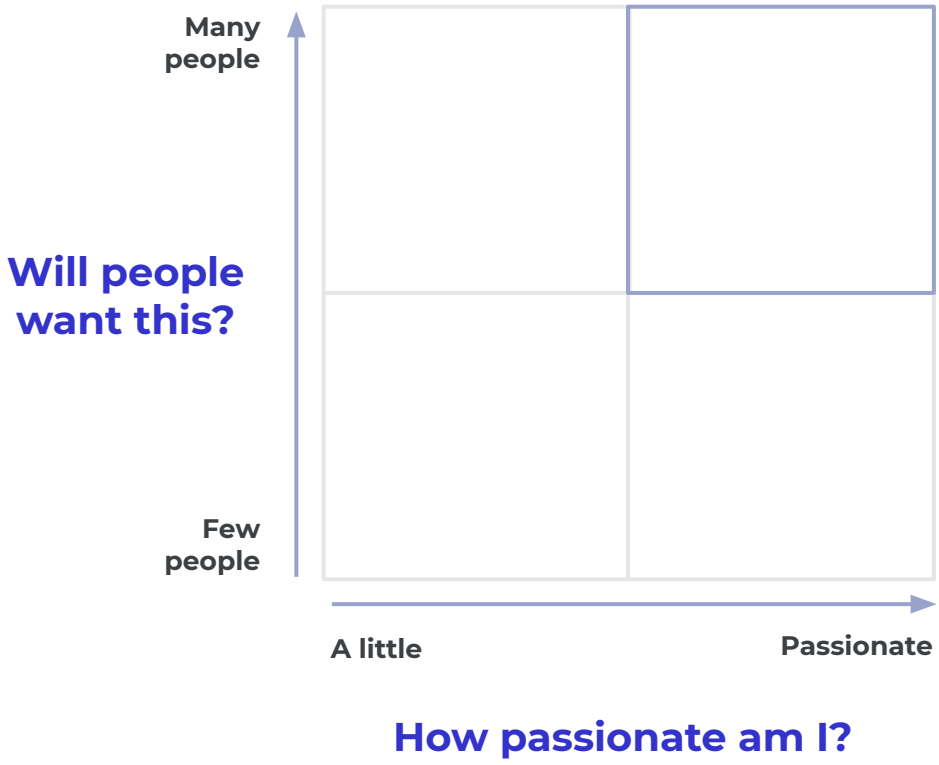
Use this decision quadrant to evaluate your ideas!

Write each idea in one square of the box. You are starting with a guess related to whether or not you think many people would be interested in your idea. That will help you determine if you have a business idea or not.

Place your idea low if only a few people might want it and high if many people want it. Place your idea to the left if you're not that passionate, and to the right if you are very passionate and ready to spend time on it.

The idea closest to the top right corner could be the winner!

What product or service could help others share the joy or overcome the challenge? This is a great critical thinking tool that can be applied in any decision-making situation. Simply rename the X and Y axis.



Name _____ Date _____

Role Play Your Product or Service

Use your imagination to understand your product or idea better.

If your product is a physical product, find props to use to replicate the experience. For example, if you are thinking of a mobile app, draw the screens users will encounter onto sticky notes and flip through the notes to imagine the experience. Revise and revise again, until you have an idea of what will work for your users.

If your business idea is a service, imagine the whole experience of knocking on a door or picking up the phone to speak with a potential customer. Imagine what questions they will ask and how you will be able to carry out the service.

1 **What are the most important questions you need to answer to understand if your product or service will work?**

2 **What have you learned from this role-play?**

3 **What is your next step in making the product or service real?**

Name _____ Date _____

Extension Activity: Craft Your Elevator Pitch

There's no time like the present to start practicing your elevator pitch!

An **"elevator pitch"** is a short statement that completely describes the most important aspects of your business idea—it's what you'd use to explain your idea if you only had 30 seconds.

Example:

I am launching a paw scrubber for the millions of people who love their pets but hate the mess of dirty paws, because I am passionate about my dog exercising outside and have figured out how to make cleaning up after her walks faster and easier.

Use this stem to get started!

I am launching a _____ for _____

who _____ because I am passionate

about _____

and have figured out how to make _____!

(better, faster, cheaper, more effective, more accessible, etc.)

Name _____ Date _____

Make a List of Potential Customers

Complete the following table to start guessing or estimating the number of people in your market.

Who can benefit from your product or service?	**Total # of people in this group**	**No. likely to benefit from your product or service**	**Make a list of these people!** (These are potential customers and you'll need to survey them.)
Family			
Friends			
Immediate neighbors			
School community			
Community or religious organization			
Local business			

Name _____ Date _____

Make a List of Potential Customers

Complete the following table to create a list of people who can be sample customers so you can ask them to provide feedback on your idea.

