

ARCHITECTURE

UNIT: UNDERSTANDING ARCHITECTURAL FLOOR PLANS_LEVEL 1

THE PROBLEM:

Architects use many different plans to communicate building designs with people all over the world. Using the materials and the resources provided, you will explore and learn how to read floor plans, use architect scales and even begin creating floor plans of your own!

CONSTRAINTS AND CRITERIA

1. Understand how to use an architect's scale to measure existing dimensions.
2. Learn how to organize your designs and brainstorm ideas to make your own floor plans.
3. Create a bubble diagram to begin the early stages of a floor plan.
4. Create a bubble diagram within the floor plan provided.
5. Use trace paper over your floor plan to show how walls will divide the space in your designs.

MATERIALS:

- Architects Scale
- Pencil
- Paper (8 ½" x 11" sheets)
- Trace paper
- Colored Pencils
- Provided Floor Plans (Printed - Stem101 Website)
- Compass
- Masking Tape

DIRECTIONS:

Be sure to check off each step ☒ as you progress.

☐ **Step#1** – Key Terms

Using the presentation provided, take notes on architectural key terms. Architects need to be detailed when creating plans for buildings, using proper terminology helps them to explain their ideas and communicate them effectively.

☐ **Step#2 – Architects Scale**

Watching the video provided, learn how to read and use an architect's scale. Complete the worksheet when you feel confident with the scale.

☐ **Step#3 – Bubble Diagrams**

Watching the video provided, create a bubble diagram of your dream home. Make sure that your home functions like a home before adding extra spaces to your designs. Make sure your home includes the following spaces: kitchen, bathroom, bedroom, living room space). Create a bubble for each room and organize your home so the function of the room matches the rooms next to it.

☐ **Step#4 – Elevate your Bubble Diagrams**

Watching the video provided, create a legend on your Bubble Diagram to show three different privacy levels within your home. Label them Private, Semi-Private, and Public. Assign a color to each privacy level and make sure you color in the circles on the bubble diagrams. Study the diagram to make sure that the public spaces are not next to the private spaces. If this is the case, move your bubbles around so that your home functions properly.

☐ **Step#5 – Bubble Diagram inside of a Floorplan**

Watching the video provided, use a premade floorplan to put your bubbles inside the exterior walls. Make sure to place the following rooms in your bubble diagram: kitchen, coat closet, bedroom, bedroom closet, bathroom, living room, utility closet. Assign colors to show privacy of the spaces and move on to the next step.

☐ **Step#6 – Trace Paper Overlay**

Watching the video provided you will elevate your bubble diagrams to look like a floor plan. Begin by laying a piece of trace paper over your bubble diagram. Trace the exterior walls first. Now turn your bubbles into straight walls (demonstrated in the video). Make room for hallways if needed and erase lines to create access points (doorways). Use the $\frac{1}{4}"=1'-0"$ scale to make 32" door openings for rooms and closets. The compass will be used last to show the swing paths of the doors.