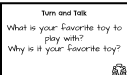
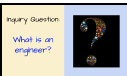


UTK Unit 4 We Are Engineers!

Lesson 1

 Phenomenon: Engineers create things to solve problems.	 Question to Investigate: What is an engineer?	 Lesson Objective: Students explore engineering realia and draw themselves as an engineer to develop an understanding of engineering.
 Success Criteria: I can draw myself as an engineer. 		

Launch	
	Today, we're launching our new project called: We Are Engineers!
	We have a very important question that we will be thinking about for the rest of this unit and throughout this project. This question is called our essential question. Our essential question is: How do engineers help the world? Hmm... What do engineers create? How do those creations help the world? Take a moment to think about that. Allow students independent think-time.
	To launch our project, let's think about some of our favorite toys we play with! In your partnerships, turn and talk: • What is your favorite toy to play with? • Why is it your favorite toy?
	When students return from partnerships, build on prior knowledge and invite students to share their favorite toys. Facilitator questions could include: • Interesting, can you tell us more? • How do you play that game? • Is it a game you play with others? • What is your favorite part about the toy? • Do you play with the toy indoors or outdoors? • Is the toy on a computer or video console or a physical toy?
	Today we are going to investigate the question: What is an engineer? We will explore more about engineering. Are you ready to discover: What is an engineer?
	We are going to read a story about a boy named Andrew. As we read, think about these two questions: What do you notice? What do you wonder? Read the story <u>Andrew Learns About Engineers</u> by Tiffany Obeng. Chart Students' responses. Add responses to: "What did you notice? What did you wonder?" chart. Thank you for sharing what you noticed and wondered.
	Let's all take one minute to move around the room in whatever way we would like to move. For a structured Brain Break, try Toy Story Brain Break: Andy's coming!

Explore



Note: Collect realia items for students to explore at the tables. Some possible realia ideas include: Screw driver, Block, Ruler, Pencil, Graph paper, Calculator, Eraser, Lego brick, toy car, etc.

Today, we are going to explore engineering by looking at real objects (or [Engineering Picture Walk](#)). You will explore the objects in the bin at your table. Ask yourself what is the object and what does it do?



As you explore the items in your bin with your friends, practice using our Habit of Mind of responding with wonderment and awe by being curious and having fun! Think about what the item is. What does it do for me and others?



It looks like you had a lot of fun exploring the materials (or looking at the pictures) to discover "What is an engineer?" For a deeper understanding of engineers, draw a picture of yourself as an engineer. Think about the story and all of the items we looked at before you draw your picture. What will you include in your drawing? Pass out paper or the template [I am an Engineer](#) to students. Students will draw a picture of themselves as an engineer.

Reflect



Let's look at our pictures together. What did you include in your picture? What kind of engineer are you going to be? What will you create: Give students time to share their reflective thinking about their pictures. ***I hope that you had fun learning and are ready to learn more! We will continue to explore engineering throughout our project.***



We are going to watch a video called: [How do you become a great inventor?](#) As we watch, think about our inquiry question, What is an engineer?