Name	**Do you know this person? What makes them a good person to survey?**	**Contact method and information** (e-mail address, phone number; neighbor or family member)

Print

Challenge 2: Research Your Product

Step a CREATE AND SEND YOUR SURVEY

Step b PRACTICE VISUALIZING DATA

Step c VISUALIZE YOUR OWN DATA

Name _____ Date _____

Create and Send Your Survey

1: Write Your Questions

Develop questions that will help you learn more about your customer and their needs.

- Consider asking about their needs or something they enjoy, so you can see if they have the problem you are solving (for example, muddy paws) or if they currently enjoy similar things (like lemonade, cookies, etc.)
- Consider asking about quantity or frequency. For example, can you ask how many pets they have? How often do they bake cookies? Look for numerical data!
- Consider asking questions about what is especially challenging or joyful about the experience.
- Ask if they would be willing to engage in surveys as you continue to develop your project.
- Ask anything else you are curious about!

Now, write 3-5 questions to send as a brief survey.

1. _____
2. _____
3. _____
4. _____
5. _____

Create and Send Your Survey

2: Choose a Survey Tool

As you consider how you will survey your future customers, you may be wondering how to get the survey questions to your sample and how to get their responses back.

Explore digital survey tools that will help save time and help you organize your responses. Friends and family are a great place to start.

Google Forms and Survey Monkey are two options you might use to send your survey digitally.

- With both tools you can construct questions in many formats, including multiple choice, rankings, and text.
- Data is returned in a spreadsheet format, which makes it easy to sort numerical data and turn data into graphs and charts.

Be sure to check with a parent or guardian to make sure you are conducting your survey safely and that you are authorized to use the technology tools.

Name _____ Date _____

Create and Send Your Survey

3: Craft an opening note

When reaching out to friends and family (your sample customers) for help on a project, it's important to show gratitude for their contributions and support by explaining the project and asking politely for their assistance.

Craft a brief note like the example below to send along with your survey:

> Dear friends and family,
>
> I am writing to you today to ask for your support in a project I am working on.
>
> It is an idea I have for a [product or service idea].
>
> I am hoping to gather feedback throughout my design process from people like you.
>
> Would you mind answering a few questions in a brief survey? It will take less than 2 minutes and would be really helpful to me.
>
> [Insert Link]
>
> I look forward to your responses.
>
> Best regards,
>
> [Your name]

Be sure all participants have the access they need. Send yourself a test first to make sure it all looks as you want it to and that it works!

Name _____ Date _____

Practice Visualizing Data

Use this tool to help you practice with dot plots, frequency tables, and bar graphs!

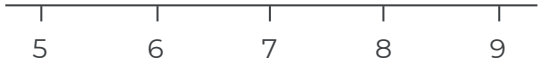
Use the data provided to create a dot plot showing the number of walks these dogs went on.

1. **What's the title of the dot plot? "Number of walks"**
   Notice how the numbers 5, 6, 7, 8, 9 are on the number line. This matches perfectly with the number of walks in our table!

2. **Place dots above the number line.**
   The number of dogs is the number of dots! So, for 5 walks, there will be one dot above. How many dots will go above 6 walks? Complete the dot plot for the rest of the table!

3. **What do you notice about the data?**
   Where do you see the most dots? The least dots?

Number of Walks	Number of Dogs
5	1
6	2
7	3
8	1
9	1



Number of Walks

Name _____ Date _____

Practice Visualizing Data

Here are the lengths of time, in minutes, that dog owners in Sam's neighborhood spend cleaning up after walking their dogs:

12	13	15	16	18	19	24	25	26	26	26	29

32	34	35	38	40	41	41	42	44	47	48	51	56

Complete the frequency table to show the amount of time most dog owners spend cleaning.

1 **Draw lines in the data to mark each length of time used in the table.**

The first lines have been drawn for you, from 10 minutes to less than 20 minutes. Insert lines between numbers in the data set to match the categories of length in the table.

2 **In the frequency table, enter the number of numbers in the data set in each category.**

The frequency is the amount of numbers in the data set that fall into the category described. Starting with 0 to less than 10 minutes, do you see any numbers that match this description? If none exist, then the frequency is 0. From 10 to less than 20 minutes, there are **6** numbers in the data set, so the frequency is 6.

Length	Frequency
0 minutes to less than 10 minutes	
10 minutes to less than 20 minutes	
20 minutes to less than 30 minutes	
30 minutes to less than 40 minutes	
40 minutes to less than 50 minutes	
50 minutes to less than 60 minutes	

