

Ready, Set, Sail!

Luxury Yacht Design Activity

Situation

Imagine yourself as the potential owner of a luxury yacht with amenities that not even some homes have. The higher the price tag, the more lavish a yacht may be including special custom designed features to gratify the boat owner and operator.



Design and construct a detailed scale model of a luxury yacht that includes the accommodations and amenities listed below.

Resources	
Time	20 class periods
People	Up to 3 per group
Energy	Electrical and wind energy
Information	Concepts of buoyancy, stability, hydrodynamics, modeling techniques, and basic yacht layout and design
Money	Estimated actual cost of \$1,000,000
Tools	Any available in class that can be used safely with teacher permission
Materials	Cotton strips, glue, sealer, and paints for the hull, and any other available in class that can be used safely with teacher permission
Space	LOA to scale must not exceed 50'

Other Criteria

The yacht design must include:

- Sleeping space for six people.
- A small kitchen and eating area.
- A social area (like a living room).
- Space for fishing off the back of the vessel.
- An operational sail.
- An operational motor.

Required

Documentation

The following must be handed in your design portfolio at the end of the activity:

1. Three or four alternate design sketches completed before building.
2. One final design drawing (to be completed before you receive materials).
3. Records of testing using the graphing calculator and CBR and testing tank.