



2018 Future Fayette

Workforce

Teacher in the Workplace Program

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## LESSON PLANS

# Lesson Plan Title: Trigonometry In The Workplace

### General Information

Author: Christine Grimm

Email: cgrimm@casdfalcons.org

Subject(s): Trigonometry

Topic: Trigonometry Functions in the Real World

Grade-Level(s): 11 and 12

Summary: Trigonometry students will research different professions that involve using the trigonometric functions in the workplace. This project is a culminating activity after teaching the unit. Students will access the imedia center for the one button studio and recording studio. Along with their presentation of their findings on the profession, they will also be required to submit a visual/audio.

Resources: IMedia Center, One button Studio, Recording Room

### Alignment to PA Standards for Career Education and Work

- 13.1 Career Awareness and Preparation
- 13.2 Career Acquisition (Getting a Job)
- 13.3 Career Retention and Advancement

### Desired Results

Established Goals:

*What relevant goals will this lesson address?*

The student will

- Research professions that involve trig functions.

- Create presentation that includes history, descriptions, examples of topic.
- Create visual or audio aid.
- Present to class.

Overarching Understandings:

*What are the big ideas?*

*What misunderstandings are predictable?*

- Students begin to tie the content area to the real world and the different occupations that it encompasses. As their teacher, I quite frequently am asked the question “Why are we learning this?” After researching the occupations, they begin to see the connection.
- Students discover there are professions that may be only a 12 or 18 month program (technicians) versus a 4 year degree.

Essential Question(s):

*What provocative question will foster inquiry, understanding, and transfer of learning?*

- What is the connection of the trigonometric function and your researched profession?
- What education is needed for your researched profession?
- Give a synopsis of your profession.

Knowledge:

*What key knowledge will students acquire as a result of this unit?*

- Connection between the content and real world
- Different professions
- History
- Education requirements
- Salaries
- Demand

Skills:

*What key skills will students acquire as a result of this unit?*

- Organization Skills
- Communication Skills
- Research Skills
- Media Skills

**Assessment Evidence**

Performance Task:

*Through what authentic performance task(s) will students demonstrate the desired understandings?*

By researching the various professions, students will gain knowledge of different career choices and the pathways they follow. Students will also gain knowledge on the skills needed whether it be a 4 year degree or 12 month program. Students will engage in a skit and/or recording to relate their findings to their classmates.

*By what criteria will performances be judged?*

Students will be judged based on a rubric that they were given prior to this lesson.

Other Evidence:

*Through what other evidence (e.g., quizzes, tests, academic prompts, observations, homework, journals, etc.) will students demonstrate achievement of the desired results?*

*How will students reflect upon and self-assess their learning?*

Students will complete a presentation to their classmates on their findings.

### **Lesson outline/activities (1-3 days)**

Launch: After completing Unit on Trig Functions:

Days 1: Students will be given their instruction on what's expected of them. They will pick an occupation to research and begin their research.

Explore:

Day 2 and 3: Students will continue their research in the imedia center. They will organize their information in a logical sequence (powerpoint or poster) to present to the class. They will also use the one button studio or recording studio to portray their occupation that they researched.

Summarize:

Day 4 and 5: Students will present to class.