

Introduction

Architecture is the art and science of designing buildings. It can also include other physical structures or built environments. You might think of the Pyramids in Egypt or the Colosseum in Rome, but there is so much more to architecture than these famous structures.



There are different types of architecture. The first one that might initially come to mind is a Residential Architect, or someone who designs homes. They deal with clients who want their own customizable house designed. Then they start to design the plans, layouts, and elevations. They estimate the costs of materials and services, as well as the time needed to complete the construction and finishing. Another type of Architect is a Commercial one. This type of Architect makes a well-designed building aesthetically pleasing as well as functional, and the functionality varies according to the type of space that is being designed. An Interior Designer focuses more on -- you guessed it -- the interior of spaces and buildings. They can design and style apartments, restaurants, and even offices. They work with fabrics, colors, and furniture.



There are many other types, such as a Green Design Architect that aims to make buildings more sustainable, Landscape Architect that works more with parks, fields, and other outdoor spaces, as well as Industrial Architects. Architects help us utilize our spaces for our homes, offices, places of worship, entertainment, and many more. They bring balance into people's lives because good design makes our lives more efficient.

Northeastern Connections

Faculty Connection

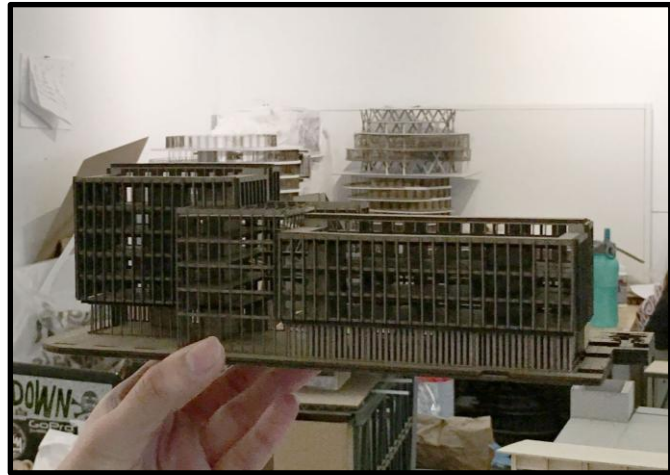
“At Northeastern, we connect specific problem solving inherent to architectural and landscape architectural understanding with the larger context of contemporary cities.”

The curriculum at Northeastern helps students understand and conceptualize complex environmental, urban, and architectural issues. CAMD, the College of Arts, Media, and Design at Northeastern

University has a School of Architecture that aims to help students focus on the art of building and environmental performance, as well as explore how designed environments affect urban conditions.

“Northeastern’s programs in architecture and urban landscape are becoming a leader in identifying opportunities for civic representation, urban development, and neighborhood design. Northeastern’s students are in demand because of their combination of professional competence and fluency in urban architectural and environmental design issues. There are opportunities for interdisciplinary cooperation in urban-oriented research and creative work in areas such as the economics of urban redevelopment; the design and planning of resilient food, water, energy, transit, and industrial systems; urban public policy; and new forms of spatial and visual communication. Additionally, Northeastern’s urban focus is applied globally in the semester abroad.”

In addition to semesters abroad to learn about architecture first hand, Northeastern has many field trips within Boston to learn about the architecture that is right outside of the classroom. CAMD’s school of architecture offers majors such as Architecture, Landscape Architecture, as well as various combined majors such as Civil Engineering and Architectural Studies, and Environmental Engineering and Landscape Architecture. The College also provides several minors such as Architectural and Urban History.



