



of Greater Indianapolis

CREATE YOUR DREAM SPACE

SESSION TWO: 3D MODELING

Topics Explored	STEM (mathematics, spatial reasoning), Job Exploration (architecture), Creativity
Age Group	9-11, 12-14
Purpose of Activity	Participants will explore careers related to home construction as they explore their living space and design their dream home.
Time	50 Minutes
Materials	Must Have: Computer and Internet Access

Before you Start

Wait! Did you complete Session One: Exploration and Design? If not, download the activity at girlsincindy.com/resources.

Make sure to ask permission from your parent/guardians or trusted adults before using any of the computer programs mentioned in this activity.

Activity Description

In Session One, we explored the space we live in and designed our dream living space for the future. This session, we will see our dream space come to life! We will use the technical drawing we created in session one to build a 3D model using a computer program, exploring the careers involved in building a home in the process.

Tip: Did a friend or family member join you in session one? Ask them back and compare final designs at the end of the session.

Step One: Explore Careers

Last session, we explored the career of Architecture. What other careers and jobs do you think are involved in building a home?

- **Interior Designer**
- **General Contractor**
- Electrician and Lighting Design
- Plumber
- Engineer
- HVAC (Heating, Ventilation, Air Conditioning)
- Carpenter

There are many careers involved in building a home. More even than those listed here! In this activity, we will focus on **Interior Designers** and **General Contractors**.

Inspiring all girls to be strong, smart, and bold

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Step One: Explore Careers (Cont.)

There are many careers involved in building a home. More even than those listed here! In this activity, we will focus on **General Contractors** and **Interior Designers**.

Consider the title '**General Contractor**'. What do you think they do?

- General contractors take the plans, the technical drawings, of architects and hire out other roles like electricians, plumbers, HVAC, and others to build the home.
- They are the manager and the point person for all the building that happens on the exterior and the interior 'bones' of the house, like walls, floors, electrical, plumbing, doors, windows, AC.

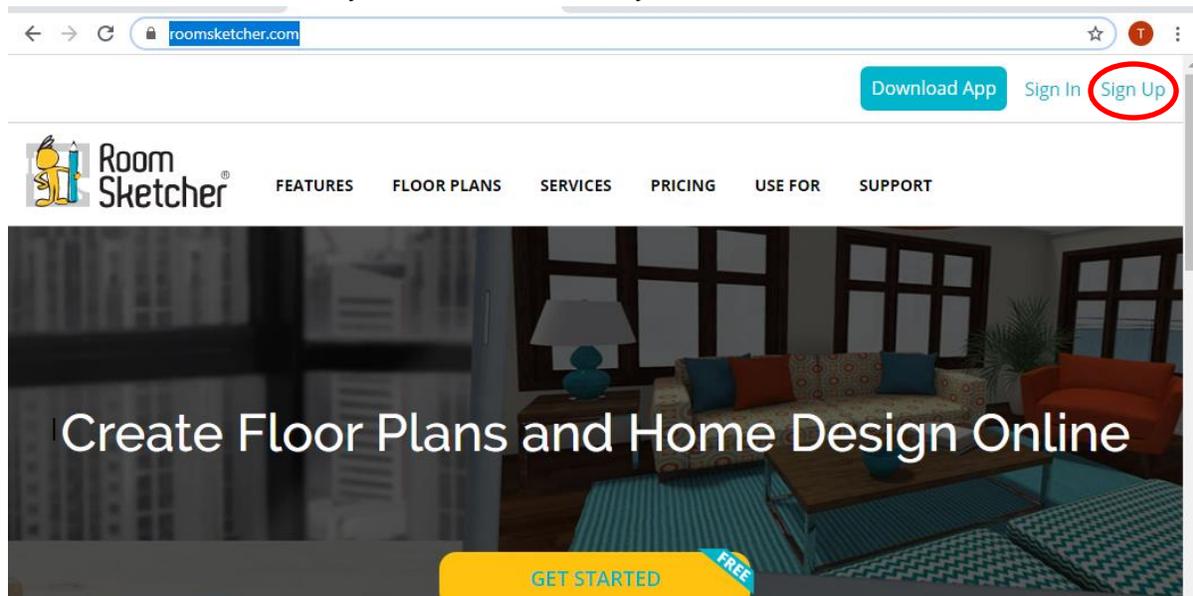
Consider the title '**Interior Designer**'. What do you think they do?

- Interior Designers work closely with the General Contractor and the owner of the home to design and decorate the inside of the space in a way that promotes the desired mood, functionality, and general look and feel of a space.
- Interior Designers talk to the homeowners and determine what they want and need out of a space, then make decisions like what flooring, counters, furniture, art, and more to use in the home.

