

# Deer Valley Unified School District



Deer Valley  
Unified School District

Boulder Creek High School  
CTE & Academic Integration



Team Leader: Michelle Coots  
[michelle.coots@dvusd.org](mailto:michelle.coots@dvusd.org)

**CTE Course:** *Prin. of Engr.*

**Academic Course(s):** *Geometry 1-2*

**Unit Name:** *3d drawing software*

---

**Lesson Name:** *3D drawing is geometry*

**Lesson Synopsis:** *3D drawing/geometry*

**Time Frame:**

*CTE Course – 2 days*

*Academic Course(s) – 2 days*

---

**Objectives:**

*CTE Course –*

*Evaluate geometry problems*

*The students will identify and calculate the area of geometric figures that are used in CAD software*

*Academic Course(s) –*

*Evaluate geometry problems*

**Standards:**

*CTE Course –*

*Std. 4 - APPLY MATHEMATICAL LAWS AND PRINCIPLES RELEVANT TO ENGINEERING AND TECHNOLOGY,*

*concept 4.3 - Use algebraic, geometric, and trigonometric relationships, characteristics, and properties to solve engineering problems,*

*concept 4.5 - Apply mathematical concepts to modeling*

*Academic Course(s) –*

*Strand. 4, concept 4 , PO3*

**Bloom's Taxonomy**

- Knowledge
- Comprehension

- Application
- Analysis

- Synthesis
- Evaluation

**Resources & Materials:**

*CTE Course –*

*Engr. workbook activity*

*(Cengage Learning - Unit 2: Print Reading and Parametric Modeling; Section 3: Geometric Shapes & Section 4: Geometric Solids)*

*CAD Software / Google SketchUp*

*Academic Course(s) –*

*same*

**Prerequisite Learning:**

*CTE Course –*

*N/A*

*Academic Course(s) –*

*Alg. 1-2*

**Learning Structures/Strategies**

**CTE Course**

**Set for Interest**

How does 3D software work?

**Input/Modeling**

Students use 3D drawing program

**Check for Understanding**

Teacher checks use of student 3D drawing capability

**Guided Practice**

**Teacher shows and checks geometry problems**

**Independent Practice**

Students evaluate area, circumference, and volume of assigned geometry problems.

**Closure**

Teacher summarizes lesson

**Assessment**

grade the geometry problems

**Learning Structures/Strategies**

**Academic Course(s)**

**Set for Interest**

How does 3D software work?

**Input/Modeling**

Students use 3D drawing program

**Check for Understanding**

Teacher checks use of student 3D drawing capability

**Guided Practice**

**Teacher shows and checks geometry problems**

**Independent Practice**

Students evaluate area, circumference, and volume of assigned geometry problems.

**Closure**

Teacher summarizes lesson

**Assessment**

grade the geometry problems