

LEGO® Education STEAM Career Toolkit

Teacher Resource Guide



Welcome to the LEGO® Education STEAM Career Toolkit! Today's students are our future STEAM leaders – the ones reimagining and rebuilding a better world for all of us. Together we can show them what's possible because STEAM is for *every* learner and *any* career can be a STEAM career.

Through engaging videos and hands-on challenges, your students will meet a group of STEAM Heroes and learn how these diverse professionals use STEAM skills every day. Inspire your students to discover – or create! – what they love to do. Just imagine the possibilities when they combine their confidence, curiosity, and passion. After all, small steps can lead to big change.



What is a Career Toolkit?

The toolkit features STEAM Heroes, who each have a career that might surprise you. And that's the point! Each Hero shares their personal STEAM journey in a video, and then challenges your students to help them solve a problem they face in their day-to-day life, bringing the real world right into your classroom.

Within these video episodes, you'll see references to the character, Hannah, who is meant to represent the most curious student in the world. She's inspired by the students in your own classroom, whose curiosity and passion for STEAM is helping make the world a better place, little by little.

The toolkit has everything you need to introduce your students to unexpected STEAM careers, including free teacher resources like this guide and slides to use in class.

We hope you and your students explore the unlimited possibilities in STEAM!

Tip: Bookmark www.LEGOEducation.com/CareerToolkit to access the full toolkit.



Included in the free toolkit:

- Intro Session Video
- Teacher Resource Guide
- Video Episodes
- Classroom Slides
- Differentiation Guide



Think before you print!
Save paper and quickly access helpful links.

Are you ready to Rebuild The World? Let's get started!

What You Need

The Career Toolkit is designed to work for *your* class. You can use any or all content, in any order, and with whatever materials you have. After all, you know your students and schedule best.

The toolkit is intentionally flexible and can easily be adapted for the grades and subjects you teach. Not only is it a free resource, but it can also be used with materials you already have in the classroom. Be creative!

Tip: If you have LEGO Education sets, have your students use them to complete the challenges.

How to Use

You will find everything you need to know to use the Career Toolkit in this guide. It includes information about each STEAM Hero, along with their video episode link and challenge. There are also ideas on topics and vocabulary words students can research, bonus ideas and lessons, and much more.

Have a great teaching experience and deliver a great learning experience for your students with:

- **STEAM Hero Episodes:** In short video episodes, professionals from storytelling to racing and ocean advocacy share how their career is a STEAM career. Real-world connection is an important part of STEAM, and these everyday heroes are using the same skills your students are learning in class.
- **Challenges:** The Heroes worked with an education expert to create a STEAM activity where students help them solve real problems they face on the job. The challenge is introduced at the end of each episode and is open-ended for playful, hands-on learning. Teacher versions are provided below, while student versions are in the slides.
- **Slides:** Classroom slides offer student-facing versions of the bios and challenges, as well as templates that allow you to edit, expand, or connect the activities to what you're already teaching. It's up to you whether you use them or take inspiration and create your own.
- **Differentiation Guide:** STEAM is for everyone, and this resource helps you meet your students where they are. Find ideas for scaling the level of difficulty for your students who need a greater challenge, the ones who need a bit more support, and everyone in between.
- **STEAM Superpowers:** We don't know what the future workforce will look like, but we do know the skills it will require. Every Hero has a STEAM Superpower – and so do your students! Observe which skills your students use, and at the end, have them choose their STEAM Superpower. Use the Certificate of Completion to celebrate your students. *Hint: Students can also create their own!*



Q: Is there a best order to watch the episodes?

A: The episode guide is organized in our favorite order to watch them. However, each video is designed to stand on its own, so you can create the playlist that fits your curriculum.


Hint: See if you can uncover the connections between episodes!

Differentiation

The toolkit is designed to inspire students to explore different careers and see the STEAM practices in them. The messages shared by the STEAM Heroes and challenges they present are not grade specific, so you can use them in the way that best fits your students.