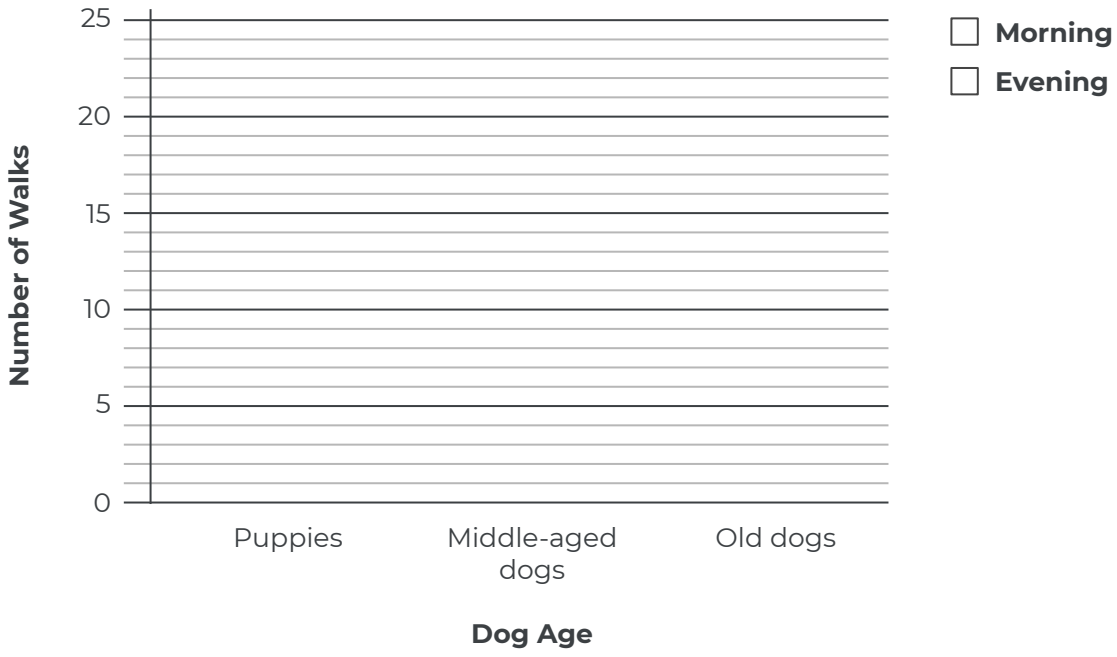
Name _____ Date _____

Practice Visualizing Data

Use this tool to help you practice with dot plots, frequency tables, and bar graphs.

1. **Choose one color for morning and one for evening and fill in the key.**
2. **Create bars for the number of morning and evening walks for each dog age.** Notice the bar for the puppies' morning walk category is already created! Color it with your morning color and create bars for the rest of the data.

Dog Age	Morning	Evening	Total
Puppies (2 years or younger)	20	15	35
Middle-aged dogs (2 to 7 years)	17	23	40
Old dogs (over 7 years old)	9	16	25
Total	**46**	**54**	**100**



Name _____ Date _____

Visualize Your Own Data

Use these blank tables and graphs to input your own data. Choose any or all, it's up to you!

Table or Frequency Table

Dot Plot

Name _____ Date _____

Visualize Your Own Data

Use these blank tables and graphs to input your own data. Choose any or all, it's up to you!

Bar Graph

Histogram

Print

Challenge 3: Research Your Market

Step a

- DIVE INTO PERCENTAGES

Step b

- MARKET RESEARCH QUESTIONS
- SEARCH THE INTERNET FOR RELIABLE DATA

Step c

- MAKE GUESSES USING DATA AND RESEARCH

Step d

- VISUALIZE YOUR OWN DATA

Dive Into Percentages

This tool is helpful for anyone who wants to see fractions as percentages visually.

A percentage is just a fraction with a denominator of 100!

$\frac{1}{4}$  **25%** because $\frac{1 \times 25}{4 \times 25} = \frac{25}{100}$

$\frac{1}{2}$ or $\frac{2}{4}$  **50%** because $\frac{1}{2}$ or $\frac{2 \times 25}{4 \times 25} = \frac{50}{100}$

$\frac{3}{4}$  **75%** because $\frac{3 \times 25}{4 \times 25} = \frac{75}{100}$

$\frac{1}{1}$ or $\frac{4}{4}$  **100%** because $\frac{4 \times 25}{4 \times 25} = \frac{100}{100}$

Name _____ Date _____

Dive Into Percentages

Use this tool to help you practice calculating percentages and using them to understand your target market.

Step 1: Multiply the original fraction to have a denominator of 100.
What should we multiply the original fraction by to get to 100?

5 x 20 = 100 4 x ? = 100 20 x ? = 100

Step 2: Write the fraction over 100 as a percent.
Remember, a percent is just the numerator of a fraction over 100 with a % sign!

Types of Pets	Original Fraction	Fraction over 100	Percent
Only Dogs	$\frac{3}{5}$ x 20 =	$\frac{\quad}{100}$	%
Only Cats	$\frac{1}{4}$ x 20 =	$\frac{\quad}{100}$	%
Dogs and Cats	$\frac{3}{20}$ x 20 =	$\frac{\quad}{100}$	%

Name _____ Date _____

Dive Into Percentages

Use this tool to help you practice calculating percentages and using them to understand your target market.

Step 1: Write the respondents as the numerator, and write the total, which is 20, as the denominator of a fraction.

