

Redesign Your Living Room!

Now that you are spending so much time at home, you probably have some ideas about how your living room should look. Do you want a different seating arrangement? Do you want different furniture? How about board games, puzzles, a smart speaker, or a video game console?

For this Area of Plane Figures project, you will be redesigning your living room layout with a scale model of the room, including placement of the furniture. You will be creating a PowerPoint or Google Slides presentation to be shown to your family in order to convince them of your plan.

You will include a cost breakdown of the items you would like to have in your living room. Keep in mind that your family does not have an infinite supply of money!! You should research prices online in order to obtain the best deals!

Part I: Measurements, two-dimensional scale model, and area calculations (due 04/17)

Part II: Budget of items with prices, and total cost of your design (due 04/24)

Part III: PowerPoint or Google Slides presentation with layout and budget (due 05/01)

Part V: Slideshow presented to your family, and written reflection completed (due 05/08)

Part I: Measure your living room, in meters. Create a two-dimensional scale model of your living room, either digitally or by hand. Provide the scale factor of your model. Use your scale factor to place your items to scale in your model. You must have a minimum of eight plane figures: one circle, two rectangles, three triangles, one regular polygon (pentagon/hexagon/octagon), and one irregular polygon. Make sure that your furniture (couches, tables, chairs, rugs, etc.) will work for the various activities that will take place in the room (sitting, eating, playing games, etc.). Provide the area of the living room, in meters. Also, provide the dimensions and area of each piece of furniture, in meters, labeled on each item or in a list next to the layout. Submit your design electronically to your teacher. If you drew your layout by hand, then scan or take a photo of it.

Part II: Research the cost of items from Part I. You may add any additional items to your budget that you would like to have in your living room. Make sure that you do research online to find the best prices. Create a list or spreadsheet of the cost of each item; include a link to the description of each item. You should provide the total cost of your plan. Submit your budget electronically to your teacher.

Part III: Make a PowerPoint or Google Slides Presentation of your layout, areas, furniture and other items, budget, and total cost. Your presentation should have a title slide with your name and class period. Your presentation must be named in the following format:

firstname_lastname_period_chapter11project

Any images that you use in your presentation that you did not take or make yourself must be cited in a references slide at the end of your presentation. Web links are an acceptable form of citation. Submit your PowerPoint or share your Google Slides presentation electronically to your teacher.

Part IV: Formally present your PowerPoint or Google Slides to your family. You should act as if you are presenting to your teacher, the Administration, or the School Board. Be prepared to take any questions from your audience. Notecards or outlines are acceptable while you are presenting. You should make eye contact with your audience and not read verbatim from a script.

After you have presented, please submit answers to the following questions electronically to your teacher:

1. Which part of the project did you find the most challenging, and why? Which part was the easiest, and why?
2. What did your family think about your presentation and proposal?
3. If your family asked you any questions, what was asked and what were your responses?
4. How would you change your design after talking with your family?

Rubric: Each of the four parts will be evaluated using the following descriptions:

Above and Beyond – Uses exemplary methods, shows creativity, goes beyond the requirements of the problem

On Target – Completes the task with only minor errors, uses successful approaches

Not There Yet – Makes significant errors or omissions, uses unsuccessful approaches

Any part of the project that is evaluated as “Not There Yet” will require a resubmission by the end of the following week after it is due.