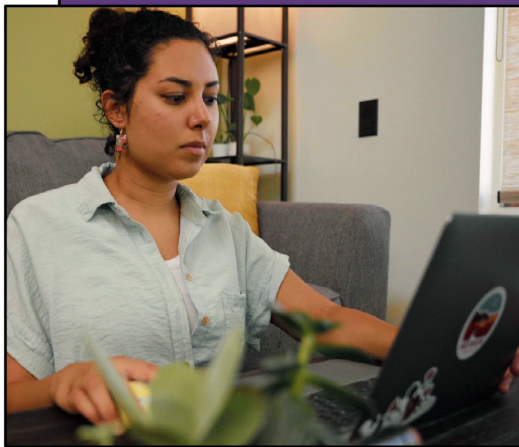


Original EduGuide

INDUSTRY



IT GETS
BETTER
PROJECT

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Introduction

I am honored, happy and hopeful to help create and share this EduGuide on science, technology, engineering, and math (S.T.E.M.) careers in partnership with the It Gets Better Project.

I am honored to be working with the It Gets Better Project in providing school counselors and educators with tools to support our LGBTQ+ students and their future goals especially in S.T.E.M. careers where the LGBTQ+ community is underrepresented but the various fields are growing. It is an honor to partner with the It Gets Better Project as they work to uplift, empower, and connect LGBTQ+ youth around the globe. It is always an honor as a cis het person to have the opportunity to be an ally, advocate, and co-conspirator to my LGBTQ+ family and friends and students. And to help other educators do the same.

I am happy that the It Gets Better Project is creating interesting and engaging videos and EduGuides for educators to use with student groups. I am happy to be a part of getting this material in front of youth to show them the diverse and inspirational stories of these LGBTQ+ S.T.E.M. Professionals so that our LGBTQ+ youth have mirrors to see themselves represented in these fields and so other youth have windows to see the diverse contributions, positive impact, and commonalities shared with the LGBTQ+ community.

I am hopeful that this EduGuide creates opportunities for educators to connect with students in a personal way and I am hopeful that it will help students to stay connected to their educa-

tion by seeing the future opportunities ahead of them.

My first job as a counselor was in a men's correctional facility. I learned from these intelligent, talented, and charismatic men that the disconnect they felt with their education and the educators around them are why they did not complete school and looked for connection and belonging elsewhere. It is why I became a school counselor and why connections are the foundation of the work I do. Creating opportunities where students feel seen, heard, loved, and valued for their authentic selves and creating opportunities where students are empowered and their voices are amplified allows them to see themselves as scientists, artists, innovators, engineers, nurses, neuropsychologists, and so much more. When students see themselves as capable and powerful individuals with strengths to pursue their goals despite challenges, discrimination, and lack of visibility they will stay connected to the education that will create a path to their goals. When students see themselves in successful spaces that they never believed they could be in they will see that they belong and have something to contribute to make that space even more successful. When students see those who are different from them in those successful spaces it increases empathy, inclusive actions, and engagement of more diverse perspectives.

Please enjoy learning with and from your students about these LGBTQ+ S.T.E.M. Professionals. My hope is that you create brave and welcoming spaces for your students to experience and process the lessons and lives shared in the videos and EduGuide. Connect with your students as they share the challenges and opportunities they face and the interests and goals they hold for themselves. Allow those connections to help connect them to their current and future education and professional pursuits.

About Me

Hi! I'm Laura Ross. My pronouns are she/her/hers. I am a middle school counselor in Georgia. The 2022-2023 school year marks my 17th year as a school counselor. My focus as a school counselor is to connect personally with my students in order to connect them with their education now and in the future. My school counseling program is founded in diversity, equity, inclusion, and justice, student voice, connections and asset-based personal growth and opportunities.



I am personally and professionally a strong ally, advocate, and co-conspirator for the LGBTQ+ community, especially youth, advising the first middle school level GSA in our school district. In addition to being a school counselor, I am a consultant for Counselors for Computing and a member of the Girl Talk Inc. DEI Committee as well as a leader with the Georgia School Counselor Association and the 2020 American School Counselor Association School Counselor of the Year.

EduGuide Overview

This EduGuide consists of five lessons, each of which corresponds to one of the *Industry* episodes. Use them sequentially, as laid out here, or as one-off lesson plans. The series includes:



Episode 1

Billy is an engineer who works for Google and teaches online coding as the drag queen, Anna Lytical.



Episode 2

Jenn is an epidemiologist working to monitor and isolate potential viral outbreaks.



Episode 3

Jiwan is a neuropsychologist studying ways to interrupt conditions like autism.



Episode 4

Reiss is an immunologist from the UK whose mission is to find a way to treat and end cancer.



Episode 5

Sabah is a data scientist in bioinformatics who is working to help find alternative treatments for conditions by repurposing drugs already approved by the FDA.

Participant Packet

At the end of this EduGuide, the Participant Packet contains the following:

- A one-page note sheet for each episode. This is a discussion-based EduGuide, and these note sheets are designed as a differentiated support to give students time and space to gather their thoughts before group discussions.
- An individual reflection handout, “My Challenges. My Opportunities.” The same handout is used for all five lessons. Feel free to make as many copies as you need.
- A series of templates to support students in completing the Culminating Activities at the end of the EduGuide. These can be shared with students on an as-needed basis.
- A “Final Thoughts” reflection sheet, to be completed at the end of all lessons and activities.

Time Needed

Each lesson should take between 60 and 90 minutes to complete. Allow an additional 30 to 60 minutes for extension activities.

Age/level appropriateness

These EduGuides are designed for middle and high school students.

Participant consent

We encourage you to make these workshops absolutely voluntary. We think a basic agreement for the space of these workshops should be that everyone is here because they have decided to be here and anyone can choose not to participate in a part of the lesson.

Group size

These lessons can be used in small or large groups. Some connector activities and some group activities may be best suited for a small group, so if the lesson is facilitated with a larger group - divide the large group into small groups (6-8 students) to complete the activity.

Remote Capability

While we encourage in-person discussions, all activities included below can be conducted in a virtual environment. Facilitators will want to make use of break-out rooms for smaller group activities, with shared documents or online boards to facilitate collaboration.

Individual student follow-up

Depending on the experiences shared by students during the lesson, individual follow up may be needed. As students share challenges they currently face or anticipate facing, they may need to have individual discussions for support and intervention. If a school counselor is facilitating the lesson, plan an individual session to follow-up with the student to determine the level of support needed for the student. If a teacher or other educator is facilitating the lesson, report the concern to a school counselor who can follow-up with the student individually. If the student has an IEP or receives any additional support, be sure to include special education teachers or support systems in the conversation. Let the student know you are sharing the concern so trust is not broken.

ASCA Student Standards: Mindsets & Behaviors for Student Success

Category 1: Mindset Standards: School counselors encourage the following mindsets for all students:

- **M 4.** Self-confidence in ability to succeed
- **M 5.** Belief in using abilities to their fullest to achieve high-quality results and outcomes
- **M 6.** Understanding that postsecondary education and lifelong learning are necessary for long-term success

Category 2: Behavior Standards: School counselors provide culturally sustaining instruction, appraisal and advisement, and counseling to help all students demonstrate:

- **Learning Strategies**
 - **B-LS 1.** Critical thinking skills to make informed decisions
 - **B-LS 7.** Long- and short-term academic, career and social/emotional goals
- **Self-Management Skills**
 - **B-SMS 5.** Perseverance to achieve long and short-term goals

- **B-SMS 6.** Ability to identify and overcome barriers

- **Social Skills**

- **B-SS 8.** Advocacy skills for self and others and ability to assert self, when necessary

Social Justice Standards - The Learning for Justice Anti-Bias Framework

6-8 Grade Level Outcomes

- **Identity 1 ID.6-8.1** I know and like who I am and can comfortably talk about my family and myself and describe our various group identities.
- **Identity 3 ID.6-8.3** I know that overlapping identities combine to make me who I am and that none of my group identities on their own fully defines me or any other person.
- **Identity 5 ID.6-8.5** I know there are similarities and differences between my home culture and the other environments and cultures I encounter, and I can be myself in a diversity of settings.
- **Diversity 7 DI.6-8.7** I can accurately and respectfully describe ways that people (including myself) are similar to and different from each other and others in their identity groups.
- **Diversity 9 DI.6-8.9** I know I am connected to other people and can relate to them even when
- **Justice 14 JU.6-8.14** I know that all people (including myself) have certain advantages and disadvantages in society based on who they are and where they were born.we are different or when we disagree.
- **Action 16 AC.6-8.16** I am concerned about how people (including myself) are treated and feel for people when they are excluded or mistreated because of their identities.