Step 2: Convert that fraction to a percent by multiplying it to be a fraction out of 100, and write it as a percent!

Biggest Expense for Dog Owners	Respondents	Fractions	Percent
Grooming	6	___/20 = ___/100 =	%
Toys	1	___/20 = ___/100 =	%
Food	10	___/20 = ___/100 =	%
Furniture	3	___/20 = ___/100 =	%

Name _____ Date _____

Dive Into Percentages

Use this tool to help you practice calculating percentages and using them to understand your target market.

Step 1: Write the percentage as a fraction over 100.
Remember that a percent is just the numerator of a fraction over 100 with a % sign!

Step 2: Multiply that fraction to be over a denominator of 500.
How do we get from 100 to 500? Multiply by ...?

Step 3: Write the numerator of the fraction over 500 as a price in dollars!

The numerator from the fractions over 500 is the amount of dollars spent per year on that category!

Category	Percentage	Fraction Over 100	Fraction Over 500	Dollars Spent Per Year
Pet Food	45.7%			
Pet Supplies	40.6%			
Pet Services	9%			
Live Animals	4.7%			

Name _____ Date _____

Market Research Questions

Use this tool to learn more about your market. While friends and family are a great place to start, it is not too early to start dreaming big about the future of your business!

Try to learn more about the size of your market, as well as what other businesses and customers are doing right now, so you can start to make estimates about your future business and share them as part of your pitch.

	Internet Search Questions	Notes and Findings
How many people in your school, city, or country are like the people in your original sample?		
What do you want to know about these people in relation to your idea?		
What do you want to know about their usage or spending on products or services like the one you are proposing?		
What else would you like to know?		

Search the Internet for Reliable Data

It's important to use reliable sources!

Gather information that will help you make assumptions or estimates about your business.

For example, if 80 percent of Sam's neighbors have dogs and half of that sample say they need his product, he might make a guess that half of U.S. dog-owners need his product. If Sam researched the number of dog owners in the U.S., he might find that 85 million families in the U.S. own dogs. If his estimate is correct, then over 42 million might be interested in buying his product!

Step 1: Quickly review at least 5–10 potential sources that answer key questions about the size of your market and the kinds of things people are buying in it.

Step 2: From those sources, select at least 3 that will help you make guesses about the larger market, based on your friends-and-family feedback.

Record important information about your sources so you can include that documentation on your slides and answer questions from your audience.

- What is the title and source?
- What is the author's main idea or the main purpose of the publication?
- Is this a reliable source? Does the URL end in .org, .gov, .edu? Is the information from a respected publication?
- What is the key takeaway from this particular publication? What is the number that makes the most sense?

Name _____ Date _____

Make Guesses Using Data and Research

Use this tool to make some projections using data collected from your survey and research.

Make sure you have your survey data available! You can use your findings in your pitch.

How many people would be interested in buying your product or service in your community?	
How many people would be interested in buying your product or service in your state?	
How many people would be interested in buying your product or service in the United States?	
Based on your research, how much money are people already spending on similar products or services?	
How much would your ideal customers be willing to pay for your product or service?	

Name _____ Date _____

Visualize Your Own Data

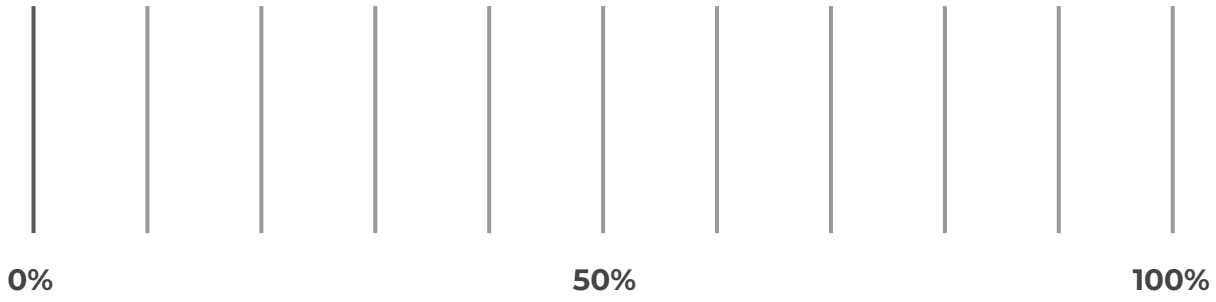
Use these blank tables and graphs to input your own data. Choose any or all, it's up to you!

Table or Frequency Table

Category	Original Fraction	Fraction Over 100	Percentage

Stacked Bar Chart

Think of a stacked bar chart as a number line. Mark your first percentage on the line, and then add the next one to it. Color each percentage in different colors on the bar!