Hands-on, playful learning by nature provides entry points and opportunities to iterate and ask questions for those who need more. For even more ideas to scale these activities, download the Differentiation Guide. In it, you'll find ways to simplify or increase the difficulty of each activity to meet the needs of all learners.

Go Further with Standards-Aligned Lessons

If you have LEGO Education solutions, you can unlock even more learning with recommended lesson plans. Your students can also use the sets to complete the challenges. Look for the  in the episode guide or on page 20.

Access our full library of free unit and lesson plans at www.LEGOeducation.com/lessons. You'll also find resources for guided lessons that are useful for getting students started before they try open-ended lessons.

Participate and Share

Ideas can be shared in many ways. Let students showcase their thinking through presentations, videos, and more. Consider connecting with your community, such as hosting a STEAM Career Day or exploring partnerships with local businesses.

It is all about the possibilities, so we'd love to see how you bring the Career Toolkit into your classroom. You can share ideas, adaptations, and student work on social using #RebuildTheWorld and in the [LEGO Education Community](#).



Get and Be Inspired!

Join the conversation: #RebuildTheWorld



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**Rebuild The World
with Ocean Advocacy**
Featuring Danni Washington

*Jump to episode
on page 6*



**Rebuild The World
with Bee Rescue**
Featuring Julie & Jeff Russell

*Jump to episode
on page 8*



**Rebuild The World
with Agriculture**
Featuring Tyler Froberg

*Jump to episode
on page 10*



**Rebuild The World
with Food Video Production**
Featuring Rie McClenny

*Jump to episode
on page 12*



**Rebuild The World
with Storytelling**
Featuring Rachel Ryle

*Jump to episode
on page 14*



**Rebuild The World
with Dance Technology**
Featuring Yamilée Toussaint Beach

*Jump to episode
on page 16*



**Rebuild The World
with Racing**
Featuring Aurora Straus

*Jump to episode
on page 18*



**Rebuild The World
with Education**
Featuring Nancy Bullard

*Jump to episode
on page 20*



Meet Danni Washington, an ocean advocate and science communicator. In this episode, Danni shares her STEAM journey and challenges students to help clean and protect the waterways in their area.

Prepare

Consider having your students start by researching related topics before they begin the challenge. Here are a few ideas:

- What types of living things can survive in the ocean? Which cannot?
- What is ocean advocacy?
- What is Blue Carbon? How is it affecting the living organisms in the ocean?
- Research current commitments to protecting the ocean.
- Explore technology for the safe removal of debris.

Vocabulary words marine debris advocacy ecosystem ocean acidification waterways

If you have LEGO® Education SPIKE™ Essential, first complete the [Solving Problems When Environments Change](#) lesson available online. In this lesson, students will design and build a solution to help an animal in a wetland.

Have your students reflect on the lesson and how it relates to ocean advocacy and environmental change.



Meet Danni Washington



Follow Danni on Instagram:
[@danniwashington](#)

Watch Danni's video with your class! [▶ Watch Now](#)

Danni is a TV personality, science communicator, and ocean advocate committed to educating others on restoring the ocean. In addition to being the first African American woman to host an American science TV show, she also serves as a founder and host of multiple conservation-focused organizations, including Big Blue & You, Mocha Mermaid, and The Genius Generation podcast. Danni received her degree in Marine Science/Biology from the University of Miami.

Her STEAM Superpower: Communication



Creativity, connection, and innovation can provide world-changing ideas.

Danni's Challenge

As an ocean advocate, one of the biggest challenges facing the health of the ocean is marine debris.

The ocean **covers 70% of the world's surface**¹ and it's in trouble. There is a call on governments and world leaders to increase the level of protection for marine environments – protecting 30% of the ocean by 2030².

This isn't just a problem for governments to solve. It will take **innovation, creativity, and connectivity** to make a difference. And you can make a difference right in your own community!

