Lesson Plan Title: Build a mini-flat

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Description: Students will learn parts of a flat, and build and design their own mini-flat around a theme.

Learning Outcomes:
Students will be able to...

- identify the parts of a flat.
- decide on a theme.
- build their own mini-flat.
- implement their design.

Grade Level: High School Proficient or High School Accomplished

2014 National Core Theatre Standards:

High School Proficient
TH:Cr1.1.I.a. Apply basic research to construct ideas about the visual composition of a drama/theatre work.
TH:Pr5.1.I.b. Use researched technical elements to increase the impact of design for a drama/theatre production.
TH:Re8.1.I.c. Justify personal aesthetics, preferences, and beliefs through participation in and observation of a drama/theatre work.
TH:Re9.1.I.b. Consider the aesthetics of the production elements in a drama/theatre work.

High School Accomplished
TH:Pr5.1.II.b. Apply technical elements and research to create a design that communicates the concept of a drama/theatre production.
TH:Pr5.1.II.b. Apply technical elements and research to create a design that communicates the concept of a drama/theatre production.
Time to Teach: 2 block classes of 90 minutes or 4 regular classes of ~45 minutes each

Materials Required for Instruction:

- Computer
- Projector
- writing tools (paper/pencil OR computer OR equivalent)
- access to scene shop or equipment OR use alternative supplies
- scissors (make sure to include several pairs for both left and right!)
- glue
- magazines
- fabric
- various types of materials
- balsa wood, lauan, or equivalent
- work space to create

Opening:

1) Ask: What is a flat? (ex: be horizontal, something smooth, without bumps, scenic items, etc.)
2) Watch an introduction to the scenic element of building a flat:  
   https://www.youtube.com/watch?v=ZZ-Pj6R6udc
3) Explain why theatre has moved to using more Hollywood style flats compared to Broadway style in terms of durability, reuse, and flexibility of applications as a more universal scenic element.
4) Say: We are going to build and design our own Hollywood style mini-flats.

Instructional Procedures:

1) Draw and explain the parts of a flat: rails, stiles, toggles, keystones and straps, cornerblocks, and screw patterns. Have students draw their notes.  
   a) Optional: Use Jonathan Pitzer’s Broadway flat video introducing 7 parts of a flat:  
      https://www.youtube.com/watch?v=JvOLBYA8JEE
2) Ask: Does any have any questions? (Allow time for students to ask clarifying questions.)
3) Say: Now we’re going to build our own mini-flats.
4) Explain how to build a flat, including materials, measuring, marking, cutting, and construction.  
   a) Recommendation: Use Practical Technical Theatre which explains the materials, measurements, assembly, and instructions for building a flat. You can get digital access via Theatre Folk and here: https://practicaltechnicaltheatre.com/. Translate the directions to building a 4” x 8” version. All measurements will be the same, only inches instead of feet. It makes for smaller flats with less materials, but the same measurements and instructions. The other option is to scale down to a quarter size so students are building 1’0” x 2’0” flats as samples.
b) **Optional:** MannyMac video from shopping for lumber to measuring and marking to construction: [https://www.youtube.com/watch?v=mcdYt1pLgc](https://www.youtube.com/watch?v=mcdYt1pLgc) *(Please note: He refers to using nails to nail the frame together, and includes building a stage jack to which he refers as a support triangle, as well as designing, or decorate depending on the purpose. Screws would be another option. This lesson does not require building a jack.)*

c) **Optional:** Gratuitous Sets How to build a flat: [https://www.youtube.com/watch?v=9-gpAtHHBMI](https://www.youtube.com/watch?v=9-gpAtHHBMI)

5) Have students work individually or in pairs. If students work in pairs, they can build two flats by helping each other through the process, but then each design their own flat.

6) Throughout the construction part of the lesson, sidecoach each step as needed.

7) Gather building materials. Use scrap materials as much as possible to reduce waste.
   a) Balsa wood (4 @ 8") for rails, stiles, toggles
   b) Balsa wood (scrap wood) for keystones, cornerblocks
   c) Lauan (1 @ 4" x 8") for facing
   d) **Please note:** It can be rather difficult to cut keystones and cornerblocks in this small scale safely. It may make more sense to cut them out of cardboard, glue them to the mini-flat, and label them with pencil to demonstrate understanding theoretically than practically.

8) Measure and mark wood.
   a) 2 @ 8"
   b) 2 @ 4"
   c) 1 or 2 toggles to be cut to fit (given the small scale, this measurement needs to be adjusted to the actual frame built)

9) Cut wood to size.
   a) leave 2 @ 8"
   b) cut 1 @ 8” into 2 @ 4”
   c) cut remaining 8” into 2 toggles that fit inside the stiles
   d) cut lauan to 4” x 8”

10) Assemble parts with nail, screw, and/or glue. Assist students as they work, including demonstrating how to assemble each part in relation to the other parts.
   a) Stiles to rails
   b) toggles to stiles
   c) keystones
   d) cornerblocks
   e) screw pattern
   f) labeling

11) Say: On the back of the flat, LABEL with your student name, class, and period number as they will all look the same! LABEL each part of the flat: top rail, bottom rail, both stiles, toggle (or both if 2 toggles), keystone, cornerblock. Use a pencil to indicate the screw pattern on the keystones and cornerblocks.

12) Once students are done building their mini-flats, it’s time to design and apply the design.

13) Say: These flats are examples of walls used in a wide variety of settings for a play. You are going to design your own flat around a theme.
14) Brainstorm different themes students may want to explore. (ex: interests, dreams, favorites, etc.)
a) Optional: If you are in a current production, you can use that production as the impetus for the design. This lesson is meant to personalize the project for students.

15) Give students time to look at the materials provided and decide on their design.