9–12 Grade Level Outcomes and Scenarios

- **Identity 1 ID.9–12.1** I have a positive view of myself, including an awareness of and comfort with my membership in multiple groups in society.
- **Identity 3 ID.9–12.3** I know that all my group identities and the intersection of those identities create unique aspects of who I am and that this is true for other people too.
- **Identity 5 ID.9–12.5** I recognize traits of the dominant culture, my home culture and other cultures, and I am conscious of how I express my identity as I move between those spaces.
- **Diversity 7 DI.9–12.7** I have the language and knowledge to accurately and respectfully describe how people (including myself) are both similar to and different from each other and others in their identity groups.
- **Diversity 9 DI.9–12.9** I relate to and build connections with other people by showing them empathy, respect and understanding, regardless of our similarities or differences.
- **Justice 14 JU.9–12.14** I am aware of the advantages and disadvantages I have in society because of my membership in different identity groups, and I know how this has affected my life.
- **Action 16 AC.9–12.16** I express empathy when people are excluded or mistreated because of their identities and concern when I personally experience bias.

Career Exploration Resources

- [CareerExplorer](#)
- [O*NET OnLine](#)
- [My Next Move](#)
- [MyPlan.com](#)

LGBTQ+ in S.T.E.M. Resources

- [The STEM Village](#)
- [Pride in STEM](#)
- [About oSTEM | Out in Science, Technology, Engineering, and Mathematics](#)
- [39 LGBTQ+ STEM Innovators and Resources - Columbia Engineering Boot Camps](#)
- [oSTEM](#)
- [House of STEM](#)
- [LGBTQ+ STEM](#)
- [500 Queer Scientists](#)
- [STEM Equals](#)
- [Resources for LGBTQ Professionals in Tech](#)



Launching the EduGuide

Materials Needed

Distribute [“INTRODUCTION - Being LGBTQ+ in S.T.E.M.”](#) [handout](#), included in the [Participant Packet](#) at the end of this EduGuide.

NOTE: You may distribute the entire Participant Packet at this time, or wait to distribute the handouts for each respective episode or culminating activity as it's delivered.

Agreements

- Establish collective agreements for respectful conversation and collaboration. Some suggestions include: stay curious, ask questions, keep comments respectful.
- Write down the agreements to review before each lesson.

Time Needed Overview

30-45 minutes

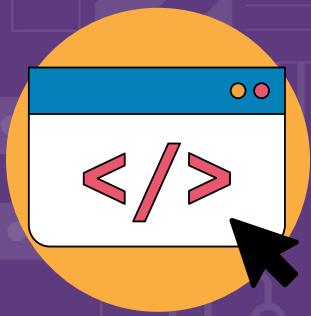
Introduce the *Industry* series about LGBTQ+ professionals in S.T.E.M. to your students.

- Give students an opportunity to reflect on and discuss the following quote from John Pham, PhD:

“The world is filled with talent we do not know. There are many kids out there who could become great scientists, but they don’t even know that this is something they could do.”

John Pham, PhD
Editor-in-Chief, Cell

- If you have time, encourage your students to read [“On Being LGBTQ+ in science - yes it matters, and here’s why”](#) by Alison Bert, DMA for Elsevier Connect.
- Ask students to fill in three post-it notes (or answer directly on the Participant Packet) about their (1) knowledge of, (2) interest in, and (3) curiosities about S.T.E.M. careers. Encourage students to share their responses. These will be discussion-based sessions, so you want to build a culture of open dialogue and respectful communication.
- Give an overview of the flow of each lesson.



Episode #1: Engineering -Billy

Objectives

Participants will:

- Discuss what engineering is, what a career in engineering might look like, what engineers do, and how to become an engineer.
- Identify and describe challenges LGBTQ+ students may face becoming engineers.
- Imagine a potential future as an engineer, taking into account what support may be available to get there as well as personal traits and interests that could come in handy on the journey to becoming an engineer.





Materials Needed

Relevant Concepts/ Vocabulary

Teacher Preparation

Supplies Needed

Total Time for All Activities

[Episode: Billy - Engineering](#)

Career Related:

- Coding
- Software engineering
- Analytical
- Design principles
- Neopets
- Second Life
- HTML Web Pages

Person Related:

- Drag queen
- Blank slate
- Contour palette
- Queer community
- Finagle
- Trope
- Push boundaries
- Being visible

- Review Lesson Plan & Sideshow
- If your students are unfamiliar with the terms above, be sure to gather shared definitions that you will be able to base your discussions off.
- [Participant Packet handouts for this episode](#), available at the end of this EduGuide.

60 to 90 minutes

Time	Activity	Description	Group Configuration
5 min	Welcome and Agreements	Welcome participants to the space and ask a student to review group agreements established in the first introductory lesson. The facilitator then shares the lesson plan’s objectives and key concepts/vocabulary from above.	Entire group
5 min	Let’s Connect	<p>Prior to the lesson, download the following image of Billy and display or provide it to your students.</p> <p>Ask students to share:</p> <ul style="list-style-type: none"> • What do you see in the picture? • What do you think about the picture? • What makes you wonder about the picture? <p>NOTE: You may also ask students to answer each of the questions above on a different-colored post-it note. Gather the post-it notes and use them to guide a discussion. Remember that some students may need to gather their notes on paper before sharing aloud. Give them time to do so.</p>	Entire group
5 min	Let’s Learn	Have the group watch the Billy - Engineering episode together.	Entire group
10 -15 min	Let’s Chat	<p>Invite the whole group to answer the following questions:</p> <ul style="list-style-type: none"> • Comprehension Questions <ul style="list-style-type: none"> - What helped Billy become interested in the career of software engineering? How could he help others be interested? - In what ways are drag and building a website similar? - How could someone use software engineering and coding to create change in the world? • Take it Further <ul style="list-style-type: none"> - Billy didn’t mention a lot of challenges he faced in the video, but based on what you 	Entire group

Time	Activity	Description	Group Configuration
		<p>learned about Billy are there any challenges that could come up for him? How could he handle those challenges?</p> <ul style="list-style-type: none"> - When feeling more comfortable about computer science and technology what might someone be able to do? - In what ways might watchers relate to or connect with Anna Lytical’s coding videos? - How does “being visible” as a drag queen who codes help Billy “push the boundaries”? <p>NOTE: It may be wise to share these questions with your students before they watch the video, if it will help guide and inform their viewing experience. Comprehension questions are listed in the Participant Packet.</p>	
20 min	Let’s Find the Challenges & Opportunities	<p>Invite the whole group to have a discussion on the following topic:</p> <ul style="list-style-type: none"> • We learned a lot about Billy in the video. He faced some challenges in blending his interest in coding and his interest in drag and he had some opportunities that helped him. With each of the challenges and opportunities Billy faces, determine how Billy can or has crushed the challenges and how Billy can or has owned the opportunities. <p>- Challenges:</p> <ul style="list-style-type: none"> ◊ Seeking connection ◊ Discrimination for creating videos as a drag queen ◊ Not always being able to be your unique self in your career ◊ Not finding ways to integrate personal interest and your profession ◊ Lack of diverse representation in tech and computer science ◊ Any other challenges? 	Entire group or smaller groups if the group is very large

Time	Activity	Description	Group Configuration
		<ul style="list-style-type: none"> - Opportunities: <ul style="list-style-type: none"> ◇ Interest in coding ◇ Dabbling in Neopets and Second Life when younger ◇ Curiosity about drag ◇ Confident in abilities ◇ Desire to engage and connect to others ◇ Desire to make coding and tech interesting for others ◇ Wanting to be visible ◇ Any other opportunities? <p>NOTE: For this activity, encourage your groups to brainstorm on a shared chart paper or whiteboard, or in a shared document if facilitating remotely.</p>	
10 -15 min	Let's Reflect	<p>Provide some time for self-reflection, or run this as a Think-Pair-Share if the culture of your classroom allows it. This can help students build a sense of the community that may help them reach their goals before they receive the handout.</p> <ul style="list-style-type: none"> • What challenges and opportunities would you face in becoming a software engineer? <ul style="list-style-type: none"> - Challenges may be treatment by others, knowledge to be developed, discrimination, etc. - Opportunities may be character traits, interests, supportive people, knowledge, etc. <p>Ask your students to complete the handout "My Challenges My Opportunities" available in the Participant Packet at the end of this EduGuide.</p> <ul style="list-style-type: none"> • What challenges and opportunities would you face in becoming a software engineer? <ul style="list-style-type: none"> - Challenges may be treatment by others, 	Individuals