Even if you live miles away from an ocean, all water is connected. The rivers, streams, and lakes across the country and world will eventually feed into the ocean. And that's where a lot of debris starts.

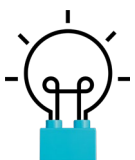
To help restore the ocean, we'll need the right tool for the job. Can your students **design a device that can protect waterways** in your area?

Explain the challenge to your students and have them think about possible solutions. It could be:

- A **collector device** to collect debris floating down the river or canal before it reaches the ocean.
- An innovative way to **clean up the beach** if you live near the coastline.

Remember, not every solution will work in every place! Think about what makes your area unique or challenging. How would students **design differently** if you lived in another area?

I can't wait to see what you come up with!



Bonus Ideas

Have your students think about how to reduce or reuse materials that become debris in the ocean. Or participate in a beach or local cleanup.

Here are even more LEGO Education lessons you can try: [Underwater Quest](#), [Swamp Boat](#), and [Trash Monster Machine](#). If you teach older students, try [Super Cleanup](#) and [Smart House: Go Green](#).

Meet Julie and Jeff Russell, a team of bee rescuers. In this episode, they share their STEAM journey and challenge students to help them safely capture the queen bee.

Prepare

Consider having your students start by researching related topics before they begin the challenge. Here are a few ideas:

- How do bees pollinate? Why is pollination important?
- Why do bees play an important role in a habitat?
- Where do bees live? Study the geometric design of beehives and why the hexagon is an efficient design.
- What are some of the different types of bees and what are their jobs?

Vocabulary words

[honeybee](#)[apiary](#)[pollinate](#)[queen bee](#)[worker bee](#)[queen cage](#)

If you have LEGO® Education SPIKE™ Essential, first complete the [Pollination](#) lesson available online. Students will show how pollen is moved from one plant to another.

Have your students reflect on the lesson and think about why saving and rescuing bees is important.



Meet Julie & Jeff Russell



Follow Julie & Jeff on Instagram:
[@mr.mrs.beerescue](#)

Watch Julie & Jeff's video with your class! [▶ Watch Now](#)

Julie and Jeff Russell are bee rescuers located in San Diego County, California. Jeff has over 18 years of experience with bees, and Julie combined her love of photography and graphic design to share their adventures on social media. Together, they travel around the state to rescue bees, relocate them, and give them a safe place to live as pollinators.

Their STEAM Superpower:

Problem-Solving



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A big part of what we do is observing and problem solving. We do a lot of detective work – we have to figure out where [bees] are going in and out of, how big the hive is, maybe how old the hive is, and their behavior.

Julie & Jeff's Challenge

As a bee rescue team, one challenge we face out on the job is safely capturing the queen before she escapes.

Did you know **the entire hive will follow the queen bee** so the best way you can safely relocate them is to capture the queen?

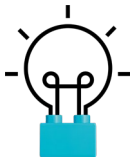
Sometimes it's easy and she flies right into the box where we can grab her and put her into what's called a "queen cage," which is a small container to transport her. But usually, she's a master escape artist.

We need the right tool for the job! Can your students **design a better tool (or tools) to get the queen** from her hiding spot into the queen cage?

Explain the challenge to your students and have them consider these design requirements:

- First, queen bees need to be safe and protected so they look for deep dark spots to hide. That means she doesn't like light, and she might be **hiding in a hard-to-reach place** like up high in a tree or in a deep corner of a wall.
- Honeybees **like some smells** and will move closer to them, while others will repel them.
- Queen bees move fast, so you have to **be quick!**

We can't wait to see what you come up with!



Bonus Ideas

Have your students think about how to keep the bees safe in their own community. Do you have a beekeeper or apiary in your area? *Hint: Urban beekeeping is the practice of keeping bees in towns and cities.*

Here are even more LEGO Education lessons you can try: [Animal Behavior](#), [Habitats](#), and [Animal Structures](#). If you teach older students, try [Help!](#), [Hopper Race](#), and [Going the Distance](#).