Student Connection

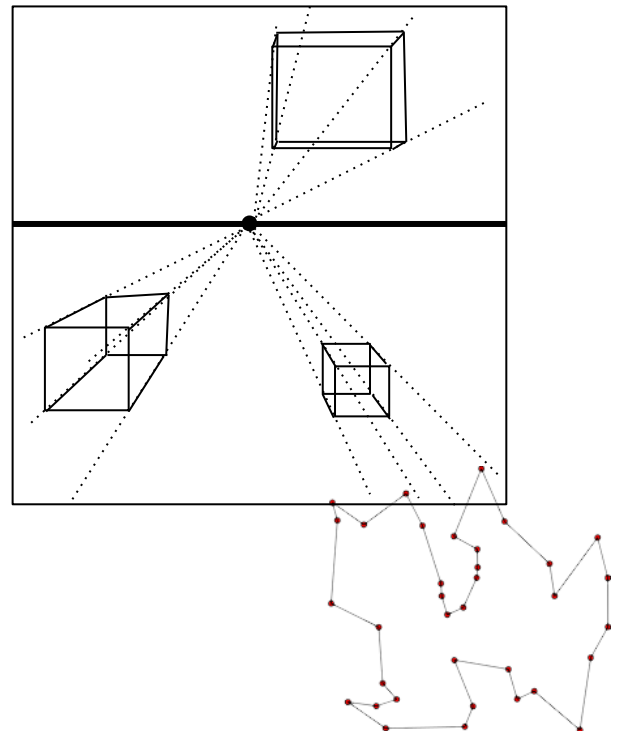
Ben Harding is an Architecture major at Northeastern University (Class of 2024). He says, “ I grew up drawing house floor plans for fun and watching my mom do home improvement projects.” After taking some summer courses at Notre Dame and speaking to some real architects, he decided this was the path for him.

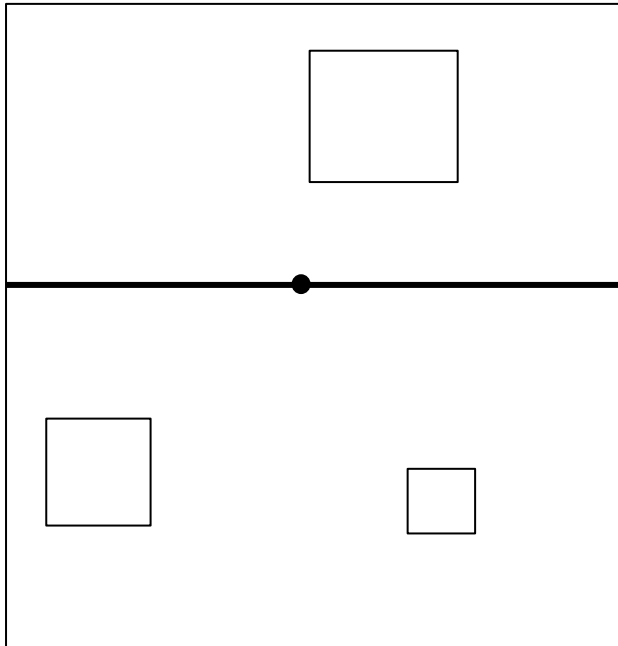
At Northeastern, Ben will have many opportunities to study abroad and learn architecture from real life famous buildings “I’ll spend my spring semester next year in Segovia, Spain. It’s a small city outside of Madrid that is famous for its intact Roman aqueduct and one of the last Gothic cathedrals constructed. So that’s where I’ll be and will make an effort to get to other European cities as much as possible while I’m there.” With Europe’s rich architectural history, Ben will not be disappointed and is sure to be able to apply the skills he learned at Northeastern.

After graduating, Ben is not entirely sure what he’ll do, as he is still 2 years into his 5 year program. “I don’t know yet and I hope I will by the time I graduate. To be a licensed architect and able to build my own designs, which I would like to be able to do someday, I would need a masters degree and enough hours of work experience to sit for my exam. So those are my two goals immediately after undergrad”. Good luck Ben!

