WOMEN IN ENGINEERING 2021
TECHNOLOGY ACTIVITY
High-tech for the ultimate future Lifeboat

Introduction:

The world's first unsinkable lifeboat was designed in 1785 by Lionel Lukin, using the River Thames in England to test his various experiments. The simple boat was made with materials such as wood, cork and copper plates, a basic shell that would carry up to 20 people.

Fast forward over 200 years and you don't need to be on a super yacht to enjoy the high-tech advantages on todays marine vessels. RNLI lifeboats now feature chart plotters, autopilot and even self-righting technology in the case of capsizing!

Imagine another 20, 30 or even 50 years in the future, what new technology could lifeboats have onboard to help save even more lives at sea?

What you will need:

Printer

Paper

Drawing equipment

Method:

1. Start with a quick discussion, drawing on students' ideas and knowledge on what technical systems may be on a lifeboat? Prompt discussion with questions such as 'How do lifeboats know where to go, communicate with other marine vessels or see during darkness?'
2. Review and discuss the 'High Tech Lifeboat' graphic together.
3. Think forward 20 years, if you were in charge of your own lifeboat, what new technology and features would you like to see on it. Using the template, design what future high-tech gadgets would you put on your lifeboat. Ideas should be annotated and labelled to explain what they are and how they would work.

Questions to spark more curiosity / critical thinking:

- Could drones be used to help save lives during a shout?
- How could you control a drone from the lifeboat? Perhaps a games console controller or VR headset?
- Other than diesel engines, how could boats be powered?
- Could lifeboats communicate together, in a group search?
- What features would you put inside the boat to make a casualty and crew feel more comfortable?

Learners could work as individuals or in small groups to complete the activity. Teachers can assess their responses to check understanding of technical language and basic product designing skills.

Encourage learners to be innovative, learners should be given the opportunity to come up with their own ideas for integrating the product and be guided with examples where necessary.

What this teaches us:

- Encourages students to think about how technology is changing our society
- Behaviour of real-world problems and physical systems
- Conceptual design and invention

The next step…….

The RNLI website rnli.org gives plenty of information on all our lifeboat fleet and you can find lots of videos on RNLI rescues on the RNLI YouTube channel.

Check out the below links for some great videos and interactive 3D tours of the inside of a lifeboat.

RNLI Shannon class lifeboat self-righting trial

How the Shannon class self-rights

RNLI Shannon class 3D interactive tour

RNLI Falmouth Severn class interactive tour

RNLI Severn class lifeboat information

How this links to the RNLI:

As technology advances and our world changes, it is important that the RNLI continue to innovate and build on the latest advances in science, technology and engineering.

Not only on lifeboats, we also use technology across the RNLI. Network connectivity for our lifeboat stations, portable tablets for our face to face fundraisers, high spec computers for our design engineering team, or the latest in creative studio applications for video editing, web development and creating footage for our important Saving Lives at Sea television programme.

Whether you have an interest in technical CAD drawing, website development, media studies or IT and infrastructure to name a few, we have a place here in the RNLI.

Interested in a future at the RNLI? Check out further information on our apprenticeship scheme.

We would love to see how you got on with the challenge so please send any photos you don't mind us sharing on our webpage to womeninengineering@rnli.org.uk (please note that we will require consent to share these photos and an automated email will be sent requesting consent).