Name _____ Date _____

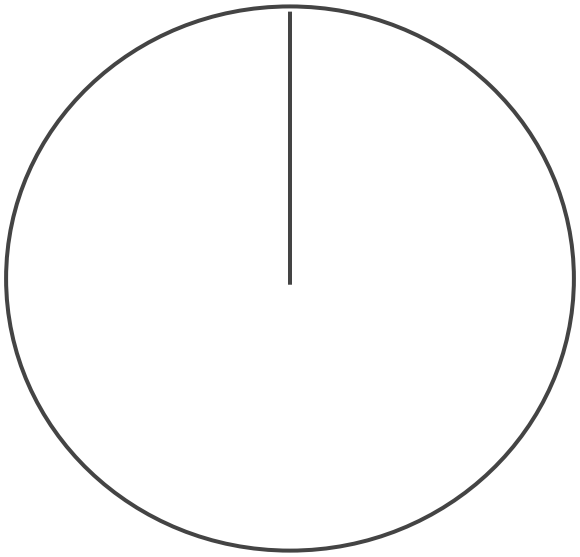
Visualize Your Own Data

Use these blank graphs to input your own data. Choose any or all, it's up to you!

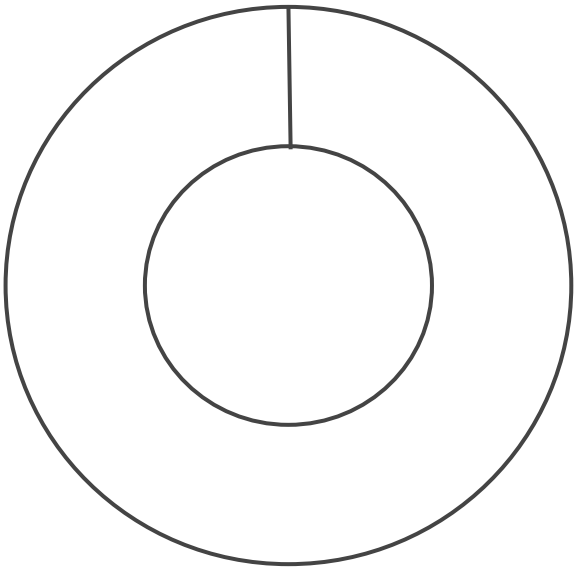
Start at the top of the chart and estimate how much of the pie or donut each percentage takes up out of the whole.

Draw lines to mark each category and **color** them in different colors!

Pie Chart



Donut Chart



Name _____ Date _____

Visualize Your Own Data

Use these blank tables and graphs to input your own data. Choose any or all, it's up to you!

Table or Frequency Table

Dot Plot

Name _____ Date _____

Visualize Your Own Data

Use these blank tables and graphs to input your own data. Choose any or all, it's up to you!

Bar Graph

Histogram

Print

Challenge 4: Create a Business Model

Step a

- FIND YOUR COSTS

Step b

- CATEGORY PRICE ANALYSIS
- COMPETITION PRICE ANALYSIS

Step c

- SELLING YOUR VALUE PROPOSITION

Name _____ Date _____

Find Your Costs

Use this tool to help you figure out your costs.

You might be wondering how people figure out their costs. It is really just as simple as it sounds. You will have to figure out how much each item you need will costs.

To do this, you may need to do a little more math. While you will sell more than one item, you first need to know the exact cost to create or deliver just one.

Sometimes, however, the materials you need will come in larger quantities, and you will not be able to purchase one single item.

> **For example**, Sam had to buy 24 deli containers to be able to get one. So he had to calculate how much each container would cost on its own.

Once you know the cost of materials to build one product or deliver one service, you can use this cost to help you consider **how to set your price**.

Item	Total Cost of Package	Quantity Per Package	Price Per Single Item
Deli Container	$16.88	24	$0.70
Total			

Name _____ Date _____

Category Price Analysis

Use this tool to help you figure out your price based on other spending in similar areas.

To determine price, it is important to look at other products that solve similar problems.

What other products or services in the same category do your potential customers currently spend money on?

> **For example,** when Sam wanted to see how much money was spent on pet grooming supplies, he looked at dog shampoo. Shampoo isn't a direct competitor to paw scrubbers, but it is in the category of pet cleanliness.

Product or Service	Price of Item	Quantity Needed per [period of time]	Total Cost per [period of time]
For example: Fancy dog shampoo	$26.00	6 times per year	$13.00 per month

Calculate the following:

Mean	
Median	
Mode	

How do your costs **compare** to these prices in the category?

Name _____ Date _____

Competition Price Analysis

Use this tool to help you figure out your price based on the prices of direct competitors.

To **determine price**, it is also important to look at the products or services you'll be competing against!

Use the table below to **research prices of your competitors** who offer the same product or service you want to offer. People may be using other products and strategies to solve the same problem, such as muddy paws. Look for ways people are solving the same problem or enjoying a similar experience for this analysis.

Product or Service	Price of Item	Quantity Needed per [period of time]	Total Cost per [period of time]

Mean	
Median	
Mode	

Name _____ Date _____

Selling Your Value Proposition

Use this tool to record ideas about **ways to describe the value** of your product or service.

