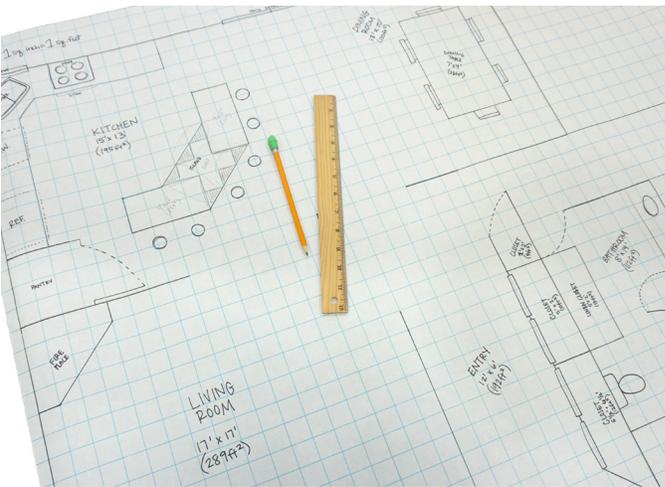


African American Architects



Lesson adapted from Susan Riley's
Lesson Seeds, EducationCloset

Grade Level

3rd-4th grade

Key Vocabulary

- Architect
- Floor Plan

Materials

- Pencil & eraser
- Ruler
- Pacon Grid Roll, 1" ruling, item #0077810

Resources

- Images of Villa Lewaro & Floor Plan:
<https://nthp-savingplaces.s3.amazonaws.com/2016/08/26/13/39/33/721/Preserving-Villa-Lewaro-National-Treasure-Madam-C-J-Walker-Estate.pdf>
- Information on African American Architects:
savingplaces.org/stories/three-influential-african-american-architects-you-should-know#.WwhJc1MvxBw
- Information on Madame Walker:
savingplaces.org/places/villa-lewaro-madam-c-j-walker-estate#.WwhJ9VMvxBx

Objective

Students will learn about the buildings designed by famous African American Architects, and the significance of their achievements considering the era in which they lived. Students will design a floor plan layout of a building of their choice, and use their knowledge of area of rectangles to calculate the square footage of rooms and objects.

Standards

3.MD.C.7.D.

Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems.

VA:CR1.2.3a.

Apply knowledge of available resources, tools, and technologies to investigate personal ideas through the art-making process.

Engagement

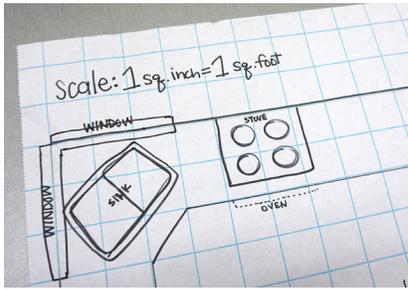
Show students images of Villa Lewaro, designed by Vertner Woodson Tandy. Using artful thinking, analyze the components of Madame Walker's home. Share information on Tandy and other African American Architects (see resources). Make sure to discuss what an architect does, and the significance of the African American architects' achievements considering the era in which they lived.

Activity

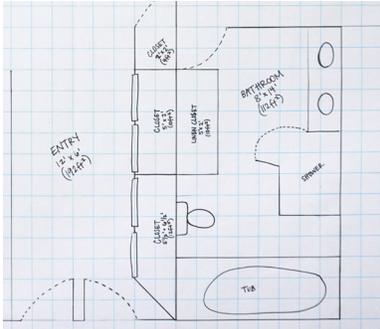
1. Introduce floor plan examples to students, pointing out the scale it is drawn in, common symbols used, and considerations in the layout concerning doors, windows, lights, etc. (See URL for Villa Lewaro Floor plan in resources.)
2. Measure the area of each rectangular room on the floor plans, and explore how the shapes of the rooms are used in both overlapping and non-overlapping ways.

Activity continued on next page...

Step 4



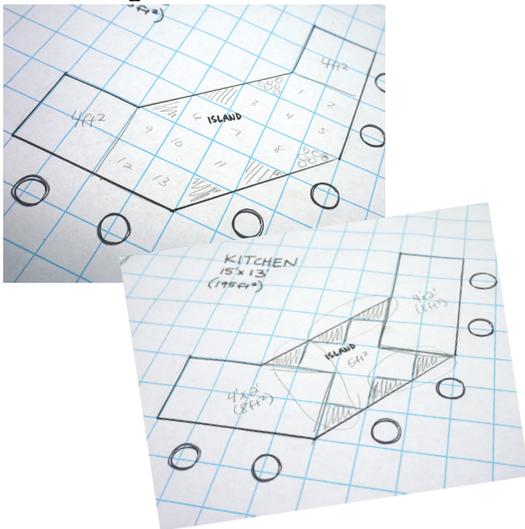
Step 5



Step 6



Step 7



Activity, continued...

- Once students have basic knowledge of what a floor plan looks like, demonstrate how to create one using a roll of grid paper.
- First, explain your scale. For this example, we are using 1 inch ruled grid paper, where each 1 inch square=1 square foot.
- Model how to use a ruler to draw walls, doorways, and windows, etc. Also demonstrate drawing a line through the middle of a square to represent $\frac{1}{2}$ foot increments.
- After you have a few rooms on your example floor plan drawn, ask students to help you calculate and label the area of each room. Ensure students recognize multiplying the width by the length of the walls will give them the same number as counting the full squares within the walls bounds. This is also a great opportunity to explain why we use square units when measuring area.
- Remind students of a couple strategies for finding the area of rooms or objects that are not perfectly square. Either counting squares, breaking up into rectangles, or adding up halves to make whole numbers, etc.
- Allow students to create their own floor plans, calculate, and label the area of each room.

Assessment

Assess student blueprints for accurate square footage calculations, and appropriate room sizes.