

**SUBMITTED BY: FRANK HOLTHOUSE**

**STRATEGY NAME: VIRTUAL TEAM DESIGN**

**PURPOSE/OBJECTIVES:**

- Solve an authentic design problem in a team separated by time or space
- Effective use of communication / soft skills
- Effective use of the design cycle
- Effective use of design software

**MATERIALS NEEDED:**

- Google Apps
- Autodesk Inventor (3D Design Software)
- First Day Interview Questions
- Decision Matrix

**PROCESS:**

**INTRO:**

How do engineers work on global projects together?

**LESSON / PROJECT:**

Assign students a partner from a different class. This will put the emphasis on written forms of communication. Have students communicate and interview each other via Google Docs. Students will use this mode of communication to delegate project tasks and record daily activities.

Have students write a real-world design challenge. Example: Create a bike rack that is free standing and will allow for up to 20 full sized mountain bikes to be stored for the new athletic area.

Gain instructor approval. Projects must be able to be realistically solved in a 3 week timeline

Create team norms for how the team will function.

Research 8-10 examples of existing products with sources.

Have each partner Sketch and annotate a possible solution.

Gain feedback from partner.

Use decision matrix to rank design solutions.

Using data from the decision matrix choose a final design.

Using 3D solid modeling software create a full set of working drawings (Exploded assembly, Annotated individual parts)

Present the final design to the class.

**EVALUATION:**

Students will be evaluated on the following:

- Daily notebook entries
- Working Drawings
- Final Presentation
- Decision Matrix

**ADDITIONAL NOTES OR COMMENTS:**