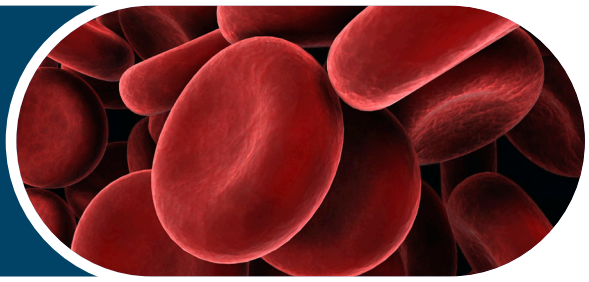
# BLOOD AND GUTS TEACHER TOOLKIT

Grades K–8



Dear teachers,

Thank you for welcoming Pacific Science Center's Science on Wheels Blood and Guts program into your school! Please enjoy these additional resources in your class or to send home with families to help students continue to build on the themes addressed during their Science on Wheels day.

## AFTER YOUR SCIENCE ON WHEELS VISIT

### DISCUSSION PROMPTS

*Lead a 5—10 minute group discussion after your Science on Wheels visit*

- What did you like best about the Science on Wheels Blood and Guts program?
- What was one thing you learned that surprised you?
- Most things you do need more than one of your body systems to work together. For example, playing soccer uses your nervous system, skeleton, muscles, and circulatory system just to name a few. What is an activity you enjoy doing? How many body parts or systems can you think of that you need to use to do this activity?
- Each of our body systems is important for keeping us healthy and letting us experience the world around us. Choose one body system you learned about with Science on Wheels. What's something you can do to keep that system healthy in your own body?

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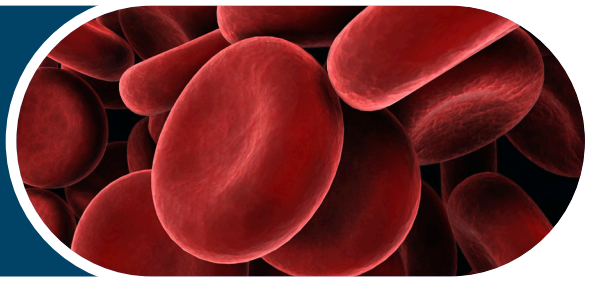

## ADD ON A DIGITAL DISCOVERY WORKSHOP*

We recommend adding the paired Digital Discovery Workshop System Sleuths to deepen the impact of your students' Science on Wheels experience. Focusing on systems thinking skills and the NGSS crosscutting concept of Systems and System Models, this specially designed virtual program helps learners reflect on key themes from the Science on Wheels day.

- Digital Discovery Workshops are included for low-income groups, and $250 for general groups. Receive a 10% discount when you book three or more Digital Discovery Workshops.
- 40-minute live, virtual programs for up to 50 students. Book as many Digital Discovery Workshops needed to reach every participating student.
- Use the **System Sleuths Scheduling Link** to select a date and time* for your classroom's digital workshop.

**System Sleuths Digital Discovery Workshop:**
Discover the systems all around us as we investigate what makes something a system and dive deeper into human body systems. Explore a real heart specimen and a blood model as we uncover the inner workings of our circulatory system parts and how they work together. Reinforce key concepts of human body systems while exploring content from your Science on Wheels visit with crosscutting concepts and science practices in mind.

**Note: while the scheduling page recommends booking the digital workshop prior to your Science on Wheels day, we are more than happy to accommodate groups attending after their Science on Wheel experience.*

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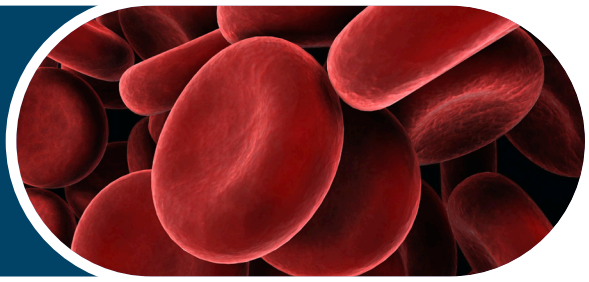
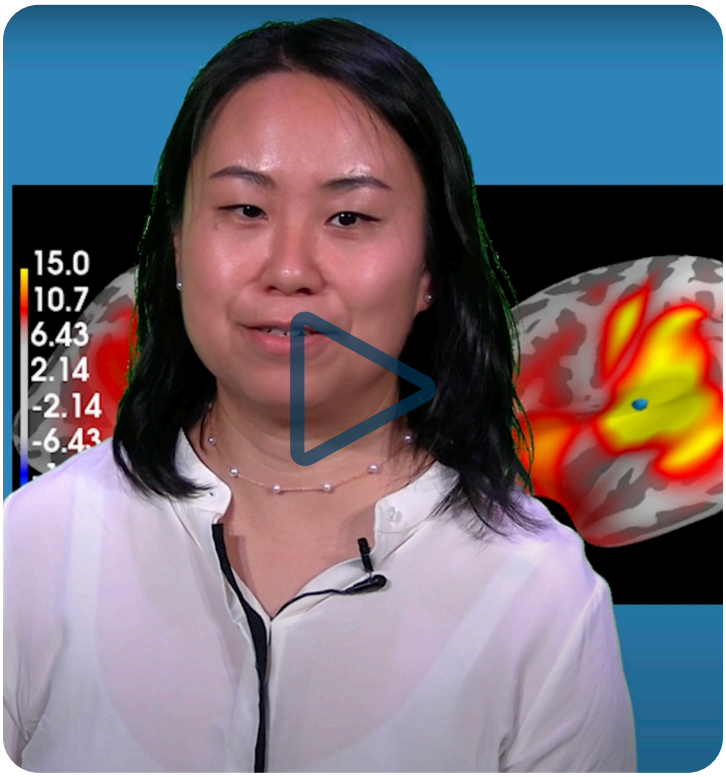