Today we will first work as general contractors to build your dream home using a computer program called [RoomSketcher](#). Then, we'll work as interior designers and make choices about the interior of our dream space.

Step Two: RoomSketcher Set Up

Before you begin, ask your parent/guardian or trusted adult permission to use [RoomSketcher](#). Once you have their permission, go online to [roomsketcher.com](#) and select 'Sign Up'. Then use an email address to make a new account. They will send an email to the address you used to confirm your account.

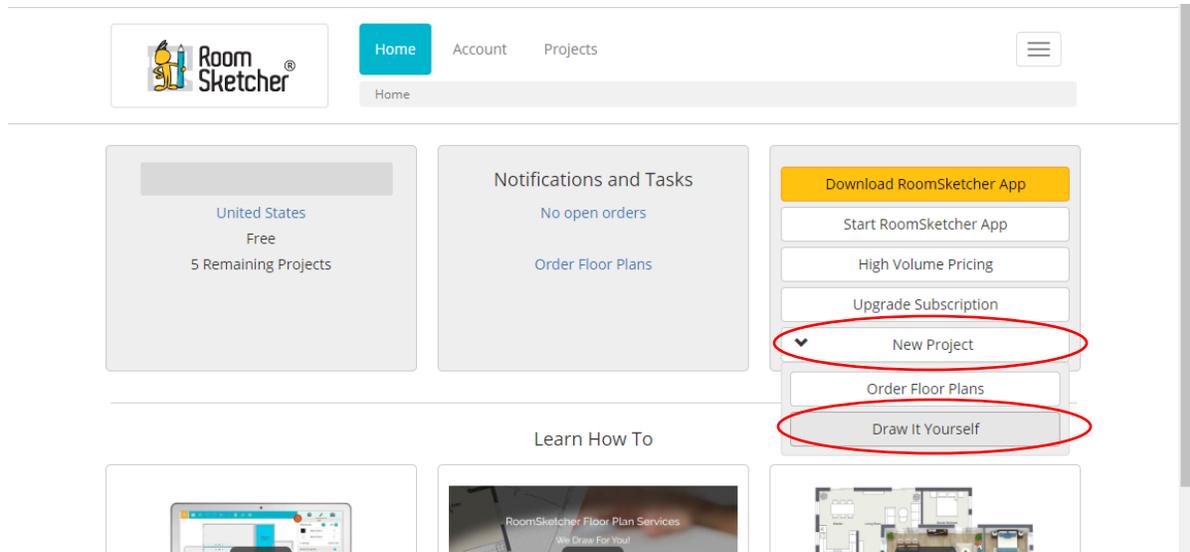


Step Two: RoomSketcher Set Up (Cont.)

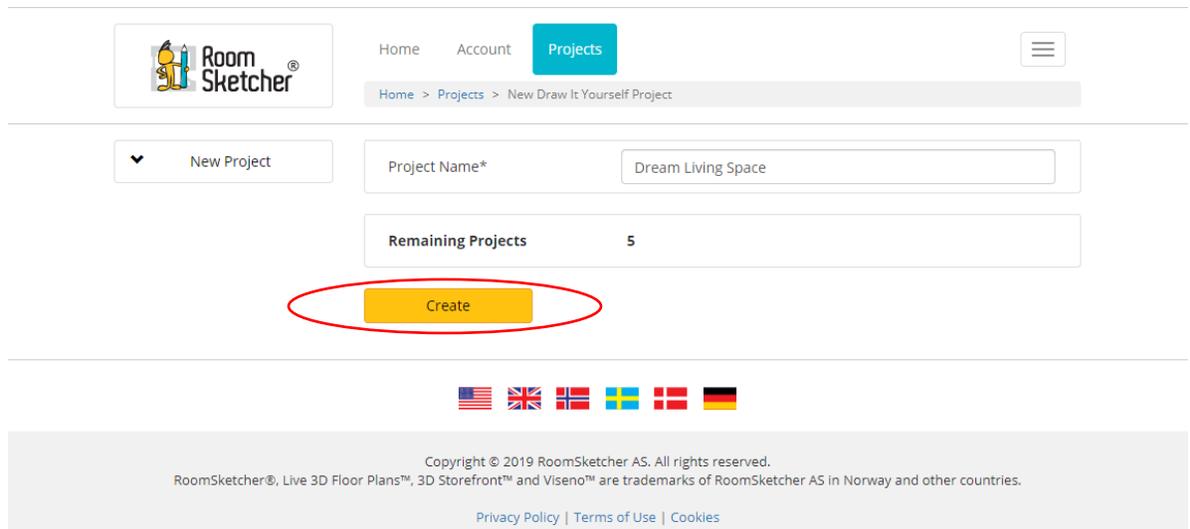
You now have a new account! It is time to start translating our technical drawing from session one into this RoomSketcher.