Meet Tyler Froberg, a fourth-generation farmer and former agricultural science teacher. In this episode, Tyler shares his STEAM journey and challenges students to help automate strawberry picking, which is currently done only by hand.

Prepare

Consider having your students start by researching related topics before they begin the challenge. Here are a few ideas:

- What crops grow where you live?
- Why is weather important in farming? How might the weather in your area impact local farms?
- What makes soil healthy? What is pH and how do pH levels impact soil?
- What factors affect farming that could lead to us not having enough food produced?
- What are some sustainable farming practices?

Vocabulary words

agriculture

crop

nutrients

harvest

trellis

food desert

If you have LEGO® Education SPIKE™ Prime, first complete the [Veggie Love](#) lesson available online. Students will use live forecast data to decide whether tomato plants will need to be watered this week.

Have your students reflect on the lesson and how it relates to growing fruits and vegetables on a farm at scale.



Meet Tyler Froberg



Follow Tyler on Instagram:
[@farmer.froberg](#)

Watch Tyler's video with your class!

► Watch Now

Tyler Froberg is a fourth-generation farmer, veteran, and former agricultural science educator. With his background in teaching and a passion for agriculture, Tyler uses social media to educate his community and people around the world. He helps people of all ages understand where food comes from and what it takes to grow it, right from his family's farm in Alvin, Texas.

His STEAM Superpower:

Resilience



In every STEAM career, innovation is important – and agriculture is no different.

Tyler's Challenge

As a fourth-generation farmer and previous agricultural science teacher, I love to show people where food comes from. And not just that it comes from the farm, but what it takes to grow it. I even taught veterans how to grow food in a food desert.

Did you know there is a ton of technology used on the farm? Like our summer pea picker. Most food is picked by machines now, which can be effective at harvesting because they are quick and save time.

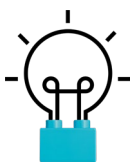
However, sometimes the food is too delicate to be picked by machines. This is the case for strawberries. **Every strawberry in the world is picked by hand!** And it takes about 30 minutes to pick a whole row.

I need the right tool for the job, and I need your help! Can your students **design an automated strawberry picker?**

Explain the challenge to your students and have them consider how their design can:

1. Gently pick delicate strawberries and **not squeeze them** too hard.
2. Pick only the **ripe fruit**, which are solid red. No green ones!
3. Navigate our field with elevated rows and **other obstacles**.

I can't wait to see what you come up with!



Bonus Ideas

Discuss with students where their food comes from locally. Visit a local farm or grow something in your class or at home.

Check out these related LEGO Education lessons: [Wind Speed](#) and [Protect Our Produce](#). If you teach younger students, try [Protect the Environment](#) and [Preparing for the Weather](#).

Meet Rie McClenny, a food video producer. In this episode, Rie shares her STEAM journey and challenges students to design a tool that helps her create food videos.

Prepare

Consider having your students start by researching related topics before they begin the challenge. Here are a few ideas:

- What is food science? How is math and science used when you cook or bake a recipe?
- What is video production?
- What is a design constraint? Why is it important to understand constraints such as the audience and the purpose before creating something?
- Give students different objects that can be broken down into smaller pieces. Brainstorm ways to remake the pieces into something new.

Vocabulary words

chef

video producer

ingredients

recipe

acidity

tripod

If you have LEGO® Education SPIKE™ Essential, first complete the [Redesigning to Make New Objects](#) lesson available online. Students will assemble a kitchen tool.

Have your students reflect on the lesson and how it relates to creating and producing food videos.



Meet Rie McClenny



Follow Rie on Instagram:
[@riemcclenny](#)

Watch Rie's video with your class! [▶ Watch Now](#)

Rie McClenny is a food video producer and chef. She makes fun, creative, and engaging food videos with step-by-step recipes, cooking tips, and more. Rie is also the host of a program where chefs compete to turn children's imaginative drawings of fantastical food into delicious real-life dishes. Rie is from Japan and currently lives in Los Angeles, California.

