UH Lesson Plan Template Adapted for Intro to Theatre Ed (Direct Instruction)

Name of Teacher Candidate	Samuel Gonzalez

Lesson Overview	
Grade Level	10th Grade
Estimated Time Needed	50 minutes
Lesson Description	This lesson is designed to introduce the concept and practice of creating scale models, an important skill that is used in the process of scenic design in the theatre.
Content Area Standards	§117.324.c.1.A demonstrate proper use of standard vocabulary in costumes, lights, makeup, theatre management, properties, scenery, and sound §117.324.c.2.B apply the design process, including analysis, research, incubation/selection, implementation, and evaluation, to a theatrical product such as a rendering, model, and sketch §117.324.c.2.F demonstrate understanding of communication methods between directors and designers such as prompt book, costume plot, light plot, makeup, theatre management, property list, design renderings, and models §117.324.c.2.G practice proper measurement and scale as applied to design or construction §117.324.c.5.C recognize the design and technical elements of theatre as an art form and evaluate self as a creative being
Objectives	The student will construct models of an object using unit cubes and modify the scale of each model.

Resources/Materials/Tools	
Technology Resources	
Other Resources	Unit cubes, paper, pencils

Lesson Procedures	
Warm-Up (motivational hook)	As the students enter the classroom, distribute about 30 unit cubes to each students. Tell the students that they have 3 minutes to create any 3-Dimensional shape of their choosing using the 24 cubes. Note that it is important for the students to know how many cubes are being used to create their shape. Once the 3 minutes have elapsed, invite some of the students to share their creations, and the amount of cubes that were used to create their shape. After a few students have shared their 3-Dimensional shapes, instruct the students to get into pairs and choose one of the two shapes in front of them to recreate, but this time, the students will double the number of blocks that was used to create the shape. For example, if someone created a rectangle that was 3 cubes x 4 cubes x 1 cube, they would now be creating a rectangle that was 6 cubes x 8 cubes x 2 cubes. After the students have created their second objects, have some pairs share their new object with the class. Ask the students to share if they experienced any difficulties or challenges when making their second object. (10 min)
Direct Instruction	Now that the students have practice making objects using the unit cubes, tell the students that the activity they just did used the basic principles of creating a scale

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(How are you teaching the content)	model. Explain that scale models are used in the theatre to create a 3-Dimensional model of a scenic design, but to a smaller scale that will show the look of the set design but at a much smaller scale. Ask all the students to return their unit cubes to the table at the front of the room. Using the unit cubes, create a model of a table that has legs that are 2 units x 2 units x 4 units, and the top of the table is a rectangle measuring 8 units x 4 units x 2 units. Now that you have created a model of the table, explain to the students that the scale for this table is 1 ft = 2 cubes, so if the table was actualized, it would be 2 feet tall, 2 feet wide, and 4 feet long. Now, explain to the students that the scale will be reduced by half, so 1 ft now equals 1 cube. This is known as a 1:1 ratio. Once you have created the new model of the table, explain to the students that even though the table is smaller is size, it is still an accurate model, since the dimensions are still proportional to one another. Finally, explain to the students that the original scale (1 ft = 2 cubes) will be doubled, meaning 1 ft= 4 cubes. It is important to note that instead of using 16 cubes to make the legs of the table, you will now need 32 cubes to make each leg of the table. The same goes for the top of the table. Initially, 64 cubes were needed to make the top of the table, but now, 128 cubes are going to be needed to make the top of the table. Once you have completed the final table, explain to the students that just like the smaller table, the larger table you just created is still proportional to the original table. What matters most is that you adhere to the given scale as you make the models. (10 min)
Guided Practice (What are the students doing with your help)	Now, the teacher will guide the students through the creation of objects using the unit cubes, while also using specific dimensions as if they were creating a model for an object on stage. Distribute 24 cubes to each student. Since there will most likely be a limited amount of unit cubes, the object is going to be a pillar that would be on stage. For the first example, explain to the students that 1 ft = 1 cube. The pillar they are going to make is going to be 1 ft wide, 1 ft long, and 6 ft tall. Once all the students have made the pillar, tell the students that the scale will now be changing to 1 ft = 2 cubes. To make the new pillars, the students will join their original pair so they will have enough cubes. Once all the students have made the new pillar, explain to them that the scale has been doubled, so the pillars that the students have made are twice the size of the first pillar. Repeat the process using the same two scales, but now create a box that is 2 ft x 3 ft x 1 ft. (15 min)
Independent Practice (reteaching and enrichment)	In pairs, the students will pick out a shape with specific dimensions. Their responsibility is to create that shape in 2 different scales: 1 ft = 1 cube and 1 ft = 2 cubes. As the students create the various shapes, walk around and provide assistance as needed. Be sure to provide dimensions for objects that will not require an excessive amount of unit cubes, as there most likely will be a limited supply of them. Some objects may require only four cubes for the first model, and some objects may require 48 for the second model. (10 min)
Closure	Once all the groups have completed at least two different models, discuss with the students their observations as they made various scale models of 3-Dimensional objects. Remind the students that just because a model may be extremely smaller than the actualized design does not make it incorrect, as long as the dimensions are accurate and proportional to the scale. (5 min)