First, find your technical drawing and familiarize yourself with the layout.

Next, select 'New Project', then 'Draw it Yourself' in RoomSketcher.



Name your project and select 'Create'.



Step Two: RoomSketcher Set Up (Cont.)

Select 'Edit in Web Editor' if your computer has Adobe Flash or Select 'Edit in App' if you want to download the app. Make sure you have permission from your parent/guardian or trusted adult before you download anything to your computer.

These instructions will guide you to select 'Edit in Web Editor'.

The screenshot shows the RoomSketcher Project Dashboard. At the top, there is a navigation bar with 'Home', 'Account', and 'Projects' (selected). Below the navigation bar, a breadcrumb trail reads 'Home > Projects > Project Dashboard'. A green notification banner at the top states: 'New project created. Press the "Edit in App" button to draw your floor plans.' The main content area is divided into several sections:

- Project Dashboard:** A sidebar menu with options: 'Download 2D Floor Plans', 'Download 3D Floor Plans', '3D Photos', '360 Views', and 'Share'.
- Project Information:** A table with the following data:

Project Name	Dream Living Space
Project License	Regular
Created	
Modified	
- 2D Floor Plans:** A section with a 'Generate' button.
- 3D Floor Plans:** A section with a 'Generate' button.
- Actions:** A vertical list of buttons: 'Edit in App' (yellow), 'Edit in Web Editor' (circled in red), 'Upgrade Project', 'View in Live 3D', 'Delete', and 'New Project' (with a dropdown arrow).
- Levels:** A section with a dropdown menu showing 'Level 1'.

Now it is time to start your new project! Make sure you have your technical drawing from session one before you move onto the next part of this activity.

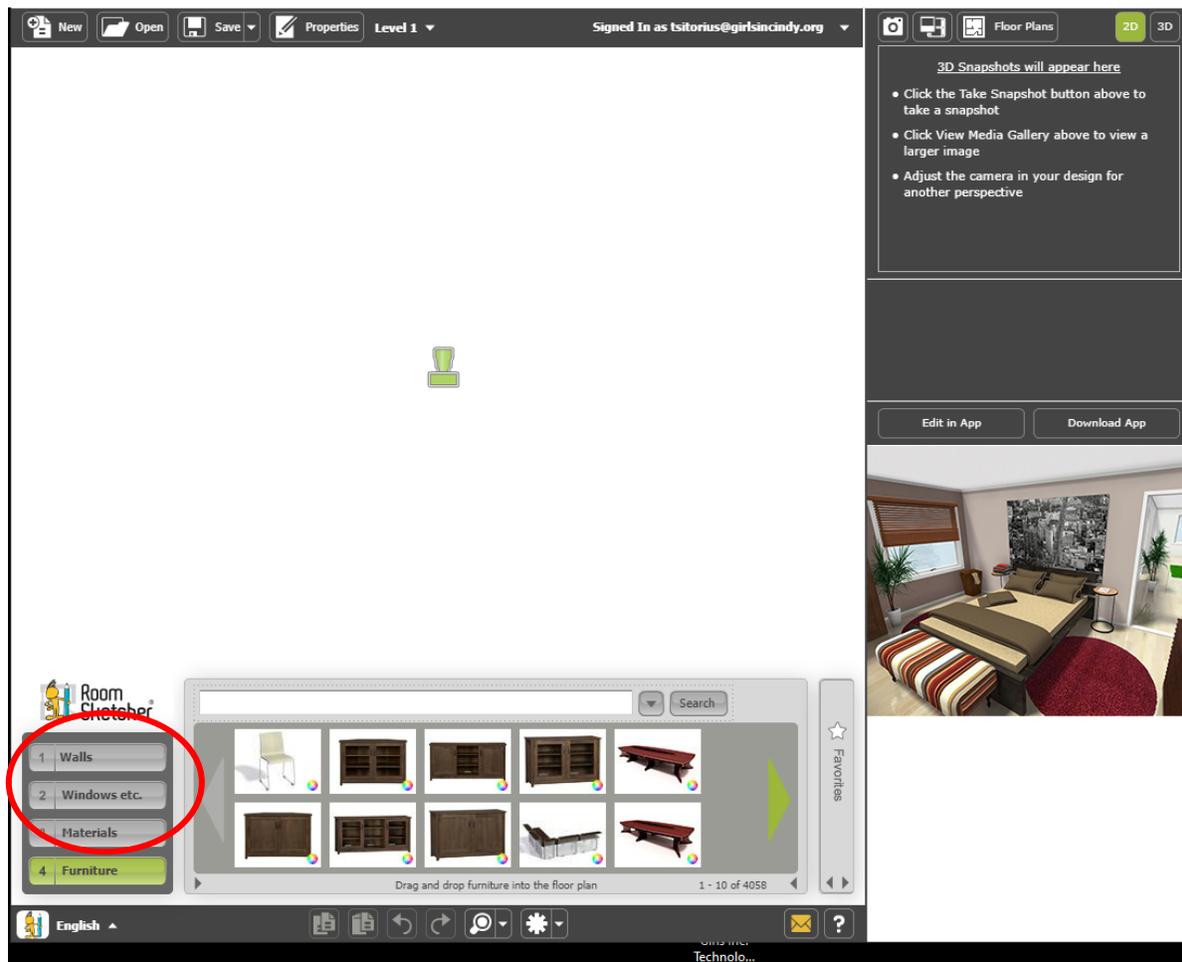
Step Three: Build Your Space!