Her STEAM Superpower:

Confidence



If you understand science, it is easy to solve problems when your recipe didn't turn out right.

Rie's Challenge

As a food video producer, I develop the idea, shoot, and edit the video. But I'm also the hands and talent in the videos! One challenge I face in the kitchen is recording the content.

I use my camera or phone on a tripod to capture **different angles and steps** in the recipe I'm making.

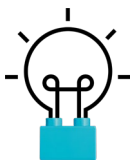
But while I'm filming, I have to start and stop recording to move it higher, lower, or change the angle. I usually have flour and other ingredients on my hands, so it gets messy!

I need the right tool for the job, and I need your help! Can your students **design a tripod to capture great video** of my recipes?

Explain the challenge to your students and have them consider how to create a new kitchen-friendly tripod that makes it easier to capture great content on the first try. It needs to:

- **Start** and **stop** recording without me having to touch the device.
- Hold the device at **different heights and angles**.

I can't wait to see what you come up with!



Bonus Ideas

Have students plan their own food video using a recipe for their favorite food or try something new. Maybe even try to create a video in class or at home!

Discuss what a life hack is with students and have students identify any life hacks they use. Challenge students to come up with a new idea for a life hack.

Check out these related LEGO Education lessons: [Classify and Choose Materials](#), [Big Little Helper](#), and [Daytime and Nighttime](#). If you teach older students, try [Repeat 5 Times](#) and [Rain or Shine?](#).

Meet Rachel Ryle, a storyteller and self-taught artist. In this episode, Rachel shares her STEAM journey and challenges students to use curiosity and creativity to tell a story about how plants grow.

Prepare

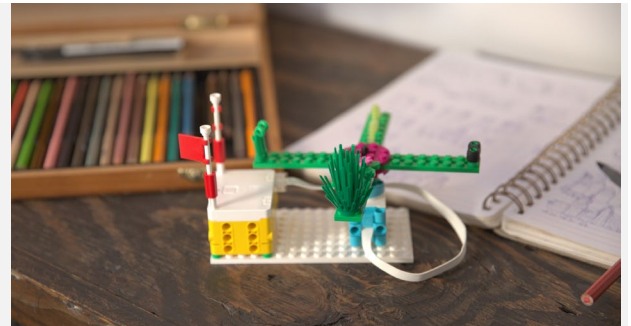
Consider having your students start by researching related topics before they begin the challenge. Here are a few ideas:

- What are the main types of art? Which form is your favorite?
- What is animation? Research ways it is used.
- How does art make you curious? Consider sharing art and seeing what it makes students curious about.
- What are traits that flowers have and how do flowers grow?

Vocabulary words photography animation stop motion freelancer plant life cycle

If you have LEGO® Education SPIKE™ Essential, first complete the [Life Cycles](#) lesson available online. Students will work in groups to build a shared model of a plant or animal life cycle.

Have your students reflect on the lesson and how they could tell a story of a flower's life cycle.



Meet Rachel Ryle



Follow Rachel on Instagram:
[@rachelryle](#)

Watch Rachel's video with your class! [▶ Watch Now](#)

Rachel Ryle is a storyteller and self-taught artist, illustrator, and animator. Always exploring her creativity, she is known for her collection of art and quirky stop motion animations. Rachel is a freelance artist who has created custom illustrations and animations for many popular TV shows and brands.

Her STEAM Superpower:

Curiosity



Failures aren't a thing that happen to us; they are a thing that happen for us.

Rachel's Challenge

As a storyteller, I love to **play with and create art**. My art comes out in many different ways. Through animation, illustration, photography, or written word, I love to bring my stories to life.

For me, art has been a journey of growth. When I create, there are moments when I fail or lack confidence. But that only pushes me to grow even more.

