

Webcast for Science week 2010

Secondary / Higher version

Suggested age range: 14+ yrs

Structure: live web cast mixed with prerecorded programme about energy, fossil fuels and renewables. Finishing with a hands-on Polymer science activity.

Further detail

Live Welcome from Rob Farr - The Energy MC. followed by

PART 1 - ENERGY

Defining energy, Quantity of energy consumed in Joules, energy mix and global sources of energy. Rob explains the difference between a PRIMARY energy source and a SECONDARY energy source.

PART 2 - FOSSIL FUELS

Using graphics and film footage from Petroplus Coryton refinery, Rob looks at how crude oil was formed, and how this Hydrocarbon mixture is separated by FRACTIONAL DISTILLATION. Two staff case studies are included in the programme - a chemist and an instrumentation apprentice. Each case study emphasises the career opportunities within the energy industries.

The programme goes on to look at how fuels are distributed across the UK and the quantities of fuels that Coryton produces.

PART 3 - RENEWABLE ENERGY

Filmed on location in Yorkshire and Spain, Rob is seen at a Wind farm and investigates solar power and how it is stored. Specially designed graphics detail why solar power is less successful here in the UK compared to Spain.

Live mentions and answering of questions will conclude the webcast before groups are invited to take part in the hands on activity.

HANDS ON ACTIVITY (Optional extra activity)

A Borax and PVA 'mix - in'. Rob will be mixing PVA glue and Borax with food colouring resulting in some lovely SLIME! Viewers are invited to take part in this activity following Rob's instructions.