

Mapping Blueprints



Lesson adapted from Susan Riley's
Lesson Seeds, EducationCloset

Grade Level

Kindergarten-1st grade

Key Vocabulary

- Blueprint
- Floorplan

Materials

- Blueprint/floor plan examples
- Pacon® Heavyweight Tagboard, White, item #5211
- Tru-Ray® Construction Paper, Assorted Colors, item #103031
- Pencil
- Ballpoint Pen (optional)
- Marker
- Scissors
- Glue

Resources

- Peter E. Col House Floorplan:
[https://commons.wikimedia.org/wiki/File:Peter_E._Col_House,_1163_Martin_Avenue,_San_Jose,_Santa_Clara_County,_CA_HABS_CAL,43-SANJOS,2_\(sheet_2_of_5\).png](https://commons.wikimedia.org/wiki/File:Peter_E._Col_House,_1163_Martin_Avenue,_San_Jose,_Santa_Clara_County,_CA_HABS_CAL,43-SANJOS,2_(sheet_2_of_5).png)

Objective

Students will observe floor plans and identify shapes used. Using artistic thinking, students will re-design the example floor plan using the same size shapes they identify.

Standards

1.MD.A.1

Order three objects by length; compare the lengths of two objects indirectly by using a third object.

VA:Cr2.3.1

Identify and classify uses of everyday objects through drawings, diagrams, sculptures, or other visual means.

Engagement

Engage students in observing their school, either by taking a walk around the school or through photographs of the building. What do they notice about the building in terms of size and shape? How are the shapes related to each other inside and outside the building? Have students take a look at a set of blueprints of the school (if blueprints are not available, you can draw a basic floor plan of the school to share with students). Facilitate the conversation about the blueprints or floor plan by using prompts like, “Does this look familiar?” or “Think about what we just observed on our walk, what similarities and differences do you see?” and “How are the shapes related here?”

Activity

1. Show students another example of a blueprint or floorplan. For this example, we used the historic Peter E. Col house (link in resources section). Either project the floorplan, or hand out a copy to each student.
2. Do a “guided tour” of the house, describing where the front door would be, and tracing with your finger the path you could potentially take to walk through the house. Encourage students to close their eyes and visualize walking through the front door and seeing the living room in front of them, and

Activity continued on next page...

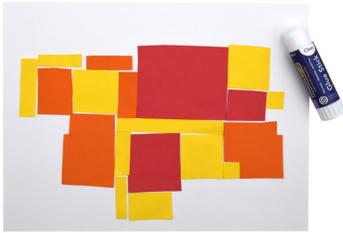
Step 4



Step 6 Options



Step 7



Step 8



Activity, continued...

turning to the right and seeing a doorway to the dining room. Continue on a guided tour of the house like this (encouraging students to use their finger to trace the path you're taking through the house if they have their own copies).

3. After the guided tour, ask students if they recognize some shapes on this floor plan. Have students think-pair-share any shapes they see, and how many times the shapes repeat.
4. Model tracing the shapes that make up the floor plan, and have students do the same on their copy of the floor plan.
5. Next, have students use a pencil or ruler to identify three rooms that are the same shape, but different sizes. Ask students to order these three shapes from smallest to largest by writing a 1, 2, and 3 (one being smallest, three being largest) in the shapes of the rooms they're comparing. (Make sure students keep these labeled shapes handy for the end!)
6. Explain to students that they are going to do a little remodeling of the floor plan, but they have to keep the rooms the same size. To do this, students need to cut out the room shapes from construction paper. There are various ways to go about this. You can have students cut up the floor plan and trace the shapes onto construction paper, then have them cut out the shapes again. You can have students cover the back of their floor plan in pencil and then use a ballpoint pen to trace the shapes onto the construction paper to cut out. You can have students cut both the floor plan and the construction paper at the same time (using tape to keep the papers together, if needed). You decide which method will work best for your students.
7. Once students have their shapes cut out from different colors of construction paper, have them rearrange the shapes to make a different floor plan from the original, and glue them to the tagboard.
8. Have students label the rooms on their new floor plan, and attach the three labeled shapes (from step 5) to their paper for your assessment.

Assessment

Assess students' ability to order rooms from largest to smallest. Ask students to take a partner on a guided tour of their remodeled floor plans like you modeled for them in step two.