

The HCGB will be developing prototypes and construction guides throughout 2011, with final products being available for publicity early in 2012. The Hovercraft Challenge to Youth will be inviting entries from schools, youth groups, Scout groups, ATC squadrons and any other organisation in the age range 11-16 years (year 7 to year 11) from Easter 2012 for a formal start to the Challenge in September 2012.

The National Final will take place in July 2013 at a suitable venue which has yet to be negotiated. We will limit entries to 50 groups for the first year and hope that this can be expanded in the years to follow. We are inviting schools and youth groups to register their interest as early as possible so that we can keep you up to date with progress.

To pre-register please contact us on:

challenge-to-youth@hovercraft.org.uk



Participating groups will be given access to a dedicated website with building guides, hints & tips, adverts from parts suppliers, forums for Q&A discussion with HCGB experts and with other groups.

www.hovercraftchallengetoyouth.org.uk

Groups will also become members of the HCGB with access to the club website and the years of experience in building hovercraft that its members will be glad to share with you.

WHAT IS THE HOVERCRAFT CLUB?

The Hovercraft Club has become the controlling body for light hovercraft in Great Britain, and is associated with hovercraft clubs in many other countries around the world.

In addition to the UK National Championships, a European Hovercraft Racing Championship Series is held each year, with rounds in various countries including Britain. Every other year a World Championship Hovercraft Racing Series takes place somewhere in the world! These events bring together international hovercraft racers, designers, mechanics and their families from many nations.

There is also the opportunity to take part in International Cruising events including, for example, exploring French rivers. Cruising events are less competitive and allow drivers to explore areas such as coastal mud flats and stretches of river which can often only be traversed in a hovercraft.



Further information

Can be obtained on the website on the Information Page, Events Page, including a list of all HCGB Publications

See also leaflets

Building a Hovercraft - How the Club can help
Hovercraft Club of Great Britain - Information

ALL ENQUIRIES REGARDING HCGB TO:

Information Officer

HCGB Ltd

PO Box 328

Bolton BL6 4RR

01204 841248

info@hovercraft.org.uk

Website: www.hovercraft.org.uk



2013



DESIGN, BUILD, COMPETE

Are you up to the Challenge?

The Hovercraft Challenge to Youth is open to schools and youth groups in the 11-16 age range and presents young people with hands-on real world exposure to the engineering challenges that building a hovercraft can present. The Challenge is to build a fully working hovercraft within one school year and culminates in a National Final where the teams can demonstrate their designs, their driving skills and their achievements in the hope of being crowned National Champion.



Not only does the Hovercraft Challenge approach the idea of engineering from a less mainstream direction than normal lessons or after school clubs. It also encourages creativity and most importantly enthusiasm and cooperation in problem solving; invaluable skills for any young person whether they decide to pursue an engineering career or not. One thing is certain; being in a Hovercraft Challenge team is an experience that its members will never forget. This is a project which will enhance any young person's portfolio, and could make the difference at those important interviews for College and University places, apprenticeships or jobs.

DO YOU DARE TO RIDE ON AIR?

A hovercraft is a vehicle that is supported off the ground by air and is propelled by air, it is unique in that it is equally at home on land or over water, however it has no wheels and no brakes!

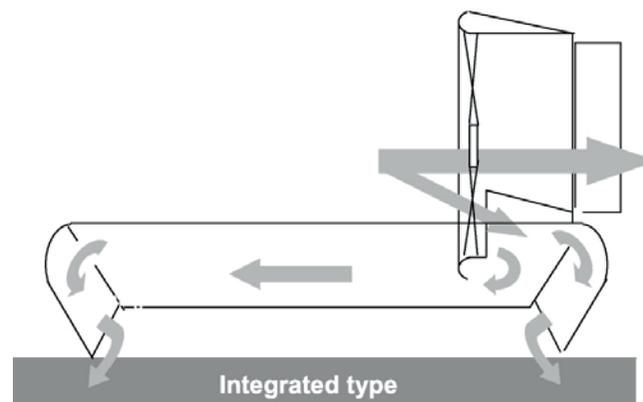
It was Sir Christopher Cockerell who invented the hovercraft. He proved that the idea worked by using an industrial air blower and two tins, one inside the other, blowing against a set of kitchen scales.

Early hovercraft did not have skirts; this made them look very impressive floating along with clear air underneath them. Unfortunately the ground clearance was only a few inches. This meant that the craft could only travel over very small obstacles. Then flexible skirts were introduced to increase the height of the rigid hull from the ground, allowing it to negotiate larger obstacles. It also increased the stability of the vehicle.

Modern hovercraft still use the same basics as the original ones, but with a few refinements.

There are two main types of hovercraft.

The easiest to build and run is normally an integrated type, which is the type that will be used for the Challenge to Youth.



It uses one engine to drive one fan. Most of the air goes straight out the back of the duct to propel the vehicle along. The rest of the air (about a quarter) is ducted down into the hull and released through holes into the skirt. The skirt has a constant supply of air to it, so it doesn't matter if it gets a puncture. It can even suffer some damage without too much loss of performance.

The other type of hovercraft has two engines; one at the front for lift, and one at the rear for thrust. The rear engine may drive one or more fans.

Hovercraft are steered with rudders behind the thrust fan. This means the more air that travels past the rudder the more easily the craft will turn. It is also possible at low speeds to turn using body weight alone.



Driving a hovercraft is a unique experience. Some have likened it to driving a car on ice, but really nothing compares to it, which is why when you first drive a hovercraft it's best to try it at an organised event.

The National Final of the Hovercraft Challenge to Youth will test you and your hovercraft -

ARE YOU UP TO THE CHALLENGE?