

GRADE 9-12:

Engineering and Science Career Body of Knowledge

1.1 Explore careers in engineering and science.

PROCEDURE:

In discussion before viewing *Human Performance: Careers*, the teacher may consider engaging students in discussion on any of the following topics:

- Human Performance is a field that helps people interact more effectively with technology and systems.
- Human Performance Professionals come from a variety of backgrounds including psychology, computer programming, engineering and more.
- Human Performance professionals help make people's lives safer, more enjoyable, and more productive.
- Human Performance research, products, and training programs have applications across a number of disciplines including medicine, engineering, defense and others.
- Human Performance professionals rely heavily on STEM skills learned in high school.
- Research and experiments figure prominently into the field of Human Performance.

In discussion after viewing *Human Performance: Careers*, the teacher may have a follow-up discussion on the same topics discussed before viewing the video.

BEFORE VIEWING:

Have each student complete the "Before Viewing" column on the Agree-Disagree Chart.

WHILE VIEWING:

Students make notes about their impressions of how important STEM subjects are to the field of Human Performance and note the many different career paths and applications within the field.

AFTER VIEWING:

Have students complete the "After Viewing" column on the Agree-Disagree Chart. Discuss the changes in their answers.

DIRECTIONS:

Mark whether you agree or disagree with each statement in the left column before viewing the video. After viewing the video, identify whether you agree or disagree with each statement in the right column. Discuss each statement as a group.

<i>Before Viewing</i>	<i>Statement</i>	<i>After Viewing</i>
Agree Disagree	Human Performance is a field that helps humans to better interact with technology and systems.	Agree Disagree
Agree Disagree	Understanding the capabilities and limitations of Human Beings is important for Human Performance Professionals.	Agree Disagree
Agree Disagree	Understanding Human Biology, Physiology, and Cognition is important for Human Performance Professionals.	Agree Disagree

PROCEDURE:

Distribute the pre and post-viewing guide on the following page to provide focused viewing for students while watching the *STEM Career Lab* video, *Human Performance: Careers*.

Before viewing the video, instruct students to read and respond to the “What I Already Know” column of the *Human Performance: Careers Viewing Guide*. Let students know it’s okay if they do not know all of the answers. Play the *Human Performance: Careers* video and instruct students to now fill out the “What I Learned” column. After playing the video, use the guide to facilitate a post-viewing discussion with students.

1. Human Performance is a field in which professionals help humans better interact with technology and systems through research and development of training and products.
2. STEM subjects, specifically Algebra, Statistics and Science courses, as well as writing and communication.
3. Medicine, Psychology, Defense, Marketing, Workforce Training, and more.
4. Human Performance can improve lives through making products or certain tasks safer, through patient rehabilitation, and through facilitating communication.
5. Human Performance Professionals conduct research; develop training, and products in a number in a number of applications.
6. Human Factors, Cognitive Engineering, Applied Experimental Psychology.
7. The Arts, Psychology, Programming, Engineering, Physiology, Marketing.

	<i>What I Already Know</i>	<i>What I Learned</i>
1. What is Human Performance?		
2. What subject areas in High School will help you pursue a career in Human Performance?		
3. What are some of the many fields in which Human Performance professionals can work?		
4. How can the field of Human Performance help improve lives?		
5. What are some major areas of Human Performance?		
6. What are some other names that the field of Human Performance is known?		
7. What are some of the different career pathways to Human Performance?		