Time	Activity	Description	Group Configuration
		<p>knowledge to be developed, discrimination, etc.</p>	
10 -15 min	Let's Share	<p>Provide some time for self-reflection, or run this as a Think-Pair-Share if the culture of your classroom allows it. This can help students build a sense of the community that may help them reach their goals before they receive the handout.</p>	Entire group or small groups if the group is very large
10 min	Let's Close	<p>Ask each student to complete the following statement:</p> <p><i>"I can become an engineer with the support of (person), by learning (subject/topic), and (using my personal strengths)."</i></p> <p>Have each student share their statement with the group, or write it on a post-it note as an exit ticket, whatever your time constraints and/or classroom culture allow.</p>	Entire group
BONUS	Extension Activities	<p>If you have extra time, or if a group of students finish early, please feel free to lead students in the following Extension Activities or guide them toward individual research.</p> <ul style="list-style-type: none"> • Extension Activity 1: Extended Discussion <ul style="list-style-type: none"> - Agreements: <ul style="list-style-type: none"> ◇ Speak and listen from the heart. ◇ Take the time you need, and be mindful of others need for more time. ◇ Maintain confidentiality except where safety is at risk. - Questions: <ul style="list-style-type: none"> ◇ In what ways do you like to connect with friends and family? 	TBD by the Facilitator

Time	Activity	Description	Group Configuration
		<ul style="list-style-type: none"> ◇ What is one thing you still wonder about being a software engineer? How can you find the answer to your question? What is one that could impact others with software engineering? ◇ Billy talked about seeking out the queer community? How did having a supportive queer community benefit him in his personal and professional life? How do you think it could benefit you? ◇ What does it take to be “visible” in your uniqueness and “push the boundaries” as Billy says? What feelings, character traits, or attitudes are involved in that? • Extension Activity 2: Career Research <ul style="list-style-type: none"> - Using the following websites, explore more about the career of Immunology including daily tasks and how to become a software engineer. ◇ What does a software engineer do? - CareerExplorer ◇ O*NET ◇ How to become a software engineer - CareerExplorer 	



Episode #2: Epidemiology –Jenn

Objectives

Participants will:

- Discuss what epidemiology is, what a career in epidemiology might look like, what epidemiologists do, and how to become an epidemiologist.
- Identify and describe challenges LGBTQ+ students may face becoming epidemiologists.
- Imagine a potential future as an epidemiologist, taking into account what support may be available to get there as well as personal traits and interests that could come in handy on the journey to becoming an epidemiologist.





Materials Needed

Relevant Concepts/ Vocabulary

Teacher Preparation

Supplies Needed

Total Time for All Activities

- [Episode: Jenn - Epidemiology](#)

Career Related:

- Surveillance epidemiology
- Disease
- Public health
- Outbreak
- Statistical Algorithms
- Aberrations
- Pre-Med
- Clinical practice
- Biostatistics

Person Related:

- Achievable goal
- Conscious decision
- Internal process
- Medium (ex:art)
- Pandemic
- Millennial
- Gen Z
- Collective Energy
- Equitable
- Place at the table
- Filipino
- Caucasian
- Multiracial

- Review Lesson Plan & Sideshow
- If your students are unfamiliar with the terms above, be sure to gather shared definitions that will help facilitate individual reflections and group discussions.
- [Participant Packet handouts for this episode](#), available at the end of this EduGuide.

60 to 90 minutes

Time	Activity	Description	Group Configuration
5 min	Welcome and Agreements	Welcome participants to the space and ask a student to review group agreements established in the first introductory lesson. The facilitator then shares the lesson plan’s objectives and key concepts/vocabulary from above.	Entire group
5 min	Let’s Connect	<p>Prior to the lesson, download the following image of Jenn and display or provide it to your students.</p> <p>Ask students to share:</p> <ul style="list-style-type: none"> • What do you see in the picture? • What do you think about the picture? • What makes you wonder about the picture? <p>NOTE: You may also ask students to answer each of the questions above on a different-colored post-it note. Gather the post-it notes and use them to guide a discussion. Remember that some students may need to gather their notes on paper before sharing aloud. Give them time to do so.</p>	Entire group
5 min	Let’s Learn	Have the group watch the Jenn - Epidemiology episode together.	Entire group
10 -15 min	Let’s Chat	<p>Invite the whole group to answer the following questions:</p> <ul style="list-style-type: none"> • Comprehension Questions <ul style="list-style-type: none"> - What do surveillance epidemiologists look for in their job and why is that important to look for? - What made Jenn struggle to figure out where she fit in? - What made Jenn’s goals feel like “a far stretch?” Why did these things impact how she saw her goal? • Take it Further <ul style="list-style-type: none"> - What does Jenn mean when she talks about 	Entire group

Time	Activity	Description	Group Configuration
		<p>queer youth having “a place a the table?”</p> <ul style="list-style-type: none"> - What may be the unique health concerns of queer youth that Jenn is referring to? <p>How does Jenn’s artwork benefit her as an epidemiologist?</p> <p>NOTE: It may be wise to share these questions with your students before they watch the video, if it will help guide and inform their viewing experience. Comprehension questions are listed in the Participant Packet.</p>	
20 min	Let’s Find the Challenges & Opportunities	<p>Invite the whole group to have a discussion on the following topic:</p> <ul style="list-style-type: none"> • We learned a lot about Jenn in the video. She faced some challenges in becoming and being an epidemiologist and she had some opportunities that helped her. With each of the challenges and opportunities Jenn faces, determine how Jenn can or has crushed the challenges and how Jennifer can or has owned the opportunities. <ul style="list-style-type: none"> - Challenges: <ul style="list-style-type: none"> ◊ White, male-dominated field ◊ Searching where she fit in ◊ Deciding not go into medicine ◊ Society sees her goals as a far stretch ◊ Any other challenges? - Opportunities: <ul style="list-style-type: none"> ◊ Health promotion & disease prevention class ◊ Encouraging & uplifting co-workers ◊ Family sees goals as achievable ◊ Showing up for yourself ◊ Any other opportunities? <p>NOTE: For this activity, encourage your groups to brainstorm on a shared chart paper or whiteboard,</p>	Entire group or smaller groups if the group is very large

Time	Activity	Description	Group Configuration
		<p>or in a shared document if facilitating remotely.</p>	
10 -15 min	Let's Reflect	<p>Provide some time for self-reflection, or run this as a Think-Pair-Share if the culture of your classroom allows it. This can help students build a sense of the community that may help them reach their goals before they receive the handout.</p> <ul style="list-style-type: none"> • What challenges and opportunities would you face in becoming an epidemiologist? <ul style="list-style-type: none"> - Challenges may be treatment by others, knowledge to be developed, discrimination, etc. - Opportunities may be character traits, interests, supportive people, knowledge, etc. <p>Ask your students to complete the handout "My Challenges. My Opportunities." available in the Participant Packet at the end of this EduGuide.</p>	Individuals
10 -15 min	Let's Share	<p>Allow time for students to share from their self-reflection as they feel comfortable.</p>	Entire group or small groups if the group is very large
10 min	Let's Close	<p>Each student complete the statement:</p> <p><i>"I can become an epidemiologist with the support of (person), by learning (subject/topic), and (using my personal strengths)."</i></p> <p>Each student shares their statement with the group, or writes it on a post-it note as an exit ticket, whatever your time constraints and/or classroom culture allow.</p>	Entire group

