

ISLAND BUILDING

Abridged from a project created by Alissa Doyle, 2018
USS Hornet Sea, Air & Space Museum

OVERVIEW

The Island structure of an aircraft carrier houses many essential areas key to the ship's overall functionality, all the while towering multiple decks above the Flight Deck. It serves as the ship's control tower, the Captain's Bridge, Navigation, Primary Flight Control, boiler and engine uptakes, and more! An aircraft carrier's Island is built strong and sturdy. It can stay up in windy storms, when the ship is tilting ("listing," in nautical terms), and when it gets damaged. Can you build a carrier-strong Island?

This project invites participants to test their engineering skills, work collaboratively, and explore the elements required to control and stabilize a vital technological section of an aircraft carrier.

GOALS

- Work collaboratively to build a structurally-sound tower
- Engage in the engineering process as they come up with an idea, execute it, and test its viability

SUPPLIES

- Paper
- Pens, pencils, or other writing implement
- Index cards or other thicker paper (if available)
- Tape or glue
- Yard stick or other measuring device for measuring final towers
- A fan

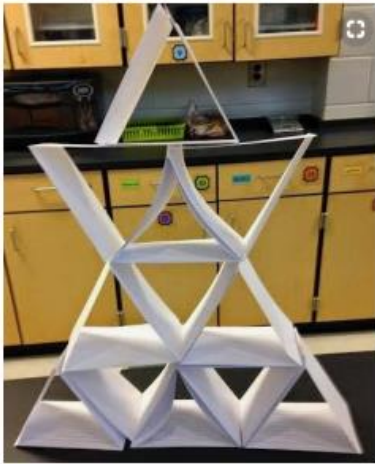
STEPS

1. Alone or in a group, first design your tower on paper. Think about how you can get as high as possible using the strongest shapes! Keep in mind that you can't glue or tape pieces of paper to each other, but you can tape a piece of paper to itself to make it into a shape.
2. Build your tower using the thicker paper (or use normal paper if that's all you have!).

3. Put it to the test! Can it stand up against the wind of a fan? What if you tilt the surface it's built on? What happens if a piece of it is taken away? How high can you build your tower even with all these forces against it?

WHAT DID YOU NOTICE?

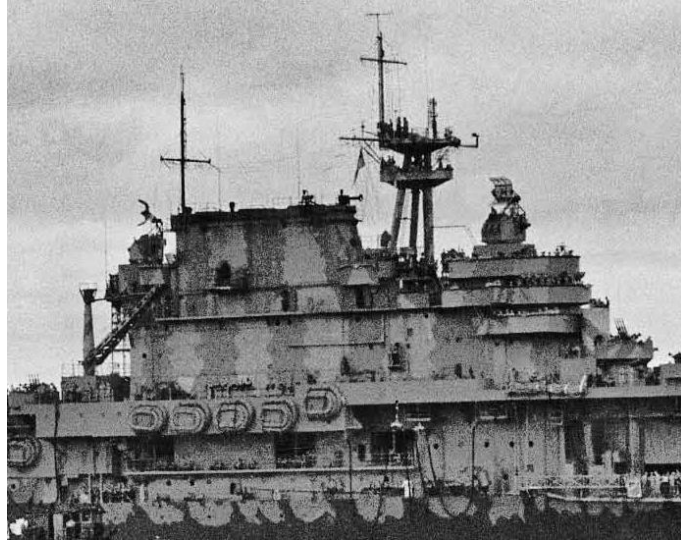
- How do you think weather affected the Island's functionality?
- How do you think being under attack affected the Island's functionality?
- Look at the differences between USS *Hornet* CV-8 and USS *Hornet* CV-12. What changes did they make to the Island design and why do you think they made those changes?



Suggested shapes for your island build!



Image of USS Hornet CV-8.



Closer view of the Island of USS Hornet CV-8.



Image of USS Hornet CV-12.



Closer view of the Island of USS Hornet CV-12.