Your pitch and other communications about your product or service should state clearly why customers might find value in your offering. This is your value proposition.

Use the table below to explore the different ways you might describe your value proposition. Wherever possible, add a number, a fraction, a percentage, or a chart to **emphasize that value**.

Problem solved (describe the time or frustration saved)	
Joy shared (describe experience)	
Money saved (describe in relation to current customer spending)	
Pollution or waste avoided	
People served	
Good feeling experienced (less stress, more joy, pride, etc.)	
Profits donated	

In your pitch, flyers, or other ways of communicating about your offering, always **make the value clear and easy to remember!**

Print

Challenge 5: Pitch Your Idea

Name _____ **Date** _____

Prepare for Your Celebration

Use this tool to record your reflections on this month's learning experiences.

What have you learned this month by doing the **Think Globally, Act Locally project**?

_____

_____

What were the biggest challenges you ran into during your project?

_____

_____

What strategies did you use to overcome the challenge?

_____

_____

What did you learn about the **power of numbers**?

_____

_____

How confident do you feel using the **data visualization tools and skills** you developed this month?

_____

_____

Strategies for kids to maintain momentum even when they start to lose speed and want to quit

What you get from it	When you do it
Helping kids keep going when they want to stop	Varies by student.

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Grow

Maintain Momentum: How To Help A Kid Keep Going, Even When They Want To Stop

Long-distance runners describe a phenomenon called “hitting the wall,” where one moment they’re flying along, feeling great, and the next, they’re zapped. With energy drained, the road ahead looks long.

You and your kids may have experienced a similar feeling, starting the year full of vigor, only to lose steam rapidly when things started getting tough and the newness wore off. Or maybe they started an Unboxed project with lots of energy, but now their enthusiasm is waning. The feeling isn’t always as extreme as hitting the wall—sometimes things are just hard, and our efforts don’t match our results.

Experienced runners power through moments like these, finding different ways to overcome obstacles and doubt. Some change strategy and find a more comfortable pace. Others speed up to recalibrate what hard effort feels like. Some apply a continuous, steady effort to the finish—like the determined tortoise in the tortoise and the hare story—and others take a break and then get right back on track. And sometimes, support from spectators can carry a tired runner across the finish line.

Obviously, kids aren’t all runners, and learning is not a race, but there are strategies self-directed learners can use to push through challenges and overcome obstacles. There are five power behaviors of self-directed learners that kids can use to find their second wind.

Power Behaviors for Overcoming Obstacles

It can feel frustrating, and sometimes even intimidating, to an observer when a kid hits a wall. Is it because the kid's giving up or is it because they can't figure out how to take the next step? Instead of showing exasperation or stepping in, encourage your kid to use the power behaviors. These strategies provide a framework and language to use that isn't personal or judgemental—it shifts the conversation away from what the kid didn't do, to what strategy might be the best method for accomplishing the task.

As a parent or learning leader, you can help kids acquire skills to move past obstacles by encouraging the **five power behaviors** (and we offer you some words to use!)**:**

- **Shift Strategy**

1. **Seek Challenges**
2. **Persistence**
3. **Respond to Setbacks**
4. **Seek Appropriate Help**
5.

TIPS

These behaviors take time to establish, and it can be hard for the adult to encourage the right moves when the kid doesn't say the "right" thing, or says nothing at all, and the adult needs to prompt the conversation.

When this happens, focus on **PROCESS** (finding strategies, encouraging determination, asking questions, etc.) rather than on **PRODUCT** (regardless of whether it's good or bad). This is the difficult instinct that we all have to try to overcome.

Practice the **16 Habits of Success**

Source: Summit Public Schools, as based on the Building Blocks for Learning Framework, Dr. Brooke Stafford-Brizard, Turnaround for Children, 2016.

But first, a note about losing steam.

When kids say an experience is frustrating and they want to give up, it's not necessarily because the work is too hard and certainly not because the kids are lazy. Research shows us that kids may give up learning something because they are not making progress.

> "When it feels like your kid is giving up, what is actually happening and what the research would say, is that they're just not feeling like they're making progress.
>
> **Mira Browne**
> Co-Founder & Executive Director, Prepared Parents

When kids struggle to pick up a new skill, they misinterpret "this is hard" for "I'm not good at this" and give up.

Power behaviors can help kids to overcome this hurdle and reframe struggles. Learning scientists call this **desirable difficulty**, a term first coined by Dr. Robert Bjork in the 1990s. Desirable difficulty refers to learning activities that are hard to do, but because we desire to learn them, we're willing to put in the effort. And bonus! When we power through, we retain the information longer and in greater detail.

Power Behavior #1 — Shift Strategy

Why is it important? When a kid is stuck on something they're trying to learn, a step in their project, or a certain type of math problem, and they've tried the same strategy over and over again without success, it's time to try a different approach. Sometimes we all need to pause and reflect to figure out what we could do differently.