Time	Activity	Description	Group Configuration
BONUS	Extension Activities	<p>If you have extra time, or if a group of students finish early, please feel free to lead students in the following Extension Activities or guide them toward individual research.</p> <ul style="list-style-type: none"> • Extension Activity 1: Extended Discussion <ul style="list-style-type: none"> - Agreements: <ul style="list-style-type: none"> ◊ Speak and listen from the heart. ◊ Take the time you need, and be mindful of others' need for more time. ◊ Maintain confidentiality except where safety is at risk. - Questions: <ul style="list-style-type: none"> ◊ If you could get rid of one food in the world, what would it be? ◊ What is one thing you would find difficult about being an epidemiologist? ◊ What is one thing you found interesting about being an epidemiologist? ◊ Jenn described how it was difficult for to see where she fit in based on various parts of her identity (being multiracial and queer). When is a time when you found it difficult to fit in and where and how did you find a place to fit in? ◊ With “a seat at the table,” what can the impact of queer youth be on their community? • Extension Activity 2: Career Research <ul style="list-style-type: none"> - Using the following websites, explore more about the career of Immunology including daily tasks and how to become an epidemiologist. <ul style="list-style-type: none"> ◊ What does an epidemiologist do? - CareerExplorer ◊ O*NET ◊ How to become an epidemiologist 	TBD by the Facilitator



Episode #3: Neuropsychology –Jiwan

Objectives

Participants will:

- Discuss what neuropsychology is, what a career in neuropsychology might look like, what neuropsychologists do, and how to become a neuropsychologist.
- Identify and describe challenges LGBTQ+ students may face becoming neuropsychologists.
- Imagine a potential future as a neuropsychologist, taking into account what support may be available to get there as well as personal traits and interests that could come in handy on the journey to becoming an neuropsychologist.





Materials Needed

Relevant Concepts/ Vocabulary

Teacher Preparation

Supplies Needed

Total Time for All Activities

- [Episode: Jiwan- Neuropsychology](#)

Career Related:

- Neuropsychology
- Doctoral research follow
- Chemist
- Diagnostic
- Cognitive
- Scientific Process
- Neurodevelopmental disorder
- Psychiatric disorder
- Compartmentalize

Person Related:

- Sikhism
- Bisexual
- Punjabi
- Core Value
- Visibility

- Review Lesson Plan & Sideshow
- If your students are unfamiliar with the terms above, be sure to gather shared definitions that will help facilitate individual reflections and group discussions.
- [Participant Packet handouts for this episode](#), available at the end of this EduGuide.

60 to 90 minutes

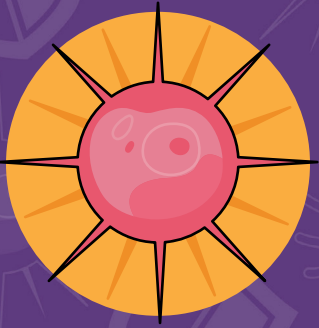
Time	Activity	Description	Group Configuration
5 min	Welcome and Agreements	Welcome participants to the space and ask a student to review group agreements established in the first introductory lesson. The facilitator then shares the lesson plan’s objectives and key concepts/vocabulary from above.	Entire group
5 min	Let’s Connect	<p>Prior to the lesson, download the following image of Jiwan and display or provide it to your students.</p> <p>Ask students to share:</p> <ul style="list-style-type: none"> • What do you see in the picture? • What do you think about the picture? • What makes you wonder about the picture? <p>NOTE: You may also ask students to answer each of the questions above on a different-colored post-it note. Gather the post-it notes and use them to guide a discussion. Remember that some students may need to gather their notes on paper before sharing aloud. Give them time to do so.</p>	Entire group
5 min	Let’s Learn	Have the group watch the Jiwan - Neuropsychology episode together.	Entire group
10 -15 min	Let’s Chat	<p>Invite the whole group to answer the following questions:</p> <ul style="list-style-type: none"> • Comprehension Questions <ul style="list-style-type: none"> - Jiwan said a lot of people look at who is in the field of neuropsychology and think they can’t make it. Why is this? - Jiwan shares that he has a core value about visibility and he realized the importance of visibility work in science. What does Jiwan mean by visibility and how can it be important in science fields? - How does baking benefit what Jiwan does in neuropsychology? 	Entire group

Time	Activity	Description	Group Configuration
		<ul style="list-style-type: none"> • Take it Further <ul style="list-style-type: none"> - Why do you think neuropsychologists focus on the relationship between the brain and behavior? Why might that be important? - Jiwan practices Sikhism, is bisexual and Indian. How might this help him in learning to understand how the brain works? - In what ways could a person’s identity positively influence their profession? In what ways might it impact their profession negatively? <p>NOTE: It may be wise to share these questions with your students before they watch the video, if it will help guide and inform their viewing experience. Comprehension questions are listed in the Participant Packet.</p>	
20 min	Let’s Find the Challenges & Opportunities	<p>Invite the whole group to have a discussion on the following topic:</p> <ul style="list-style-type: none"> • We learned a lot about Jiwan in the video. He faced some challenges in being different in the field of neuropsychology and some opportunities that helped him as a neuropsychologist. With each of the challenges and opportunities Jiwan faces, determine how Jiwan can or has crushed the challenges and how Jiwan can or has owned the opportunities. <ul style="list-style-type: none"> - Challenges: <ul style="list-style-type: none"> ◊ Taking a lot of time to coming to terms with not being straight ◊ Struggling to believe in visibility ◊ Challenged to be visible about sexuality ◊ Not having a role model specific to your identities in the career you are interested in ◊ Being in an environment where you don’t always feel empowered ◊ Any other challenges? 	Entire group or smaller groups if the group is very large

Time	Activity	Description	Group Configuration
		<ul style="list-style-type: none"> - Opportunities: <ul style="list-style-type: none"> ◇ Interest and enthusiasm for science ◇ Conducting science experiments as a kid ◇ People seeing themselves reflected in him ◇ Personal identity influencing your profession ◇ Practicing a religion like Sikhism that people may not understand ◇ Any other opportunities? <p>NOTE: For this activity, encourage your groups to brainstorm on a shared chart paper or whiteboard, or in a shared document if facilitating remotely.</p>	
10 -15 min	Let's Reflect	<p>Provide some time for self-reflection, or run this as a Think-Pair-Share if the culture of your classroom allows it. This can help students build a sense of the community that may help them reach their goals before they receive the handout.</p> <ul style="list-style-type: none"> • What challenges and opportunities would you face in pursuing a career in neuropsychology? <ul style="list-style-type: none"> - Challenges may be treatment by others, knowledge to be developed, discrimination, etc. - Opportunities may be character traits, interests, supportive people, knowledge, etc. <p>Ask your students to complete the handout "My Challenges. My Opportunities." available in the Participant Packet at the end of this EduGuide.</p>	Individuals
10 -15 min	Let's Share	Allow time for students to share from their self-reflection as they feel comfortable.	Entire group or small groups if the group is very large

Time	Activity	Description	Group Configuration
10 min	Let's Close	<p>Each student complete the statement:</p> <p><i>"I can become an neuropsychologist with the support of (person), by learning (subject/topic), and (using my personal strengths)."</i></p> <p>Have each student share their statement with the group, or write it on a post-it note as an exit ticket, whatever your time constraints and/or classroom culture allow.</p>	Entire group
BONUS	Extension Activities	<p>following Extension Activities or guide them toward individual research.</p> <ul style="list-style-type: none"> • Extension Activity 1: Extended Discussion <ul style="list-style-type: none"> - Agreements: <ul style="list-style-type: none"> ◊ Speak and listen from the heart. ◊ Take the time you need, and be mindful of others' need for more time. ◊ Maintain confidentiality except where safety is at risk. - Questions: <ul style="list-style-type: none"> ◊ What topic or activity do you get enthusiastic about? ◊ What sounds like the most interesting part about being a neuropsychologist? ◊ What part of neuropsychology sounds the most challenging? ◊ What part of your identity (that you feel comfortable sharing in the circle) do you think would be important to be visible about in following your career path? ◊ What is something you are interested in that may help you in becoming a neuropsychologist? Why might it be helpful? • Extension Activity 2: Career Research <ul style="list-style-type: none"> - Using the following websites, explore more 	TBD by the Facilitator

Time	Activity	Description	Group Configuration
		<p>about the career of neuropsychology including daily tasks and how to become a neuropsychologist.</p> <ul style="list-style-type: none"> ◇ What does a neuropsychologist do? - CareerExplorer ◇ Neuropsychologist jobs in None, FL - CareerExplorer O*NET ◇ How to become a neuropsychologist - CareerExplorer 	



Episode #4: Immunology -Reiss

Objectives

Participants will:

- Discuss what immunology is, what a career in immunology might look like, what immunologists do, and how to become an immunologist.
- Identify and describe challenges LGBTQ+ students may face becoming immunologists.
- Imagine a potential future as an immunologist, taking into account what support may be available to get there as well as personal traits and interests that could come in handy on the journey to becoming an immunologist.





