Unit 06: Beginning Trigonometry

Content Area: **Mathematics**
Course(s): **PreCalc Trig H**
Time Period: **Semester 1**
Length: **2 weeks**
Status: **Published**

Standards - NJCCS/CCSS

CCSS.Math.Content.HSF-TF.A	Extend the domain of trigonometric functions using the unit circle
CCSS.Math.Content.HSF-TF.A.1	Understand radian measure of an angle as the length of the arc on the unit circle subtended by the angle.
CCSS.Math.Content.HSF-TF.A.2	Explain how the unit circle in the coordinate plane enables the extension of trigonometric functions to all real numbers, interpreted as radian measures of angles traversed counterclockwise around the unit circle.
CCSS.Math.Content.HSF-TF.A.3	Use special triangles to determine geometrically the values of sine, cosine, tangent for $\pi/3$, $\pi/4$ and $\pi/6$, and use the unit circle to express the values of sine, cosine, and tangent for $\pi - x$, $\pi + x$, and $2\pi - x$ in terms of their values for x, where x is any real number.
CCSS.Math.Content.HSF-TF.A.4	Use the unit circle to explain symmetry (odd and even) and periodicity of trigonometric functions.

Enduring Understandings

Angles can be measured in degrees or radians.

There are six trigonometric functions.

Essential Questions

How do you convert radians into degrees?

How do you convert degrees into radians?

How can co-terminal angles be used to evaluate trig functions?

What is a reference angle?

What is the unit circle used for?

How do you evaluate trig functions?

Knowledge and Skills

SWBAT understand radian measure and conversion techniques.

SWBAT define the six basic trig functions.

SWBAT find the trig functions of acute angles.

SWBAT find the functions of special angles.

Resources

Trigonometry

Authors: Lial, Hornsby, Schneider

Graphing Calculator

www.desmos.com

www.flipgrid.com

www.graphfree.com