Learning Targets

- Learn about skills, abilities and knowledge needed for success in the Engineering sector
- Explore the roles and responsibilities, career paths, job growth and outcomes associated with the Engineering sector
- Practice developing strategies for increasing parent awareness around the Engineering sector

Driving Question: What skills, knowledge, and abilities are needed to excel in the automotive sector?

Before: Research and Explore	During	After

❖ Go To:
 • Learn How To -Engineering
 ❖ Research and Explore
 • Explore each section of the Degrees & Careers in Engineering page
 • Be sure to capture relevant information, unexpected learnings, and any questions you might have
	• Go To:
	   • Activity 1a: Intersections
	   • Activity 2: Civic Redevelopment Project
		• Complete
		   • CTE Career Development Exit Ticket

Activity 1a: Intersections

Whether we realize it or not, our daily lives are impacted by vital industries and their services. What starts as an idea in one's mind may one day turn into a product experienced by billions. Take Apple's iPhone for example. In fact, there are several stages between concept development (an idea) and the end-user product (what you receive). For example, Apple's engineers think about the type of material they will use; supply chain managers decide how they will transport and get their products to you; and marketing managers develop unique advertising to catch your attention.

In order to understand and appreciate an industry, and the careers available within it, we must first explore how these products and services impact our lives, our families, and our communities. During this activity, we will take a closer look at the "Engineering Degrees and Careers Paths" section. Review the careers and then answer the following questions.

Use the note-catcher on the next page to capture your responses.

NYC DEPARTMENT OF Education Chancellor Richard A. Carranza

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Note Catcher

Question:	Your Response
What are 3 ways that the Engineering sector impacts your life, family, or community?	*Ex: The Engineering sector designed the building that I live in. I need a safe place to stay.* 1. 2. 3.
Which of the career paths interested you? What are the educational requirements associated with that career path?	
Now look at the Job Outlook and Growth section. What is something new that you learned? What surprised you?	
Let's take a closer look at a career path in engineering. Review this profile for a Civil Engineer. What are the knowledge, skills, and abilities associated with a Civil Engineer.	Knowledge: Skills: Abilities:
Ask Around! Ask a family member to share 3 personality traits that makes you a strong candidate for an internship in the Engineering sector.	1. 2. 3.
What academic and CTE classes most link to careers in Engineering?	

Engineering Industry: Recorded Employer Experience: CTE Industry Scholars Learning Hour

What We Will Learn in this Recorded Activity:	Learn about the Engineering sector! This recorded employer interview will highlight trends in the engineering industry, the speaker's work experience, and their responses to your questions.
What to do Before and During this Recorded Activity	Before watching the session, reflect on your career aspirations and what steps you have taken to reach your goals. Also, please do the following: • Download the Note Catcher in Microsoft Word or Google Doc so you know the standard questions that will be asked during the interview. • Watch the recorded employer interview. The link will be made available. • Complete the Note Catcher and share with your teacher.
What to do After Watching this Recorded Activity	After watching the recorded employer interview, reflect on what you heard. Can you see yourself spending a day in their shoes? How have your academic coursework and extracurricular activities aligned with your career goals? Complete the following Reflection Activity and pass your knowledge along. Share your experience with family, friends and classmates. Please do the following: • Download the Reflection Activity in Microsoft Word or Google Doc, complete the activity, and share with your teacher.

Activity 2: Civic Redevelopment Project

Directions:

This activity is an exciting way to apply your newly-gained understanding of the Automotive/Transportation sector. During this activity, you will assume the role of the assigned career path. Read the prompt below, complete the questions below, and document your proposed solution in the Civic Redevelopment Plan.

Prompt:

New York City's Economic Development Enterprise is hosting a design competition to strengthen vital infrastructure in order to better withstand future challenges and crises. You are a Civil Engineer, and have been chosen to be part of the team that will design the infrastructure and solutions for your neighborhood (your zip code). Though your blueprint may address city-wide needs, it must address the needs of your zip code. Using your experience and knowledge of the Engineering industry, please propose a system or policy initiative to help the City prevent and/or better respond to future city-wide emergencies. Use the Civic Redevelopment Plan to document your proposed solution.

Consider the following questions while designing your proposed redevelopment project:

- How long will it take to implement this project design
- Does this project design build off existing systems or is this something new?
- What other professionals (if any) will I need to consult for project completion?

Use the note catcher below to guide your design project efforts.

Note Catcher Activity 2

Questions	Answers
Using Google Maps, how many engineering businesses are currently in your zip code?	
Let's highlight an engineering business in your zip code. What is the name of this business and what goods/services do they provide?	
Ask Around! Ask a family member to share: • What are some benefits of having engineering businesses in the neighborhood? • What are some ways the engineering industry can better support our neighborhood?	
Project Planning! What is my redevelopment project idea? Am I designing an immediate initiative, a system improvement or an entirely new system?	
Who do I need to support from? *List any professionals or businesses that you can partner with.*	
How will they contribute to this project design effort? *Be specific*	
What type of training would they need?	

Exit Ticket

Thank you for taking time to engage in the CTE Career Exploration session. We hope it was informative for you and your family.

Please take a few moments to complete the Exit Ticket.

For more information, visit www.cte.nyc.