Materials Needed

Relevant Concepts/ Vocabulary

Teacher Preparation

Supplies Needed

Total Time for All Activities

- [Episode: Reiss - Immunology](#)

Career Related:

- Biology
- Immunology
- Immunotherapy
- T Cell
- Cancer
- Immune System
- Genetically modified
- Molecule
- CAR T Cell Therapy

Person Related:

- Shibari
- Discrimination
- Identity
- Immigrant
- Visibility
- Spectrum

- Review Lesson Plan & Sideshow
- If your students are unfamiliar with the terms above, be sure to gather shared definitions that will help facilitate individual reflections and group discussions.

- [Participant Packet handouts for this episode](#), available at the end of this EduGuide.

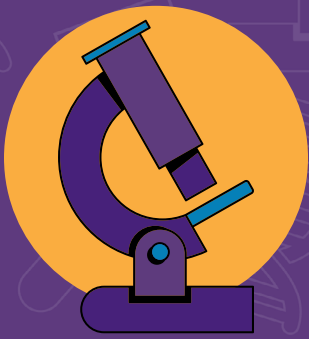
60 to 90 minutes

Time	Activity	Description	Group Configuration
5 min	Welcome and Agreements	Welcome participants to the space and ask a student to review group agreements established in the first introductory lesson. The facilitator then shares the lesson plan’s objectives and key concepts/vocabulary from above.	Entire group
5 min	Let’s Connect	<p>Prior to the lesson, download the following image of Reiss and display or provide it to your students.</p> <p>Ask students to share:</p> <ul style="list-style-type: none"> • What do you see in the picture? • What do you think about the picture? • What makes you wonder about the picture? <p>NOTE: You may also ask students to answer each of the questions above on a different-colored post-it note. Gather the post-it notes and use them to guide a discussion. Remember that some students may need to gather their notes on paper before sharing aloud. Give them time to do so.</p>	Entire group
5 min	Let’s Learn	Have the group watch the Reiss - Immunology episode together.	Entire group
10 -15 min	Let’s Chat	<p>Invite the whole group to answer the following questions:</p> <ul style="list-style-type: none"> • Comprehension Questions <ul style="list-style-type: none"> - What does Reiss study as an immunologist? - Reiss works on T cells. What do T cells do? - What did Reiss realize he could accomplish by combining his obsession with science as a kid and medical research? - How does learning the structure and creativity of shibari (Japanese rope bondage) benefit Reiss as an immunologist? • Take it Further <ul style="list-style-type: none"> - How can science make a person hopeful? 	Entire group

Time	Activity	Description	Group Configuration
		<ul style="list-style-type: none"> - How do you imagine Reiss feels as typically the only Black, queer, immigrant in meetings? - Rather than think you may be held back in a S.T.E.M. field, what thoughts could help you “go for it” as Reiss says? <p>NOTE: It may be wise to share these questions with your students before they watch the video, if it will help guide and inform their viewing experience. Comprehension questions are listed in the Participant Packet.</p>	
20 min	Let's Find the Challenges & Opportunities	<p>Invite the whole group to have a discussion on the following topic:</p> <ul style="list-style-type: none"> • We learned a lot about Reiss in the video. He faced some challenges in becoming and being an immunologist and he had some opportunities that helped him. With each of the challenges and opportunities Reiss faces, determine how Reiss can or has crushed the challenges and how Reiss can or has owned the opportunities. <ul style="list-style-type: none"> - Challenges: <ul style="list-style-type: none"> ◊ Anxious mess ◊ Discrimination ◊ Not seeing yourself (Black and queer) in spaces you want to be in ◊ Society putting people in boxes ◊ Any other challenges? - Opportunities: <ul style="list-style-type: none"> ◊ Obsessed with science ◊ Wants to give back ◊ Respected as a scientist by others ◊ Being visible in the immunology field ◊ Trying to become an expert in new things ◊ Any other opportunities? <p>NOTE: For this activity, encourage your groups to</p>	Entire group or smaller groups if the group is very large

Time	Activity	Description	Group Configuration
		<p>brainstorm on a shared chart paper or whiteboard, or in a shared document if facilitating remotely.</p>	
10 -15 min	Let's Reflect	<p>Provide some time for self-reflection, or run this as a Think-Pair-Share if the culture of your classroom allows it. This can help students build a sense of the community that may help them reach their goals before they receive the handout.</p> <ul style="list-style-type: none"> • What challenges and opportunities might you face in becoming an immunologist? <ul style="list-style-type: none"> - Challenges may be treatment by others, knowledge to be developed, discrimination, etc. - Opportunities may be character traits, interests, supportive people, knowledge, etc. <p>Ask your students to complete the handout "My Challenges. My Opportunities." available in the Participant Packet at the end of this EduGuide.</p>	Individuals
10 -15 min	Let's Share	<p>Allow time for students to share from their self-reflection as they feel comfortable.</p>	Entire group or small groups if the group is very large
10 min	Let's Close	<p>Ask each student to complete the following statement:</p> <p><i>"I can become an immunologist with the support of (person), by learning (subject/topic), and (using my personal strengths)."</i></p> <p>Have each student share their statement with the group, or write it on a post-it note as an exit ticket, whatever your time constraints and/or classroom culture allow.</p>	Entire group

Time	Activity	Description	Group Configuration
BONUS	Extension Activities	<p>If you have extra time, or if a group of students finish early, please feel free to lead students in the following Extension Activities or guide them toward individual research.</p> <ul style="list-style-type: none"> • Extension Activity 1: Extended Discussion <ul style="list-style-type: none"> - Agreements: <ul style="list-style-type: none"> ◊ Speak and listen from the heart. ◊ Take the time you need, and be mindful of others' need for more time. ◊ Maintain confidentiality except where safety is at risk. - Questions: <ul style="list-style-type: none"> ◊ If you had one hour of free time a day, how would you use it? ◊ What is one thing you would find difficult about being an immunologist? ◊ What is one thing you found interesting about being an immunologist? ◊ Reiss described himself as British Jamaican, Black, queer, and an immigrant. How would your unique intersectional identity help you to be successful in a career like Reiss'? ◊ Without seeing someone like yourself in the career of immunology, what else could help make that goal more tangible for you? • Extension Activity 2: Career Research <ul style="list-style-type: none"> - Using the following websites, explore more about the career of Immunology including daily tasks and how to become an immunologist <ul style="list-style-type: none"> ◊ What does an immunologist do? - CareerExplorer O*NET ◊ How to become an immunologist - CareerExplorer 	TBD by the Facilitator



Episode #5: Bioinformatics -Sabah

Objectives

Participants will:

- Discuss what bioinformatics is, what a career in bioinformatics might look like, what data scientists do, and how to become a data scientist.
- Identify and describe challenges LGBTQ+ students may face becoming data scientists.
- Imagine a potential future in bioinformatics, taking into account what support may be available to get there as well as personal traits and interests that could come in handy on the journey to becoming a data scientist.





Materials Needed

Relevant Concepts/ Vocabulary

Teacher Preparation

Supplies Needed

Total Time for All Activities

- [Episode: Sabah - Bioinformatics](#)

Career Related:

- Bioinformatics
- Postdoctoral research fellow
- Paradigm shift
- Scientific method
- Microbial communities
- Microbes
- PhD
- Field research
- Computational work
- Venomous animals
- Biomedical data
- Analysis
- Curated
- Genes
- Genetic Mutations
- FDA Approved

Person Related:

- First generation
- Indian
- Pakistani
- Invisible existence

- Review Lesson Plan & Sideshow
- If your students are unfamiliar with the terms above, be sure to gather shared definitions that will help facilitate individual reflections and group discussions.
- [Participant Packet handouts for this episode](#), available at the end of this EduGuide.

