

A modern library is used for many activities; some are loud and some are quiet. Listen to sounds in this building and use the **plan** drawing above like a map to shade in noisy parts. What do you notice?



## MARINERS HARBOR LIBRARY



Glass is a special material for libraries because it brings in **natural light** which is important for reading and helps the building save energy. Because they are transparent, glass **curtain walls** can also be used to tell a story about what is happening inside a building. Use the blank spaces above to draw in what you can see from the street.

Located at 206 South Avenue in **Staten Island**, this **contemporary, civic** building was designed by **APT ARCHITECTURE** (Atelier Pagnamenta Torriani).

Completed in **2014**, this green building achieved a **LEED Silver** rating and is home to a branch of the **New York Public Library**.



Because many of the walls are made of glass which isn't strong enough to support the weight of a building, the architects had to figure out a different way to make the library stand up. From the outside, can you find the metal walls and roof? Together, these parts of the building create a strong **shell structure** that looks like a **cantilever**. Cut out, fold, and glue the template below to build a portion of the library's structure. How would you use this shape in your own design for a library? Use thick paper or cardboard to finish your model.

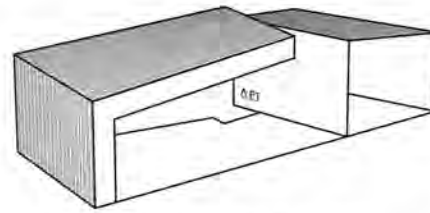
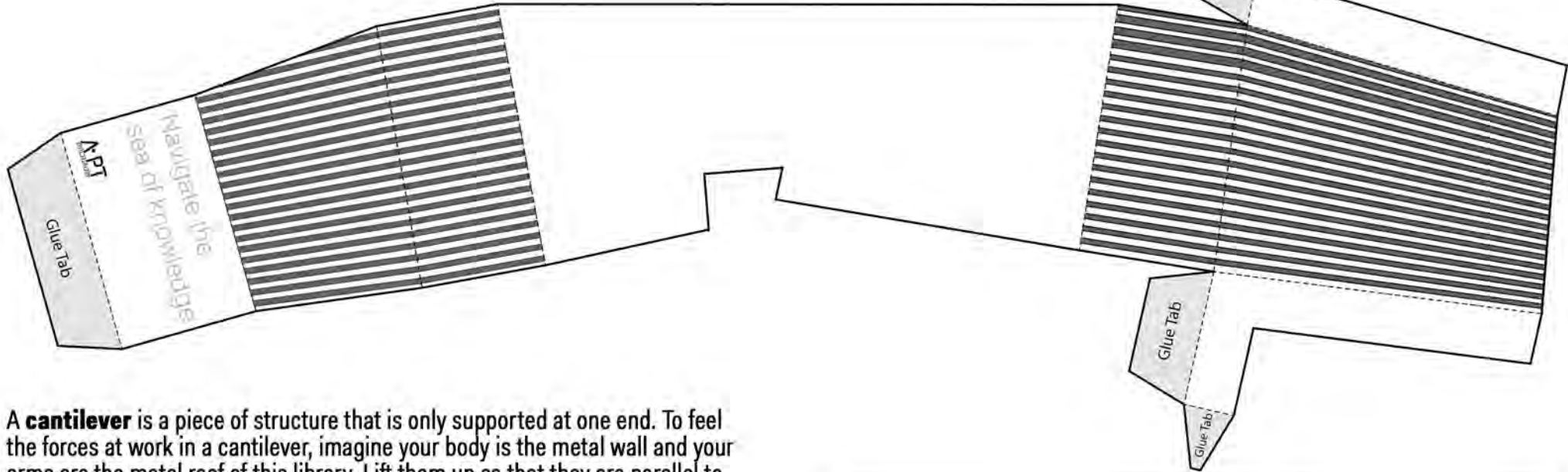
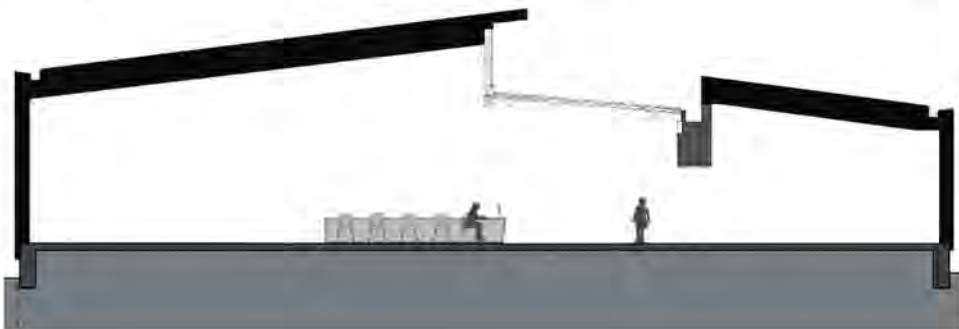


Diagram of assembled model.



A **cantilever** is a piece of structure that is only supported at one end. To feel the forces at work in a cantilever, imagine your body is the metal wall and your arms are the metal roof of this library. Lift them up so that they are parallel to the ground. How long can you keep your arms up before your shoulders get too sore to support them?

The architects solved this problem by adding **columns**, vertical pieces of structure that carry the weight of the library's roof. Looking around the library, how many columns can you find? Add these missing parts into the **section** drawing below.



There are many details of the Mariners Harbor Library that refer to the neighborhood's history as a former maritime and fishing community. For example, the library's **form** was inspired by the shape of an oyster! Look at the concrete floor by the entrance. Can you find something that was added to remind us of the sea? Use this space for a drawing or texture rubbing.