You are now a **General Contractor**! Use the tools provided to build your technical drawing in RoomSketcher. Pay close attention to placement of walls, windows, and other materials.

First, build your walls by clicking on the walls tab and dragging the wall from the beginning of the desired location to the end. Use the scale you created on your technical drawing to build your home to the correct size.

Next, add windows, doors, and stairs to your space using the 'windows' tab. Add flooring using the 'materials' tab. Click and drag the item you want on to your walls.

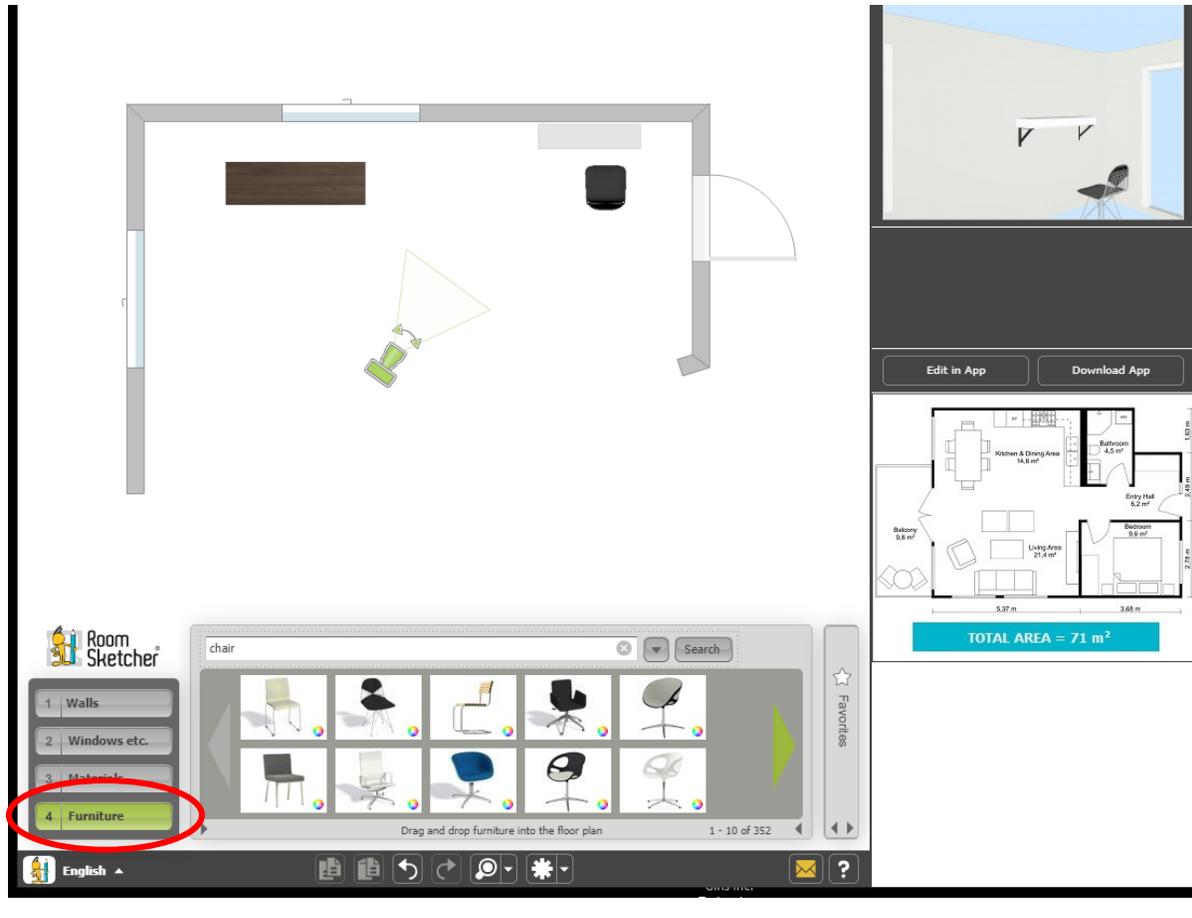
Use these tools until you complete the framework of your dream space.