16) Allow time to create. Sidecoaching with open-ended questions so students can explore their ideas and make their own design decisions.

17) Share their final mini-flats. Have them describe their theme and design choices.

18) Put several together to show how they could be used to make an interior design.

Closing:

Give students a moment to answer the reflection questions. Aloud, ask the reflection questions.

● What are the parts of a flat?
● What are some tools you used to build the flat?
● How did you develop a theme for your flat?
● In what ways did you apply your design?
● What was a challenge you faced?
● How did you overcome the challenge?

Assessment:

END OF UNIT SELF REFLECTION (Stagecraft)

RUBRIC
Reflection

Name: _________________________________ Date: ______ Per.:____

PROJECT: Building a mini-flat to scale and designing the exterior wall around a theme

1) Name one skill you used that helped you develop as a learner with this project. Think about the tools you used to complete the work.

2) What did you find most challenging about this project? How did you solve or work around this challenge? What helped you persist through this challenge without giving up?

3) When were you able to do something you didn’t think you could do before? What steps did you take to get there? What steps would you recommend others to do the same skill or full scale version?

4) What job/career uses this skill? Are you interested in pursuing one of these careers? How can you apply these skills to every day? Connect to designing a full scale set.

SCORE YOURSELF ON THE BACK OF THIS PAPER.
**Rubric**

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td><strong>Mastery (Accomplished/Advanced Levels)</strong>&lt;br&gt;I can&lt;br&gt;● measure, mark, cut, and assemble a scale mini-flat then implement a complete design on the wall itself with crown moulding, picture rail, chair rail, base board, wainscoting, and/or other details, such as windows, pictures, fireplace, etc.&lt;br&gt;● articulate the concept through choices of texture, color, shape, and unification of the design concept</td>
</tr>
<tr>
<td>3.5</td>
<td><strong>Partial mastery</strong> in demonstrating understanding, application, and performance at a higher level.</td>
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<tr>
<td>3</td>
<td><strong>Proficient</strong>&lt;br&gt;I can&lt;br&gt;● assemble a mini-flat&lt;br&gt;● attach a design to the wall around a theme.</td>
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<tr>
<td>2.5</td>
<td><strong>Partial proficiency</strong> in half or more, but not all of the short-term targets</td>
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<tr>
<td>2</td>
<td><strong>Sufficient</strong> with partial proficiency in half or fewer of the short-term targets&lt;br&gt;I can...&lt;br&gt;  o identify parts of a flat correctly.&lt;br&gt;  o identify the scale 1” = 1’0”.&lt;br&gt;  o measure and mark cuts according to the scale.&lt;br&gt;  o use the correct tools to complete the cuts.&lt;br&gt;  o assemble the flat.&lt;br&gt;  o identify the parts of a wall correctly.&lt;br&gt;  o design a wall around a theme.&lt;br&gt;  o explain my artistic choices.</td>
</tr>
<tr>
<td>1</td>
<td><strong>Emerging</strong> completes some short-term targets with assistance&lt;br&gt;● Does not meet criteria</td>
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*A student can earn a 2.5 or a 3.5 by demonstrating partial mastery of 3 or 4 Level content. Level Three Targets can be broken down within the scale to clarify for students what partial success looks like.*
Please use the space below for suggestions for any adaptations or accommodations for inclusion of special needs learners.

*Any students who have dexterity issues will need additional assistance.*

Grade Level: Demonstrate proficiency in building the flat and applying a design.

Modified: Build a flat and apply the design with assistance.

Challenge Up: Build the mini-flat to scale, apply a design, and articulate the concept through choices of texture, color, shape, and unification of the design concept.

Please use the space below to list any other specific resources for multi-cultural inclusions.

Make sure you provide resources that fit a wide range of demographics from fabric patterns to magazines so the options reflect a diversity of gender, race, and ability, among others.

**Works Cited:**

Jonathan Pitzer’s introduction to scenic elements building a flat, Broadway vs. Hollywood flats: [https://www.youtube.com/watch?v=ZZ-Pj6R6udc](https://www.youtube.com/watch?v=ZZ-Pj6R6udc)

Jonathan Pitzer’s Broadway flat video introducing 7 parts of a flat: [https://www.youtube.com/watch?v=JvOLBYA8JEE](https://www.youtube.com/watch?v=JvOLBYA8JEE)

Practical Technical Theatre: [https://practicaltechnicaltheatre.com/](https://practicaltechnicaltheatre.com/)

MannyMac video from shopping for lumber to measuring and marking to construction: [https://www.youtube.com/watch?v=mcdYJt1pLgc](https://www.youtube.com/watch?v=mcdYJt1pLgc)

Gratuitous Sets How to build a flat: [https://www.youtube.com/watch?v=9-qpATHHBIM](https://www.youtube.com/watch?v=9-qpATHHBIM)

**Additional Tools & Resources:**

Chicago Canvas’ Creating Stage Flats -- Theatre Flats: [https://www.chicagocanvas.com/creating-stage-flats-theatre-flats/](https://www.chicagocanvas.com/creating-stage-flats-theatre-flats/)

How to make a Broadway flat using luaun facing: [https://www.youtube.com/watch?v=HCJvHbDQVOQ](https://www.youtube.com/watch?v=HCJvHbDQVOQ)

How to build a TV Flat Part I: [https://www.youtube.com/watch?v=S5uRdVBprc4](https://www.youtube.com/watch?v=S5uRdVBprc4)

How to build a TV Flat Part II: [https://www.youtube.com/watch?v=urIWbrQDz7U](https://www.youtube.com/watch?v=urIWbrQDz7U)
Students examples:

Level 2

Level 2.5
Level 3, Level 3.5, Level 3, Level 2.5

Level 3, 3.5, and 4