Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Lesson 4: The Point of the Paint**

Antifouling paint keeps barnacles and other organisms from growing on the hull of a boat, but does this actually affect performance?

**Doing the Science**

1. Select the Simulation tab to open the Boat Builder simulation.

2. Select the round hull, 25 HP motor, blue paint, and rudder.

3. Click the “Test” button.

4. Select the “Calm” condition and “Light” cargo load.

5. Click “Begin Test.”

6. Record your ratings 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.

9. Repeat this process with all three hulls, using the antifouling paint. Record your ratings in Table 2.

**Table 1 – Blue Paint**

|  |  |  |  |
| --- | --- | --- | --- |
| **Hull** | **Speed** | **Maneuverability** | **Efficiency** |
| Round |  |  |  |
| Shallow Vee |  |  |  |
| Flat |  |  |  |

**Table 2 – Antifouling Paint**

|  |  |  |  |
| --- | --- | --- | --- |
| **Hull** | **Speed** | **Maneuverability** | **Efficiency** |
| Round |  |  |  |
| Shallow Vee |  |  |  |
| Flat |  |  |  |

**Do You Understand?**

1. Which type of paint offers the best performance?

1. How did this paint affect the performance of the boat?