



ANSWERS

1

Boat part	Property 1	Property 2	Best material
Hull	Strength	Stiffness	Carbon fibre composite
Sail control rope	Strength	NOT elastic	Spectra strands
Wing	Strength	Stiffness	Carbon fibre composite
Hydrofoils	Strength	Stiffness	Carbon fibre composite

2

- a If the student has correctly put 'Carbon fibre composite' for the hull material, it's because carbon fibre composite is extremely rigid and strong, and will keep its shape.
- b Marine plywood, although a good material in water, would be too heavy and cause too much drag to be used for hydrofoils.
- c The team would choose carbon fibre composite over aluminium because it is more lightweight than aluminium, which therefore reduces the overall weight of the boat and helps the boat go faster.

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Dependent on student's choice of sport.