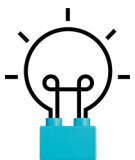
I've been inspired lately by flowers and their growth. Just like I was when I created my first animation in 2013, I'm in a **moment of curiosity** and **learning how to grow**. Telling the story of my art allows others to be curious.

The challenge is how to tell the story. Can your students help **tell a story of growth**?

Explain the challenge to your students and have them tell a story using flowers as our inspiration. They can **draw, build, craft, or create** any plant or flower they like. Have your students:

- Think about the several **states of the growth** of this plant.
- How is the flower or plant growing? Show **at least three stages** of its growth.
- Then **bring the story to life** using stop motion, illustration, photography, or anything they like!

I can't wait to see what you come up with and the story they tell.



Bonus Ideas

Have your students think about other ways they can make art come to life. Brainstorm what inspires each student and challenge students to create a new piece of art from their inspiration. Remember to have them share their art and communicate their ideas.

Here are even more LEGO Education lessons you can try: [Communicate with Light and Sound](#), [Using Ideas from Nature](#) and [Information Transfer](#). If you teach older students, try [Ideas, the LEGO way!](#) and [What is this?](#).

Meet Yamilée Toussaint Beach, a dance technologist. In this episode, Yamilée shares her STEAM journey and challenges students to design a high-tech stage for an unforgettable performance.

Prepare

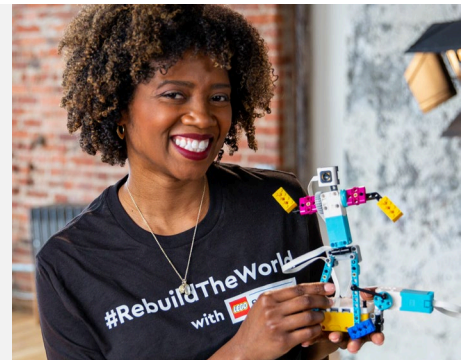
Consider having your students start by researching related topics before they begin the challenge. Here are a few ideas:

- What is choreography and how does design play a role?
- Why are design constraints important when creating something?
- Why is it important to test different ideas before selecting your final solution?

Vocabulary words circuit LED battery solder code choreography

If you have LEGO® Education SPIKE™ Prime, first complete the [Break Dance](#) lesson available online. Students will synchronize motor movements of a “break dancer” to keep in rhythm with lights and beats.

Have your students reflect on the lesson and how it relates to a dance performance.



Meet Yamilée Toussaint Beach



Follow Yamilée on Instagram:
[@yamileebeach](#)

Watch Yamilée's video with your class! [▶ Watch Now](#)

Yamilée Toussaint Beach is a dance technologist, bringing her passion for math, science, and dance together. She has been an avid dancer for over 25 years, studied mechanical engineering at MIT, and was a high school algebra teacher. When her students didn't have the same excitement about math as she did, she found a way to change that through her organization STEM From Dance. Yamilée hopes to inspire more kids, especially girls of color, to pursue a future in STEAM.

Her STEAM Superpower: Critical Thinking



You don't have to give up one thing that you love to pursue another thing. It is possible to pursue all of them.

Yamilée's Challenge

Behind everything that you see and touch is someone who had to figure out how to design it. Did you know **performances and awards shows** use a lot of technology? They use special effects, lighting, sound, set design, and more.

In my studio, kids combine STEM and dance as they work together to choreograph their dances, as well as **design and build** the technology in their performance.

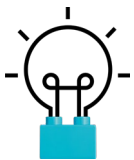
Can your students help **design a high-tech stage**?

Explain the challenge to your students and have them think about what will create an unforgettable performance, where there's no bad seat in the house.

A few ideas:

- How **big** should it be?
- How would you make the stage **rotate**?
- What kind of **special effects** can you add to bring the performance to life?

I can't wait to see what you come up with!



Bonus Ideas

There are many high-tech gadgets to use when you are dancing, walking, or just having fun. Have students explore the ways they use technology every day. Have students share ideas to make an everyday activity more high-tech.

