Scenic Design Scale Drawing

For grades 6-12

EDUCATION STANDARDS

1. CCSS.Math.Content.6.RPA - Common Core State Standards
2. TH:Cr3.1.6.c - National Core Arts Standards

MATERIALS NEEDED

1. Masking tape
2. Yard stick(s)
3. Rulers
4. Plain paper)

ACTIVITY

Step 1:
Students take tape measures or yard sticks and measure the actual ground plan of the set. As they do so, they should sketch it out and label their sketch with the actual measurements.

Step 2:
Students then sit down with their measurements and calculate the measurements for a 1/2" scale drawing and a 1/4" scale drawing. This will take a little bit of talking through. "If one half inch is equal to one foot in real life, how much would one inch be?" "What is the actual length of the stage right wall? If it is twelve feet, how many inches would that be in 1/4" scale." It may take a little bit of practice for the concept to click, but once they realize they are just multiplying by the fraction or dividing by the bottom number, they catch on pretty quickly. Once the students have done the calculations of the ratios, the then determine which scale would be the most appropriate to use on a regular sheet of paper.

Step 3:
Using a ruler, students carefully draw a top view ground plan of the set in 1/4" scale.

Step 4:
Show students a picture of the completed set. Since we had not built it at the time of the assignment, I just used a computer generated version of it. Have them sketch the design and give them the vertical measurements.

Step 5:
Again with a ruler, have them create a 1/4" scale drawing for the front view of the set. This is tricky and tripped up most of my high school students because of the perspective. The side walls are at an angle and when you look straight on, you have to adjust for perspective.

Step 6:
Color the front view.

Step 7:
Have students write a reflection on the assignment.

Assessment

Category	Accomplished	Meets Standard	Progress Toward Standard	Does Not Meet Standard
Accurate Measurement	All measurements done correctly	Most measurements done correctly	Some measurements done correctly	Measurements incorrect
Accurate Calculation	Ratio calculation is done correctly and student can articulate the ratio.	Most calculations are done correctly. Student may or may not be able to articulate the ratio.	Some of the calculations are done correctly. Student cannot articulate the ratio.	Calculations are incorrect. Student cannot articulate the ratio.
Scale Drawing Complete and Accurate	Both scale drawings are complete and accurate.	Scale drawings are mostly correct but may have some errors in accuracy.	Scale drawings are completed, but may be inaccurate.	Scale drawings are not complete.

Enrichment

**Give students a one act play. Analyze the set needs (entrances, exits, defined spaces, furniture, etc.) and design their own set that meets those needs.*
**Present their completed design to the class.*

Student Reflection

Name_____ Date_____
Assignment_____ Period_____

1. Describe what a ratio is? What was the ratio you used in your project?

2. What aspect of the project was the most challenging? How did you meet the challenge?

3. What factors do you think a scenic designer needs to consider when designing a set for a show?

4. Write two things you learned how to do in this project.