



Boat Builder

STEM Sims

Lesson 3: High Speeds on the High Seas

When the need for speed on the high seas comes, which type of boat hull is best suited to go the fastest in different sea conditions?

Doing the Science

1. Start the Boat Builder Simulation by clicking on the “Sim” tab.
2. Select the round hull, 25 HP motor, antifouling paint, and rudder.
3. Click the “Test” button.
4. Select the “Calm” condition and “Light” cargo load.
5. Click “Begin Test”.
6. Record your speed score in Table 1 below.
7. Repeat steps 2 – 6 with the shallow vee hull and 50 HP motor, remembering to use the trim tabs instead of the rudder.
8. Repeat steps 2 – 6 with the flat hull and 120 HP motor.

Table 1.

Hull	Surface Conditions	Speed Rating
Round	Calm	
Shallow Vee	Calm	
Flat	Calm	
Round	Choppy	
Shallow Vee	Choppy	
Flat	Choppy	
Round	Rough	
Shallow Vee	Rough	
Flat	Rough	

Do You Understand?

1. Which hull is best suited for speed in calm conditions? Why do you think this is?
2. Which hull is best suited for speed in choppy conditions? Why do you think this is?
3. Which hull is best suited for speed in rough conditions? Why do you think this is?