Not all strategies will work for every problem. Self-directed learners realize that when they are heading toward a dead end or getting frustrated, it is time to shift strategies—even if it means starting from scratch.

> A kid **shifting strategy** might say, "My approach isn't working, so I'll try something else."

> To **encourage shifting strategy** you might say, "Sounds like you worked really hard, but that approach isn't working. What could we try differently?"

Power Behavior #2 — Seek challenges

Why is it important? Often when our kids are bored, or aren't motivated or engaged, they need to push themselves rather than give up. They can dig deeper into a topic. They can investigate or try to answer a more complex question. Or they can work on a project—like the one in ***Learn***—for an extended period of time to investigate and respond to an authentic and engaging challenge. This is a terrific way to turn a school assignment into a real-world learning moment.

Self-directed learners are always **looking for challenges**. They know that they will not grow unless they are pushing themselves to try something they don't feel completely comfortable with.

> A kid **seeking challenges** might say, "I could set a goal that's easy for me or I could stretch myself."

> To **encourage seeking challenges** you might say, "It's always good to look for challenges. How do you want to push yourself further?"

Power Behavior #3 — Persistence

Why is it important?. The ability to persist through a setback, frustration, or challenge helps kids demonstrate and build **Self-Efficacy,** the belief that they are capable of doing hard things.

In her 2012 report, "**Teaching Adolescents to Become Learners**," researcher Camille A. Farrington explained that a student's attitudes and self-perceptions affect whether or not they'll push through challenges to learn. Four core beliefs can make all the difference: that **they belong** in the community, that their ability and competence **grow with effort**, that the **work has value** to them, and **that they can succeed**.

Self-directed learners persevere even when a task is not completely engaging or interesting. They understand that deliberate practice leads to quicker processing and frees up mental space to solve more difficult problems and think through more interesting ideas.

> A kid **showing persistence** might say, "This is difficult, but I won't give up."

> To **celebrate a kid's persistence**, you might say, "This doesn't look easy, and I'm impressed by the persistence you've shown. Keep going!" or share examples of moments of persistence from your own life.

Power Behavior #4 — Respond to setbacks

Why is this important? Obstacles are a natural part of the learning process. Figuring out how to work through them helps kids realize what they are capable of—good for **Self-Efficacy** and a **Growth Mindset,** the idea that ability and competence can be improved through dedication and effort.

Setbacks can feel like failures. But, self-directed learners understand that they can fail, and fail as often, and usually more often, than anyone else. They don't get discouraged by these failures because they realize they are opportunities to learn and shift strategies, if necessary.

> A kid **working through obstacles** might say, "I'm not going to be thrown just because my approach didn't work out."

> To **encourage this response**, you might say, "I know things didn't work out the way you'd hoped, but that happens to everyone who tries to accomplish a task. What did you learn from the experience?"

Ask them to take a breath, articulate what they're struggling with, and then work through a response or new strategy together.

Better yet, anticipate obstacles in advance and plan to overcome them! ***Engage*** helps you do that this month, using a planning tool called **WOOP!**

Power Behavior #5 —Seek appropriate help

Why is it important? Self-directed learners feel comfortable asking for help from peers, parents, and teachers, and they do it in a way that will help sustain their learning. Self-directed learners are not satisfied with being given the answer or being told the next step in the process. They try to find answers for themselves before asking for help. And, they want to know why their current strategy isn't working and why other strategies might work better.

> A kid **seeking appropriate help** might say, "I've tried to solve this problem myself using several different methods and I'm truly stuck. It's okay to ask for help.

> To **praise appropriate help-seeking**, you might say, "That's a great question you're asking me, because you've obviously done the work to find the answer for yourself, and you're asking me to help you figure it out, not do it for you. I appreciate that."

This doesn't mean get mom or dad to do the work. It's about finding the resource that answers the question. It may be online or an aunt or uncle thousands of miles away who's an expert in their field. Your kid can give them a call to ask for assistance.

Celebrate learning to recognize a kid's progress and achievement

What you get from it	When you do it
Tune in to kids' learning and celebrate progress, not perfection.	20 min. per kid at the end of the month

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Celebrate Learning!

Hooray—let's celebrate!

Unboxed concludes with ***Celebrate***, a celebration of learning to recognize your kid's progress and achievement during the previous month of learning. The celebration can center around the project in ***Learn***, the development of habits or skills, or any other big milestone in a kid's learning. So, fire up! It's time to celebrate!

If you celebrated last month, you found step-by-step instructions and detailed reflection questions to walk you through your first celebration. This month, we're offering you something a little different:

- **A single agenda** with timing suggestions to simplify and get everyone on the same page.
- **Helpful guidance for giving feedback** to kids, during your monthly celebrations or any time at all!

Why Celebrate?

The celebration of learning is an opportunity for parents and caretakers to tune in to their kid's learning in deeper, more substantive ways. The process links a kid's **Habits of Success** and **Universal Skills** with their academic achievements, and it lets kids share successes with the people who matter most in their life, highlighting the importance of **community** and **relationships** in learning.