Here are even more LEGO Education lessons you can try: [Pass the Brick](#), [Stretch with Data](#), and [Time for Squat Jumps](#). If you teach younger students, try [High-Tech Playground](#), [Good Morning Machine](#), and [The Perfect Swing](#).

Meet Aurora Straus, a professional race car driver. In this episode, Aurora shares her STEAM journey and challenges students to design a next-level race car.

Prepare

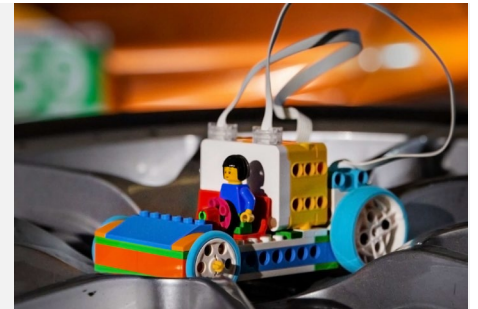
Consider having your students start by researching related topics before they begin the challenge. Here are a few ideas:

- What type of forces are happening when a car is driving?
- How does the speed of an object relate to the energy of an object?
- How can we predict the future motion of an object?
- What are some ways to move faster?

Vocabulary words motorsports friction aerodynamics horsepower pit stop

If you have LEGO® Education SPIKE™ Essential, first complete the [Taxi! Taxi!](#) lesson available online. Students will create and test a program to drive the taxi.

Have your students reflect on the lesson and how road cars and race cars are similar and different.



Meet Aurora Straus



Follow Aurora on Instagram:
[@aurorastraus](#)

Watch Aurora's video with your class!

▶ Watch Now

Aurora Straus is a 24-year-old professional race car driver. She first wanted to be a teacher, not a race car driver, but fell in love with the sport and competed in her first professional race at the age of 16. When she's not at a race weekend or working at her full-time job, Aurora enjoys sharing how racing involves engineering, physics, and a variety of STEAM skills with young girls, who often lack role models in male-dominated careers like engineering and racing.

Her STEAM Superpower:

Collaboration



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A lot of [what] I learned how to do in elementary, middle, and high school applies directly to my job now.

Aurora's Challenge

As a race car driver, one challenge I face on the track is how my team and I can make adjustments to the car to make it as quick as possible.

During and after each race, we download and **analyze a lot of data**. Data doesn't just help me improve as a driver. It also tells us what we can do to make the car perform better.

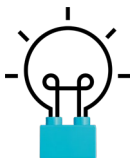
We look at things like brake performance, speed through corners, and horsepower.

I need the right tool for the job, and I need your help! Can your students **design a next-level race car**?

Explain the challenge to your students. Here are a few things they can think about in their design:

- **Speed**, safety, aerodynamics, ability to handle turns at high speeds, and more.
- The **friction** from tires, or air resistance.
- My personal favorite: how to design for **sustainability**! Racecars go through one set of tires every 45 minutes, but does the next-level race car even need tires?

Motorsports is all about innovation, so I can't wait to see what you come up with!



**Bonus
Ideas**

Have your students think about different types of transportation they take and how they move differently. Not everything needs tires for example.

Here are even more LEGO Education lessons you can try: [River Ferry](#), [Hovering Helicopter](#), and [Cable Car](#). If you teach older students, try [Watch Your Steps](#), [This Is Uphill](#), and [Driving Around](#).

Meet Nancy Bullard, better known as Mrs. B by her elementary school students. In this episode, Nancy shares her STEAM journey as a teacher and challenges students to help solve common classroom challenges.

Prepare

Consider having your students start by researching related topics before they begin the challenge. Here are a few ideas:

- What do teachers do?
- How do you like to learn? What is your learning style(s)?
- What is your favorite subject and why?
- Imagine there was a robot helper in your classroom. What could it help you do?