60 to 90 minutes

Time	Activity	Description	Group Configuration
5 min	Welcome and Agreements	Welcome participants to the space and ask a student to review group agreements established in the first introductory lesson. The facilitator then shares the lesson plan’s objectives and key concepts/vocabulary from above.	Entire group
5 min	Let’s Connect	<p>Prior to the lesson, download the following image of Sabah and display or provide it to your students.</p> <p>Ask students to share:</p> <ul style="list-style-type: none"> • What do you see in the picture? • What do you think about the picture? • What makes you wonder about the picture? <p>NOTE: You may also ask students to answer each of the questions above on a different-colored post-it note. Gather the post-it notes and use them to guide a discussion. Remember that some students may need to gather their notes on paper before sharing aloud. Give them time to do so.</p>	Entire group
5 min	Let’s Learn	Have the group watch the Sabah - Bioinformatics episode together.	Entire group
10 -15 min	Let’s Chat	<p>Invite the whole group to answer the following questions:</p> <ul style="list-style-type: none"> • Comprehension Questions <ul style="list-style-type: none"> - How does bioinformatics help solve problems in our society? - How is skateboarding and surfing beneficial to Sabah’s bioinformatics work? - Along the way, Sabah learned that their differences and different identities were important to the field of bioinformatics? Why are they important? - Process Video (Discussion Questions) 	Entire group

Time	Activity	Description	Group Configuration
		<ul style="list-style-type: none"> • Take it Further <ul style="list-style-type: none"> - Sabah once thought they would be a ballerina, doctor, or artist. Now they are not in any of those career fields. Is that a good or bad thing? Why? - Why do you think Sabah felt the need to prove themselves and be accepted when they first entered the field of bioinformatic science? - Sabah talked about their family being significant including their parents being first generation as well as Indian and Pakistani. Why might these aspects of their family be impactful personally and professionally? <p>NOTE: It may be wise to share these questions with your students before they watch the video, if it will help guide and inform their viewing experience. Comprehension questions are listed in the Participant Packet.</p>	
20 min	Let's Find the Challenges & Opportunities	<p>Invite the whole group to have a discussion on the following topic:</p> <ul style="list-style-type: none"> • We learned a lot about Sabah in the video. They faced some challenges in being different in the field of bioinformatics and some opportunities that helped them as a scientist. With each of the challenges and opportunities Sabah faces, determine how Sabah can or has crushed the challenges and how Sabah can or has owned the opportunities. <ul style="list-style-type: none"> - Challenges: <ul style="list-style-type: none"> ◊ Didn't see self in science careers ◊ Hiding some of their identities ◊ Needing to prove themselves to others ◊ Wanting to be accepted as a scientist ◊ Not being a ballerina, a doctor, or an artist ◊ Any other challenges? 	Entire group or smaller groups if the group is very large

Time	Activity	Description	Group Configuration
		<ul style="list-style-type: none"> - Opportunities: <ul style="list-style-type: none"> ◇ Being Curious ◇ Having more data than they know what to do with ◇ Being needed because of their differences ◇ Learning the importance of being vocal ◇ Feel and creating inclusion ◇ Feeling empowered ◇ Any other opportunities? <p>NOTE: For this activity, encourage your groups to brainstorm on a shared chart paper or whiteboard, or in a shared document if facilitating remotely.</p>	
10 -15 min	Let's Reflect	<p>Provide some time for self-reflection, or run this as a Think-Pair-Share if the culture of your classroom allows it. This can help students build a sense of the community that may help them reach their goals before they receive the handout.</p> <ul style="list-style-type: none"> • What challenges and opportunities would you face in pursuing a career in bioinformatics? <ul style="list-style-type: none"> - Challenges may be treatment by others, knowledge to be developed, discrimination, etc. - Opportunities may be character traits, interests, supportive people, knowledge, etc. <p>Ask your students to complete the handout "My Challenges. My Opportunities." available in the Participant Packet at the end of this EduGuide.</p>	Individuals
10 -15 min	Let's Share	Allow time for students to share from their self-reflection as they feel comfortable.	Entire group or smaller groups if the group is very large

Time	Activity	Description	Group Configuration
10 min	Let's Close	<p>Each student complete the statement:</p> <p><i>"I can pursue a career in bioinformatics with the support of (person), by learning (subject/topic), and (using my personal strengths)."</i></p> <p>Have each student share their statement with the group, or write it on a post-it note as an exit ticket, whatever your time constraints and/or classroom culture allow.</p>	Entire group
BONUS	Extension Activities	<p>following Extension Activities or guide them toward individual research.</p> <ul style="list-style-type: none"> • Extension Activity 1: Extended Discussion <ul style="list-style-type: none"> - Agreements: <ul style="list-style-type: none"> ◊ Speak and listen from the heart. ◊ Take the time you need, and be mindful of others' need for more time. ◊ Maintain confidentiality except where safety is at risk. - Questions: <ul style="list-style-type: none"> ◊ What is the first career you remember being interested in as a little kid? Is it still the same? ◊ Bioinformatics sounds like it has a lot of steps and moving parts to the work of the scientist. Which aspects of bioinformatics do you find matches your interests the most? ◊ What would challenge you the most in the field of bioinformatics? ◊ Sabah made the statement that the tech, science, and biomedical field need to be better about creating spaces that support differences because if they do not they are the ones who would "die out." What do you think they mean by this statement and do you see it possibly applying to other situ- 	TBD by the Facilitator

Time	Activity	Description	Group Configuration
BONUS	Extension Activities	<p>ations or environments? How?</p> <ul style="list-style-type: none"> ◇ What can feeling included and empowered do for someone in their personal or professional life? What would make you feel included or empowered? <ul style="list-style-type: none"> • Extension Activity 2: Career Research <ul style="list-style-type: none"> - Using the following websites, explore more about the career of Immunology including daily tasks and how to become a software engineer. ◇ Bioinformatics degree overview ◇ O*NET ◇ Bioinformatics degree overview 	TBD by the Facilitator

Culminating Activities

Welcome and Congratulations

Thank students for their participation in the Industry lessons and discussions. As a culmination, students will complete their choice of creative individual reflection activities followed by a whole group closing discussion.

Please use the resources below in whichever way you see fit.

- Activity #1 is designed to encourage students to reflect on their own identities and futures.
- Activity #2 encourages students to celebrate LGBTQ+ professionals in S.T.E.M.
- Activity #3 is a closing discussion that asks students to synthesize their learning and reflecting from the previous lessons and think about their own futures.

Activity #1 - Current and Future Me

Begin by giving students time to brainstorm different elements that make up their identity. Depending on the culture of your learning environment, students may share these with partners or keep their reflections private.

Distribute [“Current and Future Me” handout](#) included in the Participant Packet at the end of this EduGuide, and offer the following instructions:

- In the puzzle pieces, write or draw pieces of your identity including: personal identities, cultural identities, character traits, skills, talents, strengths, interests.
- In the center of the picture draw or write your future goals in relation to postsecondary education, careers, or problems you want to solve in the world.

Allow time for students to share out with the whole group as they feel comfortable.

Activity #2 - Portrait of an LGBTQ+ S.T.E.M. Professional

In this activity, students will have the opportunity to portray LGBTQ+ professionals in S.T.E.M. in a unique and creative way. Offer the following instructions:

- Think about the professionals you learned about in the Industry videos. With them in mind, you're going to create a "portrait" that displays all of the aspects that you think can help make up an LGBTQ+ S.T.E.M. Professional. This could include:
 - Character traits
 - Strengths
 - Childhood activities and perspectives
 - Personal and cultural identities
 - Support system
 - Opportunities
 - Curiosities and interests
 - Academic achievements
 - Ways to overcome challenges
- Your final creative product does not need to be a portrait in the traditional sense. Your portrait may be a drawing, a poem, a song, a collage, or even a short story. Take this opportunity to get creative and think outside the box. There are a [variety of templates](#) in your participant packet that can help guide you.

Students may also check out these resources to help inspire their portraits:

- [9 Important LGBTQ+ Innovators Who Changed STEM Forever](#)
- [Pride in STEM: 6 LGBTQ+ tech trailblazers we admire | PaperCut](#)
- [39 LGBTQ+ STEM Innovators and Resources - Columbia Engineering Boot Camps](#)
- [500 Queer Scientists](#)

Activity #3 - Closing Discussion

Guide a closing discussion with the following agreements and questions:

- Agreements:
 - Speak and listen from the heart.
 - Take the time you need, and be mindful of others' need

for more time.