Kids take center stage to showcase their work, feel pride in their accomplishments, and expand their comfort zone to present their work in front of others. The act of celebrating is both motivating and identity-forming for kids. When we **celebrate the process** of learning — interests, struggles, and all — we **honor our kids' progress, not perfection**.

What does a celebration of learning look like?

A celebration of learning is a capstone event that enables kids to share and present their learning and growth, including the habits and skills they've acquired. A celebration typically includes:

A FINAL PRODUCT:

Something tangible each kid can present, such as a report, slideshow, art exhibit, model, or prototype

A PRESENTATION:

A kid-led introduction to what they learned, how they learned it, and how it connects to their interests

COMMUNITY:

Friends, family, and others who have gathered (virtually or in-person) to celebrate learning

How do I plan a celebration of learning?

A celebration process starts with **reflection** and leads to a final **presentation**. After a month of learning, kids reflect on what they've learned and how they grew as a learner. Then they present!

Celebration steps generally stay the same:

- **STEP 1: Plan the event.**
  Save the date and announce the event—easy peasy!

- **STEP 2: Prepare your kids.**
  Preparing to celebrate is as important as the celebration itself. Luckily, you're probably doing most of this anyway.

  - **Explain the celebration.** Discuss what a celebration of learning is and ask what kids would like to present in their celebration of learning.
  - **Learn!** Lead your kids through their month of learning. We recommend doing the project in ***Learn***, but you can celebrate all kinds of growth.
  - **Facilitate reflection.** When the month is complete, invite your kids to reflect.

- **STEP 3: Practice.**
  Before the actual celebration, kids should practice presenting, using the sample agenda below. **Provide feedback on that practice** to help kids think about how they can improve their presentation for the celebration.

- **STEP 4: Celebrate.** It's time!

Reflection is essential.
It cements learning and helps kids prepare for their big presentation! Offer open-ended reflection questions, and ask kids to return to their ***Plan*** activity or other long term goals to think and talk about how what they're learning connects to their goals.

Your Celebration Agenda!

Welcome and Introductions

LEADER: Welcome the audience and explain the event. (3–5 min)

- **Describe** the purpose of the celebration of learning.
- **Explain** the sequence of events.
- **Share** excitement about the kids' growth over the past month.
- **Introduce** kids as they take their turns presenting.

Student Presentations

KIDS: Take your turn presenting your learning. (Time varies)

- **Describe** the project or this month's learning activity in your own words.
- **Present** your work on the ***Learn*** project or other activity.
- **Discuss** your reflections to share what you've learned about yourself, others, the topic, and the world around you.
- **Express** thanks to the audience and anyone who helped you in your learning journey this month.
- **Answer** questions from the audience.
- **Ask** for feedback to help improve your work in the future.

Conclusion

LEADER: Wrap things up! (3–5 min)

- **Congratulate** kids and thank them for their informative presentations and dedication to growth and learning.

After

ALL: Reflect on the celebration and audience feedback. (5–10 min)

- **Think** about how you will use what you learned today to improve future goal setting, learning experiences, and celebrations of learning.

What's the best way to give feedback?

Offering helpful feedback that builds a kid's abilities is a skill that can take time to learn—don't beat yourself up if you're still developing these skills! For the celebration of learning or on everyday tasks, keep these principles in mind:

- **Be constructive**—Your goal is to build up, not simply praise. Make sure your feedback offers practical next steps.
- **Be specific**—When offering feedback, base your comments on facts or examples from kids' work, goals, or reflection or on the requirements of the project or activity.
- **Be careful**—Make sure your comments are logical, timely, and clear, not open to misinterpretation.
- **Be realistic**—Emphasize process and growth, not smarts and achievement. Realistic goals should be challenging, but also achievable.
- **Be sensitive**—Provide constructive feedback sandwiched between statements of positivity—a 2-to-1 ratio of positive-to-negative feedback strikes a good balance.
- **Be considerate—**Pay attention to privacy and kids' emotions, and be sensitive to overload.

Strategic questions, particularly **during practice** for the celebration, can also help a kid think deeply about their learning, helping build effective self-direction.

Clarifying Questions

Clarifying questions are asked to better understand what a kid is saying. They relate only to the facts or the words used during their celebration presentation. You might ask a student:

- What did you mean when you said...?
- What was the goal you were trying to achieve?
- How does ... relate to ...?

Probing Questions

Probing questions will help **surface kids' thinking** so they can also do the metacognitive work of thinking about their thinking. Through this process, students further develop underlying **Habits of Success** such as **Self-Awareness**, **Executive Functions**, and **Self-Regulation**. As kids present their reflections in practice, ask questions that help them think deeply and describe their thinking.

Effective probing questions:

- are open ended and cannot be answered with a simple yes or no
- empower the kid to solve problems
- require a kid to pause and think before answering