Vocabulary words **scientist** **experiment** **lesson plan** **hypothesis**

If you have LEGO® Education SPIKE™ Essential, first complete the [Big Little Helper](#) lesson available online. Students will create and test the program that controls the robot helper.

Have your students reflect on the lesson and how tools help make tasks easier.



Meet Nancy Bullard



Follow Nancy on Instagram:
[@mrs.b.tv](#)

Watch Nancy's video with your class!

▶ Watch Now

Nancy Bullard, aka Mrs. B, teaches elementary school science in Charlotte, NC. During her teaching career she's won Teacher of the Year, the CATO Award for Excellence in Science Teaching, the Piedmont Natural Gas STEM Superstar Award, and was a finalist for the Presidential Award for Excellence in Science Teaching. She launched Mrs. B TV to creatively engage her students after Covid-19 closed schools in March 2020. TikTok named her one of the "100 Most Prolific Female Creators" in March 2021 and she was featured on the cover of Charlotte Magazine in December 2022. Her viral science experiment videos now reach millions around the world.

Her STEAM Superpower:

Creativity



I love watching my students learn new things. Those light bulb moments never get old.

Nancy's Challenge

In my job as an elementary school science teacher, I solve problems every day. I have to come up with creative solutions to teach my students in a way that is safe and fun for everyone.

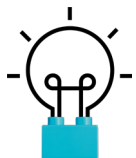
School is a busy place with a lot of moving parts. To manage my workload, I need the right tool for the job, and I need your help!

Can your students help **design a classroom tool** I can use to solve one of these problems?

Explain the challenge to your students. Have them think about their own classroom and what tool they could create. Here are some ideas to help get them started:

- Create a timekeeper to help manage time
- Design a sorting machine to keep classroom materials organized
- Develop an alarm to capture everyone's attention
- Or any other ideas that solve another problem in your classroom.

I can't wait to see what you come up with!



Bonus Ideas

Have your students think about what can also help them in the classroom. What tool would help the student learn better and make their learning experience stronger?

Here are even more LEGO Education lessons you can try: [Good Morning Machine](#), [Trash Monster Machine](#), and [Your School Creation](#). If you teach older students, try [Super Cleanup](#), [Design for You](#), and [Automate it!](#)



Rebuild The World with Ocean Advocacy

LEGO Education SPIKE Essential: [Solving Problems When Environments Change](#)

Rebuild The World with Bee Rescue

LEGO Education SPIKE Essential: [Pollination](#)

Rebuild The World with Agriculture

LEGO Education SPIKE Prime: [Veggie Love](#)

Rebuild The World with Food Video Production

LEGO Education SPIKE Essential: [Redesigning to Make New Objects](#)

Rebuild The World with Storytelling

LEGO Education SPIKE Essential: [Life Cycles](#)

Rebuild The World with Dance Technology

LEGO Education SPIKE Prime: [Break Dance](#)

Rebuild The World with Racing

LEGO Education SPIKE Essential: [Taxi! Taxi!](#)

Rebuild The World with Education

LEGO Education SPIKE Essential: [Big Little Helper](#)



Resources

Links

Toolkit Resources

- [Learn more about Rebuild The World](#)
- [Visit the STEAM Career Toolkit website](#)
- [LEGO Education STEAM Heroes Playlist](#)

Helpful Links

- [Engage on the LEGO Education Community](#)
- [Join the Educator Success Program](#)
- [View all LEGO Education lessons](#)
- [Explore LEGO Education SPIKE Essential](#)
- [Discover LEGO Education SPIKE Prime](#)
- [It's time to Rethink Learning](#)
- [Learn more about sustainability at the LEGO Group](#)

Sources

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<https://www.nationalgeographic.com/environment/article/ocean>

²Schwab, N. (2019). We need to protect 30% of the planet by 2030. This is how we can do it. World Economic Forum.
<https://www.weforum.org/agenda/2019/04/why-protect-30-planet-2030-global-deal-nature-conservation/>