Plans for Differentiated Instruction/Accommodations

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Special Education Students	- Since some of this lesson is done either in groups or through guided practice, the students will be able to partner together and complete the required tasks together. Students can verbally discuss with each other the conversions and dimensions of each model as they transition through scales. - Have some scale models made from unit cubes printed out on paper, making sure to include the actual dimensions of the object. Allow students to identify the scale the object is created in by writing it on the page and turning that in.
English Language Learners	- Write down the dimensions and the number of cubes that should be used for each scale as you go through the direct instruction and guided practice
Gifted and Talented	- Students can use the unit cubes to create a model of a shape in a reduced scale, for example 1 cube = 2 feet. However, they may only be able to create shapes with dimensions that are multiples of 2 as the students will be unable to split the cubes in half.
Potential Challenges/Plan B	
- Depending on the number of students in class, you may not have access to enough unit cubes for each activity. Some dimensions/measurements can be adjusted accordingly, or the students can do most of their work in groups and each student can turn in their own note sheet that has the dimensions and amount of cubes used for each object.	

Assessment
The students will practice creating objects in different scales on their own. The students will be allowed to create any object of their choosing, using the scale 1 ft = 1 cube. The students must record the dimensions of their object in both feet and in the number of cubes used to create the object. The student must then recreate that object in the scale 1 ft = 2 cubes. The students must also record the dimensions of the object on the same sheet of paper, including both the measurement in feet and in the number of cubes that was used to create the object. Finally, the student must record the dimensions for their object as if it were created in the scale 1 ft = 4 cubes. The students will not be required to create the actualized model as it would require too many unit cubes. The student will finally present the first model of the object they created. During their presentation, they will create the second model in the different scale. After creating the second model, the student will share the dimensions from their dimension sheet for both of the models they created, and for the third model if it were to be made in the final scale.

Scale Model Assessment Rubric

	Unsatisfactory	Adequate	Intermediary	Advanced	Exemplary
Presentation Preparedness (60 points)	The student is not prepared with their dimension sheet or initial scale model. (0 points)	The student presents the dimensions on their sheet **only for the initial scale model**. (15 points)	The student presents the dimensions **and scale model** for only the initial scale model. (30 points)	The student presents the dimensions and scale models for only the first two models, but **not the dimensions for the third model** if it were to be created. (45 points)	The student presents the **first two scale models** in addition to presenting the **dimensions for those two models**, and the **dimensions for the third model** if it were to be created. (60 points)
Accuracy of Scale Models (20 points)	The models of the objects are entirely inaccurate, referenced to the respective scale. (0 points)	The models of the objects are **mostly inaccurate**, referenced to the respective scale. (5 points)	The models of the objects **contain several inaccuracies,** referenced to the respective scale. (10 points)	The models of the objects **contain few inaccuracies,** referenced to the respective scale. (15 points)	The models of the object **contain no inaccuracies,** referenced to the respective scale. (20 points)
Dimension Sheet Accuracy (20 points)	The dimension sheet is entirely inaccurate, referenced to each model's respective scale. (0 points)	The dimension sheet is **mostly inaccurate**, referenced to each model's respective scale. (5 points)	The dimension sheet **contains several inaccuracies**, referenced to each model's respective scale. (10 points)	The dimension sheet **contains few inaccuracies**, referenced to each model's respective scale. (15 points)	The dimension sheet **contains no inaccuracies**, referenced to each model's respective scale. (20 points)

TOTAL SCORE: _____/100