Step Four: Design Your Space!

You are now an **Interior Designer!**

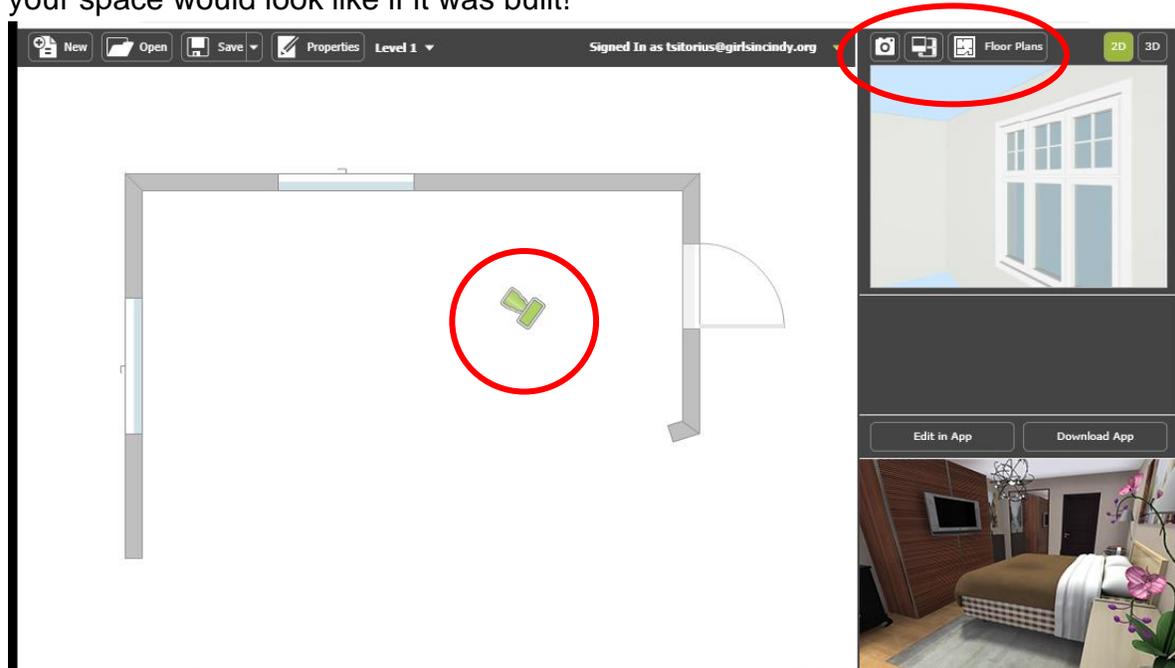
Use the 'Furniture' tab to add furniture to your space. Think about what functions you want your space to fulfill. Is this a bedroom? A kitchen? Is this a relaxing space? A space to help you stay motivated? Consider these things when deciding what furniture to add to your space.



Step Five: See Your Space!

It is time to see what you built!

Take photos of your space by moving the green camera in the middle of your drawing to the position you want to see and select the camera icon to take a photo. To see the photos you are taking, select the icon to the left of the camera. The photos show what your space would look like if it was built!



Step Six: Play Around and Discover!

Play around in RoomSketcher! Build more dream spaces or perfect your first design. Share what you build with friends or other members of your household. Challenge them to make their own design.

Think about:

- What else could you use RoomSketcher for?
- What elements of a general contractor's job are not demonstrated in RoomSketcher?
- What elements of an interior designer's job are not demonstrated in RoomSketcher?
- What is the cost of building this? If you want, spend time online researching the cost of supplies and labor to estimate how much it would cost to build your dream space.

We'd love to see what you created! With permission from your trusted adult, post a photo of your dream space and tag **@girlsincindy** or **#girlsincindy**.