Do Now

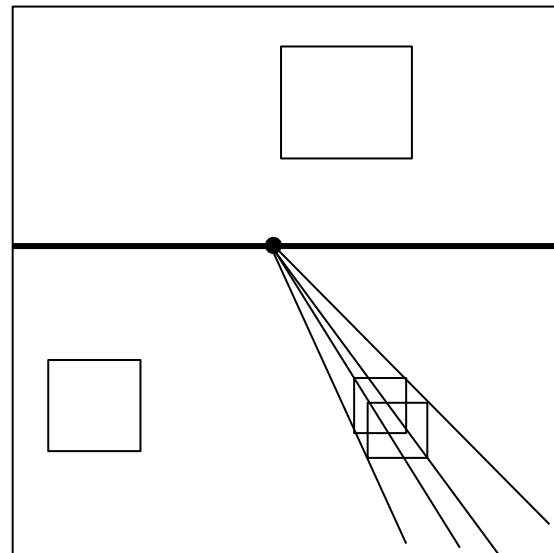
Architects design, meaning that the ability to draw is a useful skill. Some sketches are rough, but when it comes to the final design, they need to be precise. Perspective is very important when it comes to drawing buildings as you need to accurately represent buildings and show what they will look like from every angle. This activity will be focusing on something called one-point perspective.

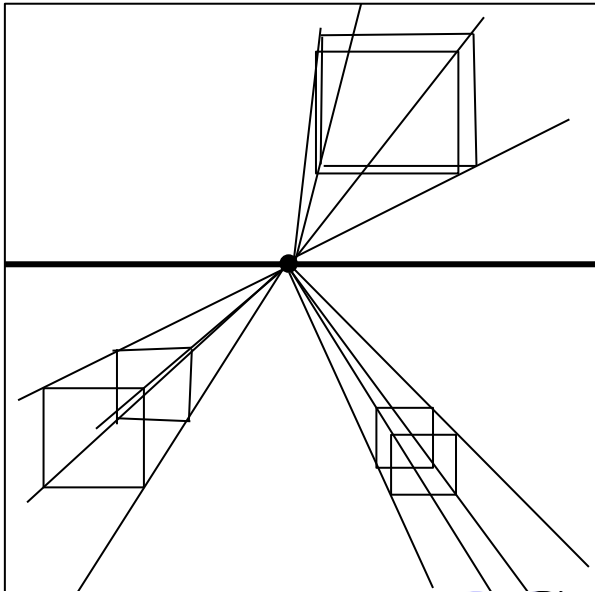




1. Draw a dot in the center of your page. This is the vanishing point. This is because this is the point where you can no longer see far objects.
2. The next step would be to draw the horizon. This is the straight line that goes right through the middle of the page (and through the vanishing point). This is what separates the objects that we view as being above or below us (the sky versus the ground).
3. Next, draw a square (or multiple) anywhere on the page.

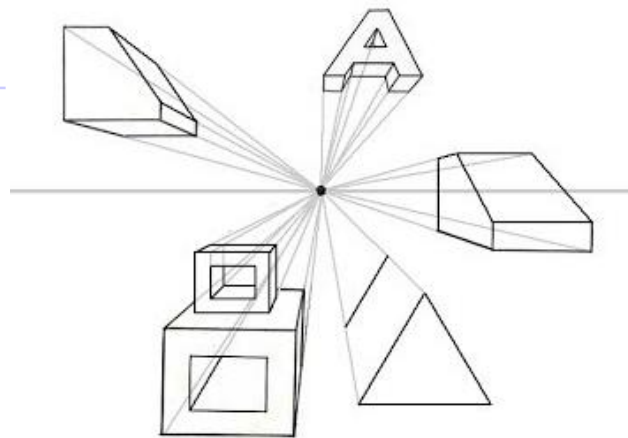
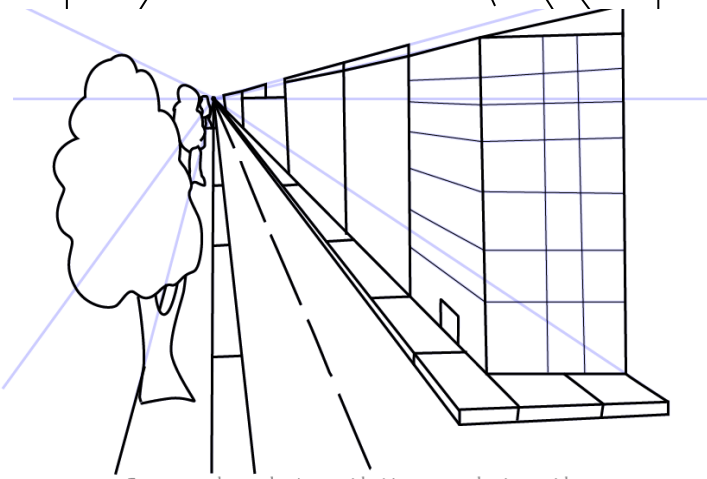
4. Draw four lines on your paper. These will start at the vanishing point and connect to each of the four corners of the square.
5. Next, add another square in front of or behind the original square. The lines you drew should act as a guide for this square (the right corner should be on the same line as the original square's right corner).