- Maintain confidentiality except where safety is at risk.
- Questions:
 - Name something you have accomplished in your life. (Small wins are welcomed)
 - What is a problem in our community or in society as whole that you believe needs to be solved and why?
 - What is a challenge you might face in solving that problem? (It can be challenges related to personal or professional experiences).
 - In what ways do you think Science, Technology, Engineering or Math can help solve that problem?
 - What personal strengths including character traits, skills or talents do you possess that could help solve that problem?
 - How will you stay motivated in building upon your strengths and continuing to work toward future goals?

NOTE: To have a record of the students' final thoughts, consider posting each question on a piece of chart paper around the room and ask students to walk around and write their thoughts. They can do this with post-it notes, or just write on the chart paper. Consider beginning with a silent conversation, where students write their thoughts and respond to each other, followed by an all-group share-out.

Wrap Up

After each Culminating Activity (or after completing all three), encourage students to complete [the shapes reflection activity](#) at the end of their Participant Packet. There they will also find the Additional Resources listed in the EduGuide Overview above.

PARTICIPANT PACKET

for Industry – Original EduGuide

Introduction

Industry is a 5-part series of 1-1.5 hour workshops that empower students to learn about and reflect on various STEM careers. In doing so, you will be viewing and discussing stories shared by working professionals in the LGBTQ+ community. Thank you for your participation!

This Participant Packet will help guide your engagement with each of the five modules. It is our hope that this becomes a resource for you to turn back to after completing the series.

Name: _____ Date: _____

INTRODUCTION – Being LGBTQ+ in S.T.E.M.

“The world is filled with talent we do not know. There are many kids out there who could become great scientists, but they don’t even know that this is something they could do.”

John Pham, PhD
Editor-in-Chief, *Cell*
Speaker at ‘An evening with 500 Queer Scientists,
Elsevier & Cell’



Source: [On Being LGBTQ+ in science – yes it matters, and here’s why](#)

Take a moment to process this quote. If you have time, read the article linked below it.

What do you think Dr. Pham is talking about? Why might LGBTQ+ students not know that some career paths are available to them? Have you ever considered a career in S.T.E.M.? Jot your thoughts in the space below.

Name: _____ Date: _____

INTRODUCTION - Being LGBTQ+ in S.T.E.M.

Now take three post-it notes, or use the spaces below, to answer the following three questions:

1. Have you ever considered exploring a career in S.T.E.M.? Why or why not?
2. What challenges do you anticipate LGBTQ+ people face in pursuing their careers?
3. What questions do you have about careers in S.T.E.M., or career preparedness in general?



Name: _____ Date: _____

Episode #1: Billy - Engineering

Response to Images

What do I SEE?	What do I THINK?	What do I WONDER?

Response to Video - Meet Billy!

As you watch the video, consider the following questions:

- What helped Billy become interested in the career of software engineering? How could he help others be interested?
- In what ways are drag and building a website similar?
- How could someone use software engineering and coding to create change in the world?

Name: _____ Date: _____

Episode #2: Jenn - Epidemiology

Response to Images

What do I SEE?	What do I THINK?	What do I WONDER?

Response to Video - Meet Jenn!

As you watch the video, consider the following questions:

- What do surveillance epidemiologists look for in their job and why is that important to look for?
- What made Jenn struggle to figure out where she fit in?
- What made Jenn's goals feel like "a far stretch?" Why did these things impact how she saw her goal?

Name: _____ Date: _____

Episode #3: Jiwan - Neuropsychology

Response to Images

What do I SEE?	What do I THINK?	What do I WONDER?

Response to Video - Meet Jiwan!

As you watch the video, consider the following questions:

- Jiwan said a lot of people look at who is in the field of neuropsychology and think they can't make it. Why is this?
- Jiwan shares that he has a core value about visibility and he realized the importance of visibility work in science. What does Jiwan mean by visibility and how can it be important in science fields?
- How does baking benefit what Jiwan does in neuropsychology?

Name: _____ Date: _____

Episode #4: Reiss - Immunology

Response to Images

What do I SEE?	What do I THINK?	What do I WONDER?

Response to Video - Meet Reiss!

As you watch the video, consider the following questions:

- What does Reiss study as an immunologist?
- Reiss works on T cells. What do T cells do?
- What did Reiss realize he could accomplish by combining his obsession with science as a kid and medical research?
- How does learning the structure and creativity of shibari (Japanese rope bondage) benefit Reiss as an immunologist?

Name: _____ Date: _____

Episode #5: Sabah – Bioinformatics

Response to Images

What do I SEE?	What do I THINK?	What do I WONDER?

Response to Video – Meet Sabah!

As you watch the video, consider the following questions:

- How does bioinformatics help solve problems in our society?
- How is skateboarding and surfing beneficial to Sabah's bioinformatics work?
- Along the way, Sabah learned that their differences and different identities were important to the field of bioinformatics? Why are they important?

Name: _____ Date: _____

Career: _____

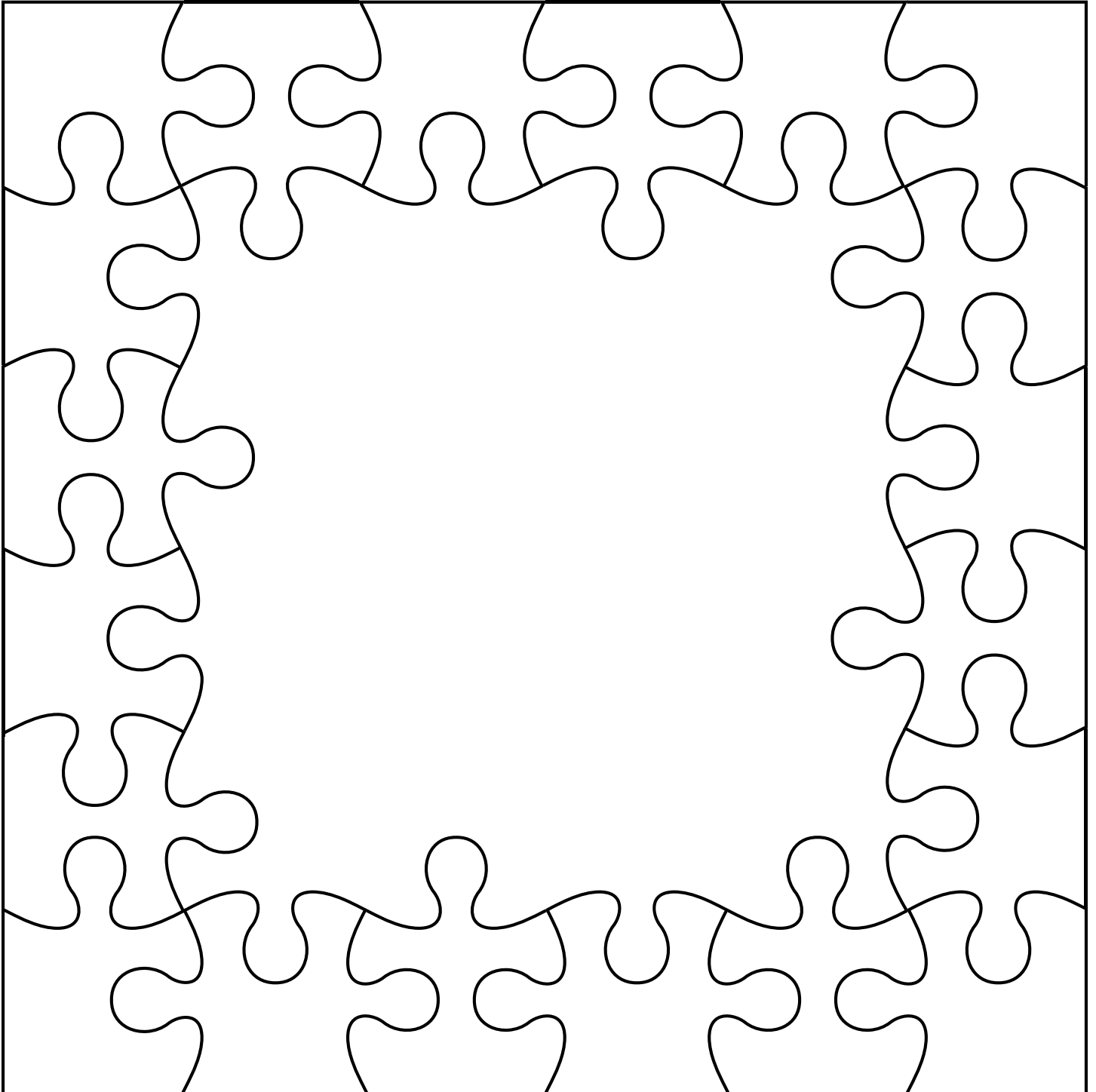
Self-Reflection: My Challenges. My Opportunities.

