



The HB Ocean Adventure Schools Programme is a Galway Stopover Volvo Ocean Race 2008-2009 Legacy Initiative. It introduces teachers and students in primary and secondary schools throughout Ireland to the sport of sailing, the marine environment, Ireland and its history with the sea, a variety of geography lessons and marine careers.

On Monday the Green Dragon completed the 'In Port' racing in Qingdao, achieving 4<sup>th</sup> place overall gaining 2.5 points on the score board which takes them to 30 points overall and extends the gap to six points from Ericsson 3 in fifth.

### OCEAN FACTS & CLASSROOM TASKS...

- The Green Dragon Boat is a 'Volvo Open 70', which is one of the fastest **monohull boats** on the planet. You can take a tour of this boat in 3D at [www.volvoceanrace.org/multimedia/3d-yacht-tour](http://www.volvoceanrace.org/multimedia/3d-yacht-tour) . Learn more about monohull boats at [www.letsdoitschools.com](http://www.letsdoitschools.com)

*A **monohull** is a type of boat having only one hull, unlike multihulled boats which can have two or more individual hulls connected to one another.*

*Among the earliest hulls were **simple logs**, but these were generally unstable and tended to roll over easily. Hollowing out the logs into a dugout canoe doesn't help much unless the hollow section penetrates below the log's centre of buoyancy, then a load carried low in the cavity actually stabilises the craft. **Adding weight or ballast** to the bottom of the hull or as low as possible within the hull adds stability.*

*Naval architects place the centre of gravity substantially below the centre of buoyancy; in most cases this can only be achieved by adding weight or ballast. The use of stones and other weights as ballast **can be traced back to the Romans, Phoenicians, and Vikings**. Modern ships carry tons of ballast in order to maintain their stability; even heavily laden cargo ships use ballast to optimize the distribution of weight.*

- Even though the crews onboard this epic race are hundreds of miles away from land and battling conditions 24 hours a day, they are always in touch with the Race Head Quarters, their team and friends and family. How do they communicate with all of these people? Well, all of the Volvo Open 70's have been loaded with a fully operational media desk provided by **Livewire** and **Immarsat Systems**, this will facilitate all media and communication systems onboard. Learn more about the communications onboard at [www.greendragonracing.com](http://www.greendragonracing.com)

### **Green Dragon Onboard Communications**

2 Apple computers

2 PC's

5 High Definition cameras fixed onboard

1 High definition handheld for media crew member

1 Editing suite onboard

*The media crew member serves as the vital link between the crews racing and everyone at home. They are the journalists on the front line and will provide all of the content for Volvo Ocean Race TV, which will produce 39 half hour programmes to run weekly and 9 hour long*

*programmes to run monthly over the duration of the race. For the first time in an event like this all footage filmed onboard Green Dragon will be in High Definition, allowing all of the action and drama from the race to be shared with a global audience at the highest possible level.*

*Images and video footage are sent back to Volvo Ocean Race HQ via Immarsat Fleet Broadband. FleetBroadband is the first maritime communications service to provide broadband data and voice, simultaneously, through a compact antenna on a global basis. Based on 3G mobile phone standards, it provides constant, simultaneous access to voice and broadband data, allowing the crew onboard Green Dragon to be in constant contact no matter where they are on the planet. Operational systems can be running online and you can still access email, the internet and make phone calls - all via a single terminal.*

## **Green Dragon Communication Capabilities**

### **Standard IP**

*Up to 432kbps over a shared channel, for email, internet and intranet access.*

### **Streaming IP**

*Guaranteed data rates on demand up to 256kbps.*

### **Voice**

*Make phone calls at the same time as accessing data applications.*

### **ISDN**

*Supports ISDN at 64kbps for legacy applications.*

### **SMS text**

*Send and receive text messages*