



The Rotary Club of York Vikings Solar Boat Challenge 2016



The Competition

The final for the challenge will take place at our annual **'Inspirations' event**, a showcase of students' work in Science, Technology, Engineering and Maths which will take place on **16th June 2016** at the Yorkshire Air Museum, Elvington.

Participants will be asked to design and construct a solar-powered vehicle from the materials provided to your school prior to the event and compete with them in a series of competitions on the 16th June. At the final contestants will be divided into groups by type of vehicle, and there will be a competition for each group. Entries can be from individuals or groups of up to four.

Entry to the competition is free and is sponsored by the Rotary Club of York Vikings.

Regulations and Specifications

Boats

- Design a solar powered boat and to prove that your ideas work build a model of it.
- The boat must be powered by solar panels. A maximum of 3 solar panels can be used to power the boat.
- The model must be made by the team who enter it.

All boats will be entered into one of the following categories on the day:

- The Aquaforce Class moulded mono hull boat
- The Scirocco Class moulded multi hulled boat
- The Free Form Class custom designed moulded hull produced by the entering team.
- The Green Class where the hull is constructed from recycled plastic bottles / containers.

Judging Criteria

The boat will be judged on how quickly it can cover the length of the pool.

Regulations

1. All races will be run in the recognised tank which will be orientated North to South.
2. The maximum length of the boat shall not exceed 550mm
3. The maximum width of the boat shall not exceed 300mm including any methods of propulsion such as paddle wheels or oars.



4. The boat must be fitted with stiff wire loops to fit loosely over the guide wire that keeps the boat on a straight line whilst going down the tank.
5. Only the solar cells can be used to power the boat
6. Only one motor can be used and a maximum of three solar cells are allowed per boat.
7. Only one propeller or water screw is allowed per boat but no limit is put on the size of them and any numbers of paddle wheels or oars are allowed.
8. No commercially produced boat hulls are allowed and all boats must be constructed by the contestants who enter them.
9. No batteries are allowed but capacitors may be used in the electrical circuit.
10. The solar cells and motors must be fitted to the hull in such away as not to be a danger to the operator or other contestants and the solar cells must not be able to fall off into the water.
11. The winner of each category will be the boat deemed by the judges to have covered the length of the tank in the shortest time and to have adhered to the rules. In the event of a tie the tying boats will take part in a best of three lengths of the tank going in alternate directions all other races will take place in the same direction.
12. In the event of any dispute the decision of the senior judge is final and the decision will be based on fairness and the guiding principles of friendly competition.
13. Disqualification will occur if teachers assist their pupils during the official test.
14. The tank will have a start line 550mm from the top of the tank, plus a finishing line of 550mm at the finishing end.