Internal Opportunities	Internal Challenges
Character Traits	Personal Areas of Growth
Knowledge	Knowledge to be Developed
Interests	Other

External Opportunities	External Challenges
Supportive People	Societal limitations such as discrimination
Other	Other

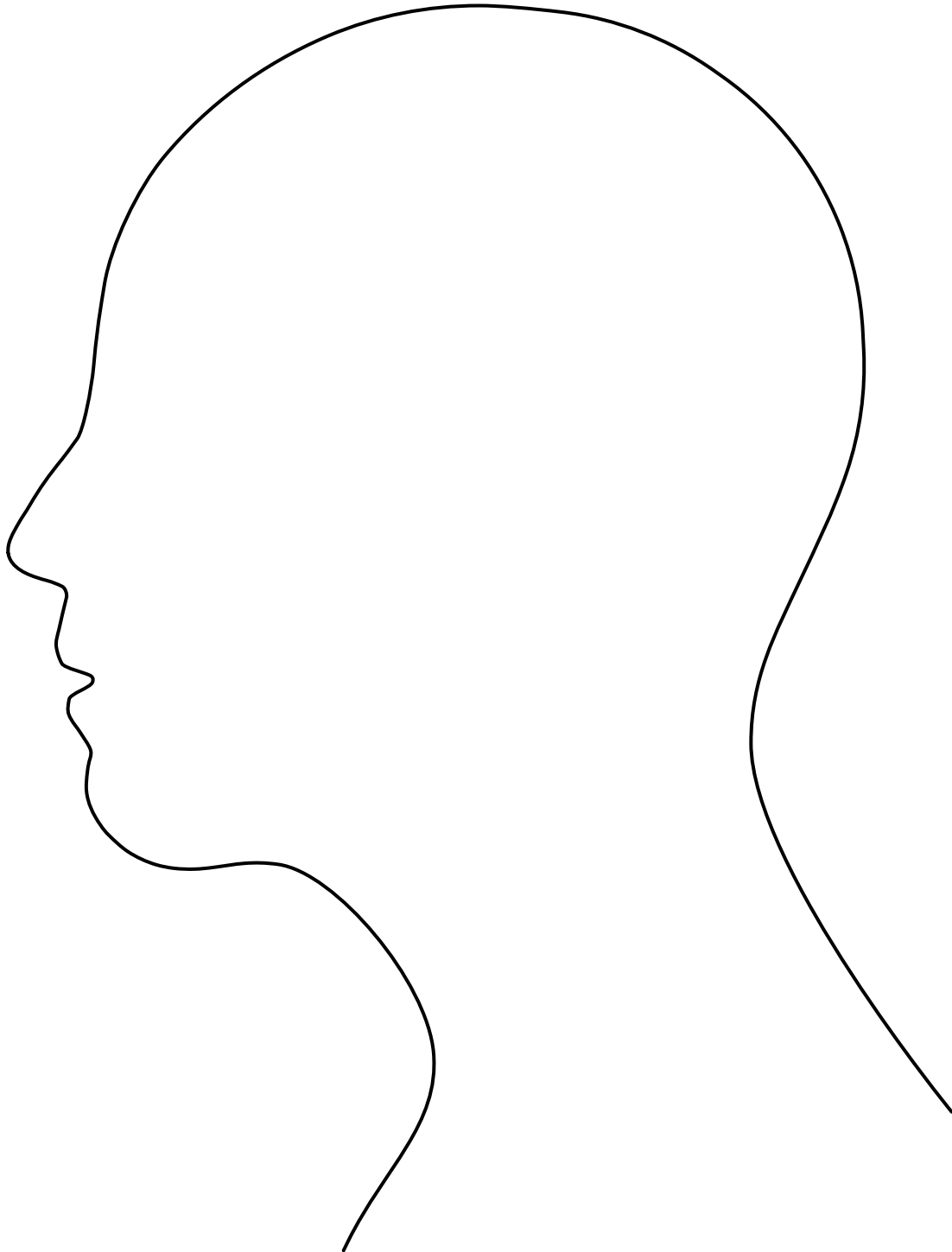
Name: _____ Date: _____

Current and Future Me



Name: _____ Date: _____

Portrait of a LGBTQ+ S.T.E.M. Professional - **DRAWING TEMPLATE**



Name: _____ Date: _____

Portrait of a LGBTQ+ S.T.E.M. Professional - POEM TEMPLATE

They are (a character trait) _____

They wonder (something to be curious about) _____

They hear (a real or imaginary sound) _____

They see (a real or imaginary sight) _____

They want (a desire) _____

They are (a talent, skill, or area of strength) _____

They pretend (something to imagine) _____

They feel (an emotion) _____

They touch (an object of interest) _____

They worry (something that is bothersome) _____

They are (a personal or cultural identity) _____

They understand (a positive truth) _____

They persevere (a challenge to overcome) _____

They say (a mantra or affirmation) _____

They dream (something to dream about) _____

They try (something where an effort is made) _____

They learn (something learned about) _____

They hope (something to hope for) _____

They are (a character trait) _____

They are (a personal or cultural identity) _____

Name: _____ Date: _____

Portrait of a LGBTQ+ S.T.E.M. Professional - **SONG TEMPLATE**

Song Title:

Intro (chords and / or hook)

Verse 1

CHORUS

Verse 2

CHORUS x 2

Bridge

CHORUS

Outro

Name: _____ Date: _____

Portrait of a LGBTQ+ S.T.E.M. Professional - **COLLAGE TEMPLATE**

The collage template consists of seven empty rectangular boxes arranged in three rows. The top row contains two large, side-by-side boxes. The middle row contains three boxes: a small box on the left, a medium-width box in the center, and a medium-width box on the right. The bottom row contains two large, side-by-side boxes, similar in size to the ones in the top row.

Name: _____ Date: _____

Portrait of a LGBTQ+ S.T.E.M. Professional – **STORY TEMPLATE**

Title

Setting

Characters

Beginning

Middle (Problem)

End (Solution)

Name: _____ Date: _____

FINAL THOUGHTS

In the shapes below, share some final takeaways. Thank you for participating in *Industry* from The It Gets Better Project!

**Something that squares
with your thinking**

**Something still going
around in your mind**

**3 important
points to
remember**

- 1)
- 2)
- 3)

Additional Resources (to Google)

Career Exploration Resources:

- [CareerExplorer](#)
- [O*NET](#)
- [My Next Move](#)
- [MyPlan.com](#)

Employability Skills Resources:

- [EMPLOYABILITY SKILLS](#)

LGBTQ+ in STEM Resources:

- [The STEM Village](#)
- [Pride in STEM](#)
- [About oSTEM | Out in Science, Technology, Engineering, and Mathematics](#)
- [39 LGBTQ+ STEM Innovators and Resources - Columbia Engineering Boot Camps](#)
- [oSTEM](#)
- [House of STEM](#)
- [LGBTQ+ STEM](#)
- [500 Queer Scientists](#)
- [STEM Equals](#)
- [Resources for LGBTQ Professionals in Tech](#)

Conclusion

Final Thoughts

About the It Gets Better Project

Connect with the Organization

Follow the Organization

We hope you enjoyed this EduGuide and the video series it accompanied. This resource is part of a growing portfolio of materials that help ensure that the uplifting stories crafted and collected by the It Gets Better Project reach LGBTQ+ youth wherever learning takes place. Learn more at www.itgetsbetter.org/education, and for inquiries, email us at education@itgetsbetter.org.

[It Gets Better Project](http://www.itgetsbetter.org) is a nonprofit organization based in Los Angeles, California. Its mission is to uplift, empower, and connect LGBTQ+ youth around the globe.

- Website: www.itgetsbetter.org
- Email: info@itgetsbetter.org
- Get Help: www.itgetsbetter.org/GetHelp

- [Facebook](#)
- [Instagram](#)
- [TikTok](#)
- [Tumblr](#)
- [Twitch](#)
- [Twitter](#)
- [YouTube](#)



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