## ACTIVITY GUIDES AND VIDEOS

*These optional extension resources help students enhance their observation skills and connect to their Science on Wheels experience. These can be used within the learning space or shared with students to do at home with their families.*

### ACTIVITY GUIDES

- **Don't Bug Me** | **No Me Infectes**: Step into an epidemiologists' shoes and prevent the spread of the flu. In this experiment, you will model the spread of disease by creating your own fake flu outbreak using cups, vinegar, and water. Activity time: 45–60 minutes. Best for grades 3—8.
- **Make a Model Lung** | **Hacer un Modelo de Pulmón**: Learn about how the diaphragm works together with the lungs to allow us to breathe by building your own model lung. Activity time: 30–60 minutes.
- **Blind Spot and Hole in the Hand** | **Punto Ciego y Orificio en la Mano**: Can you trust everything your eyes see? Experience the sensory process of your eyes sending your brain information by making your own optical illusions. Activity time: 10–20 minutes.




### CAREER VIDEOS

- **Neuroscience: Sound in the Brain with Christina Zhao**: Meet Christina Zhao, an auditory neuroscientist studying how babies' brains react to speech and music. Discover the tools she uses to do her work and hear Christina answer student questions asking if babies are smarter than we think, how we could test animal brains, and what the best part of her job is. Video length: 8 minutes.
- **Stephanie Delma | Career Spotlights: Inspired by Oliver Sacks**: Stephanie Delma, a second-year medical student at the Geisinger Commonwealth School of Medicine, shares why she chose to study medicine and what excites her about her upcoming career. Video length: 4 minutes.

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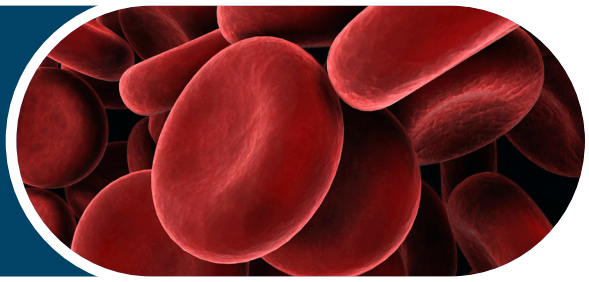
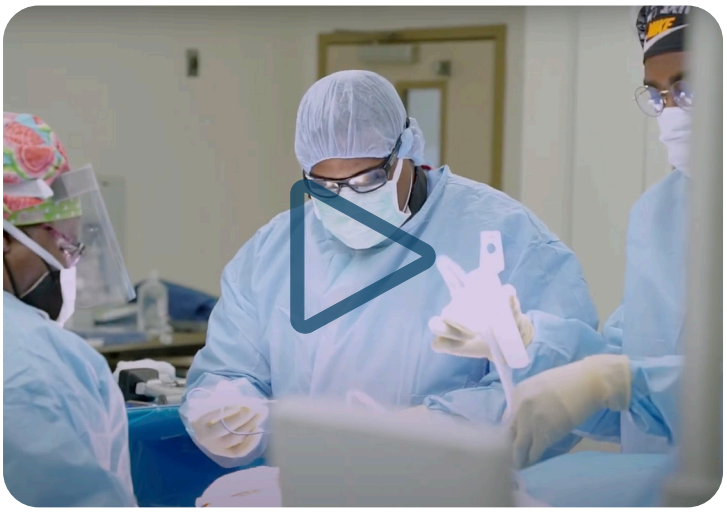


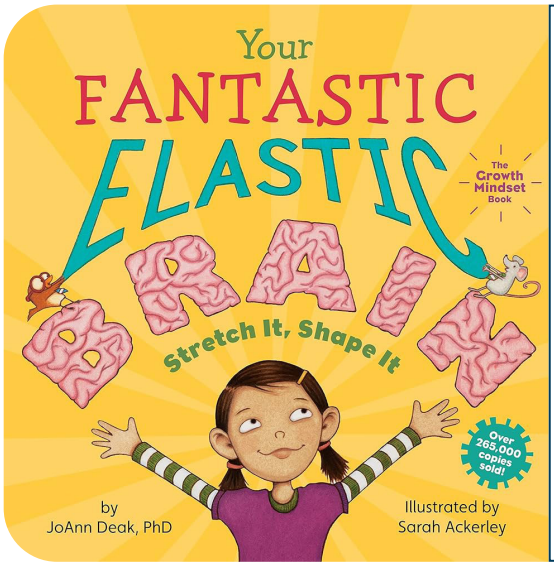
## CAREER VIDEOS CONTINUED



- **My Job: ER Doctor**: Being an ER doctor is a huge commitment, but how many people can say they save lives and really mean it? Yamini talks about the rewards–and pressures–of her job. Video length: 3 minutes.
- **Dr. Eddie Powell**: Dr. Eddie Powell was inspired by his father to follow him into medicine, but the younger Dr. Powell took a slightly different path. He became fascinated by trauma surgery, and after years working in busy trauma centers, he brought his vast experience and expertise to Phoebe Putney Memorial Hospital. Video length: 2 minutes.

## READING LIST

- Check out the **Science on Wheels: Blood and Guts reading list** for STEAM books related to the program themes.





*For more activities with simple materials, check out the* **Curiosity at Home** / **Curiosidad en Casa** *web page. Explore activity sheets by age group and topic in both English and Spanish.*

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