LO: To understand what water resistance is.  
HOM: Taking responsible risks.

What is water resistance?

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Do you think it is easier to run in air or in water? Explain your answer.

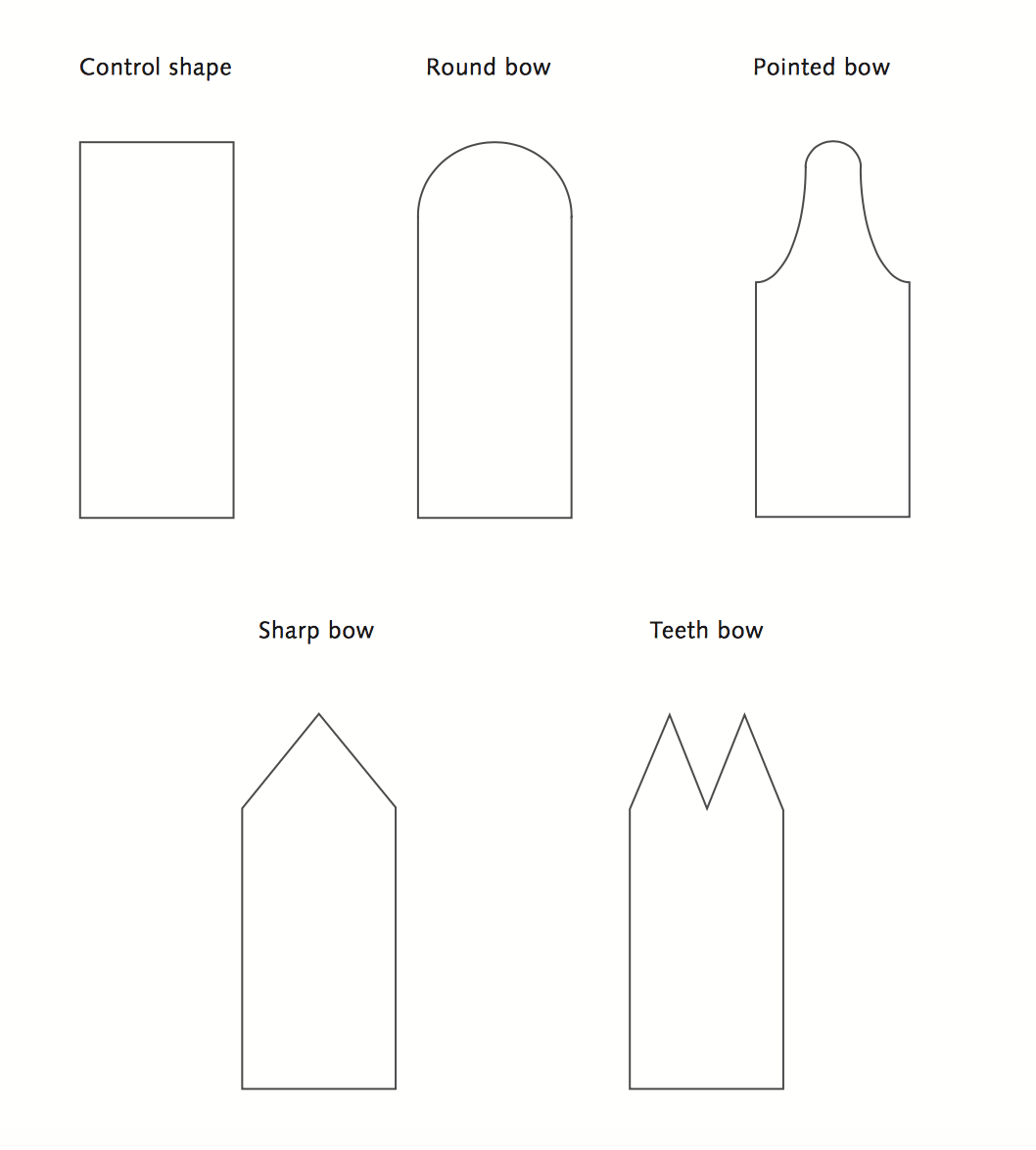
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You will be investigating the best shape for the bow (front) of a speedboat.

Draw below what you think the best shape would be.

Why have you decided on this shape?

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Make your prediction of what shape would get through the water best.

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Investigation:

You may wish to conduct this as an experiment – if you have play-doh or clay or even a plastic milk bottle that you can cut or mould into these shapes.

Hold the shapes vertically, bow downwards, and partly submerged in a bubble bath mixture with the tip of the bow held at the start point.

Time how long it takes the bow to travel through the water.

Record your results:

To work out the average, you must calculate the mean. Add the results and divide by the number of times you’ve added.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Shape of bow** | **Test 1 Time (s)** | **Test 2 Time (s)** | **Test 3 Time (s)** | **Average Time (s)** |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

Write a conclusion about which shape would be best for a speedboat bow.

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Why is it important for bows to be shaped this way?

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