5. Do this for the rest of your squares.
Erase the guidelines as well as some inner lines. You
now have cubes!

Feel free to try other shapes or even try something
harder, like the inside of a room or street with
buildings!



Activity

Design and build your dream home out of legos! Architects must carefully plan out and design every part of a building. Take the role of an architect and builder in this activity (and even an interior designer!).

Materials Needed:

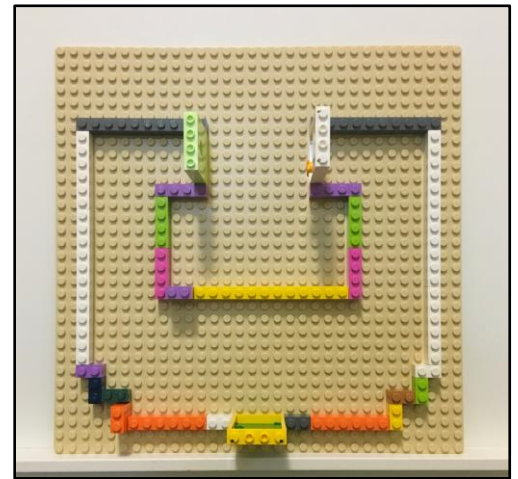
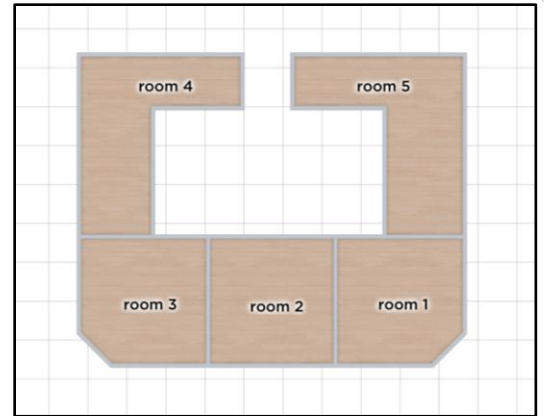
- A computer with an internet connection
- Lego bricks
- Pencil and paper (optional)

Steps:

- First, use this website to plan the layout of your dream house: <https://home.by.me/en/>
- Use the 2D design mode and plan out the layout of each floor (you may need to make an account to create a new project)
- Once you have created all your floor plans, you can add furniture if you would like to in the 3D mode.
- If you can't access the website, complete the previous steps using a pencil and paper.
- Now it's time for the house to come to life! Take out the lego bricks and start with outlining your floor using your plans as a guide (the pictures on the right are only a reference, you don't need to copy them).
- Build your house floor by floor. Add as many as you want!
- As you build, feel free to add furniture (be an interior designer as well as an architect!). Be creative with your design and decorate the outsides if you wish.

Discussion Questions:

- What was your favorite part of this activity?
- What would you have done differently?
- What was the most challenging part?



Share Your Results

We'd love to know how the activity and/or the "do now" turned out! What worked and what didn't work? Please share with us something you learned and/or send us pictures! Email us at stem@northeastern.edu.

Related links/Extensions

- [Architecture Adventure: Crash Course Kids](#)
- [National Geographic Architecture Resources](#)
- [Britannica -- Architecture](#)
- [2D Home Layout](#)
- [One Point Perspective Guide](#)