

GRADE 11:

Benchmark A: Data Analysis and Probability

Data Collection

8. Analyze and interpret univariate and bivariate data to identify patterns, note trends, draw conclusions, and make predictions.

PROCEDURE:

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

- Human Performance is a field that relies heavily on conducting experiments.
- Math, specifically statistics is a key subject area for Human Performance Professionals.
- Human Performance Professionals collect, analyze, and interpret data.

In discussion after viewing *Human Performance: Data*, 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 statistics is used in the field of Human Performance and note the different types of data that are collected and analyzed.

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 Professionals must conduct statistically valid experiments.	Agree Disagree
Agree Disagree	Human Performance Professionals must collect, analyze, and interpret data.	Agree Disagree
Agree Disagree	Human Performance Professionals look at different types of data when conducting experiments.	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: Data*.

Before viewing the video, instruct students to read and respond to the “What I Already Know” column of the *Human Performance: Data Viewing Guide*. Let students know it’s okay if they do not know all of the answers. Play the *Human Performance: Data* 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. Statistics.
2. Data is turned into something meaningful through analysis and interpretations.
3. Univariate and bivariate, or, multivariate data.
4. Univariate data is the observation and analysis of individualized variables.
5. Multivariate data is the observation and analysis of multiple variables.

	<i>What I Already Know</i>	<i>What I Learned</i>
1. What math application is key to conducting experiments?		
2. How is data turned into something meaningful?		
3. What are some different types of data?		
4. What is univariate data?		
5. What is multivariate data?		