



PLTW Virtual Learning

7th and 8th Grade Design and Modeling

April 16, 2020



Lesson: Zoo Animal Enclosure Design Challenge Day 4

Objective/Learning Target:

Students will use their brainstorm sketch of an animal enclosure to create an isometric drawing using an online program.

Warm-Ups:

Get out your Zoo and Animal Notes and your isometric drawing of your animal enclosure design.

Show your notes and design to someone in your house. Have them check your work. If they have any suggestions feel free to add them to your design today.

Lesson Introduction/Background Information:

Now that you have your final design, it is time to put it in a form that could be presented to your client.

What do you think are some of the benefits of using a computer modeling software to design and present a solution to a problem?

Lesson Introduction/Background Information:

Were any of these on your list?

- Higher quality finished product
- Lower unit cost
- Identification and elimination of inefficiencies
- Increased workload capacity
- Better control of production
- Improved communication and collaboration
- Increased manufacturing accuracy
- More design flexibility
- Better design integrity

[Source](#)

Practice:

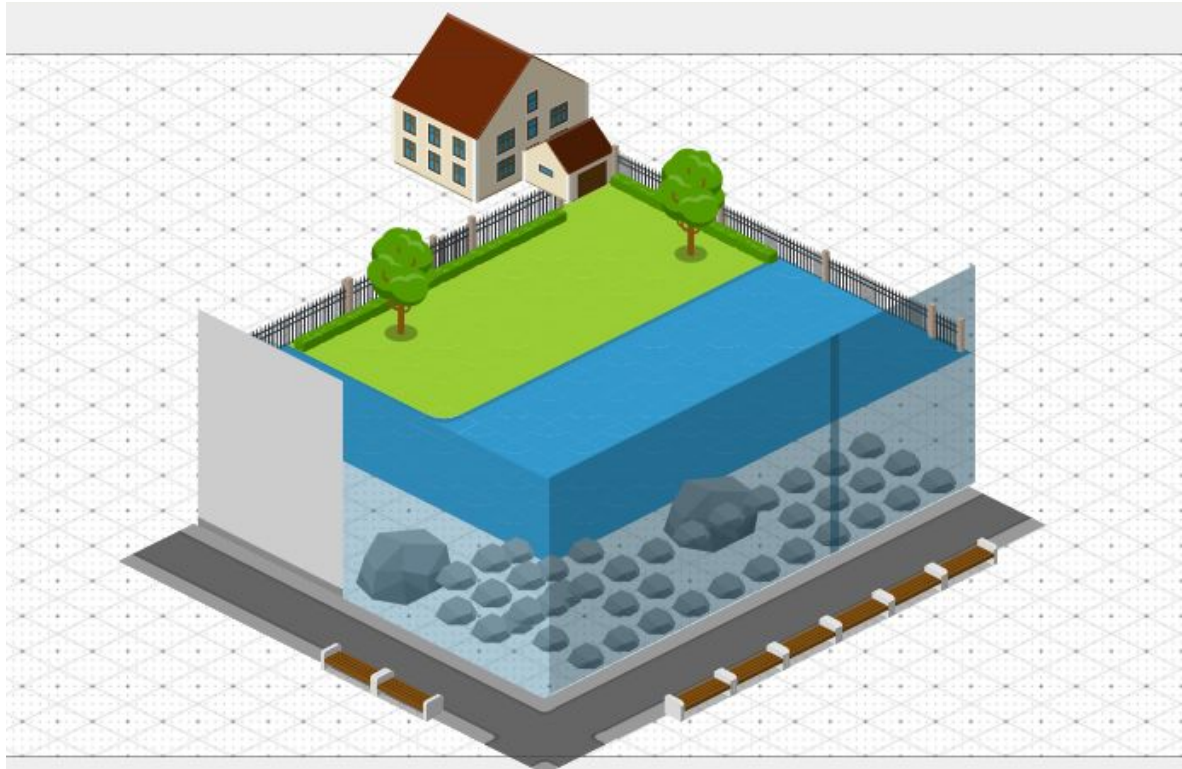
Use the website to draw the final design of your animal enclosure. If necessary go back to the April 9&10 lessons to review how to use this website.

Isometric Drawing

Tomorrow we will be creating a presentation to share your idea so you may want to save a picture of your design. You can take a screenshot or use the snipping tool on your computer.

Example:

Here is my teacher example for the hippopotamus enclosure:



Self-Assessment:

Final Check:

- Does it meet all the needs of the animal (space, exercise, temperature, etc.)?
- Is there a clear area for visitors to view your animal?
Maybe from multiple sides?
- Why should the Kansas City Zoo build this animal enclosure? What are the benefits?

Extend Your Learning/Continued Practice:

Being able to use computer aided software allows you to give clients and visitors a feeling of being in the habitat before it is built. Watch this cool tour of an upcoming tiger habitat at Twycross Zoo.

[Tiger tour](#)