

LESSON PLAN

Template for the submission of local exemplars
representative of instruction on a flexible instructional day

PDE review shall verify completeness of submission only, not quality or compliance.

LOCAL EDUCATION AGENCY (LEA) NAME

Clairton High School

English Language Arts Math Social Studies Science K-8 9-12

STANDARD(S) ADDRESSED *(include alpha numeric and standard descriptor)*

CCSS.MATH.CONTENT.HSG.SRT.C.8

Use trigonometric ratios and the Pythagorean Theorem to solve right triangles in applied problems.

CCSS.MATH.CONTENT.HSF.TF.B.7

Use inverse functions to solve trigonometric equations that arise in modeling contexts; evaluate the solutions using technology, and interpret them in terms of the context.

LESSON TITLE

Trigonometric Word Problem Mix

LESSON GOALS *(planned instructional outcomes)*

Students will be able to utilize trigonometric ratios to compare sides and calculate missing sides in right triangles in word problems. Students will correctly identify angles of elevation and angles of depression.

ACTIVITIES *(Step-by-step directions for active student participation in support of planned instructional outcome. If instruction is to be delivered via the Internet, please include alternative pathways for lesson completion for those without Internet access.)*

Students will first watch the video (found in resources below) and take notes on angles of elevation and depression.

Next, students will work through 3 example problems while following along with the notes.

Students are then given an assignment (found in resources below) that includes multiple trigonometric word problems. Some problems provide a triangular image, for others, students will have to draw and label their own triangle accurately.

Students will work through the mixture of problems and send me their work by the date given.

RESOURCES *(materials and/or tools required to complete the activities)*

[Online Scientific Calculator](#)

[Notes for students](#)

[Trig problems](#)

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OPPORTUNITIES FOR ACCOMMODATIONS AND MODIFICATIONS (*options for adaptations, alternatives, and/or assistive measures within the lesson for English Learners and students with IEPs*)

Students will be given extended time to complete the lesson if indicated on their IEP. Word problems can be modified based on level of difficulty- some students may only have to complete those problems where a visual is provided rather than have to draw their own. An alternative assignment can be found below for those gifted students who can complete more advanced problems where no visuals are provided.

[Advanced/Extension](#)

ASSESSMENT(S) (*evidence of learning*)

Evidence of learning will be determined based on individual students' work- Students work will be reviewed and graded. (Students should get a 70% or better) Feedback will be provided for students who show some common misconceptions and/or calculator misconceptions.
