

WOMEN IN ENGINEERING 2021

RNLI THEME

Object Suspension Challenge



Introduction:

Tying a knot can save your life and here is where you can discover and try all the knots from a Fisherman's Knot to a Tautline Hitch that any sailor, climber or camper will need.

The objective of this activity is to suspend an object (egg) using a shoelace for 30 seconds. Are **you** up to the challenge?!

What you will need:

Egg (possibly with some on reserve!) or similar object

Shoelace / string

Timing device

Method:

Using the equipment listed above, see if you can create a structure that can suspend an egg.

You can use as many different knots as you wish, as long as a length of string you want, just make sure that you can hold or hang it (without supporting the object with anything other than the string) for 30 seconds!

How to tie basic knots:

<https://www.animatedknots.com/basic-knots>



What this teaches us:

How did you find this activity & more importantly how many eggs were broken along the way? Below is a list of questions for you to ask yourself and discuss with the people around you as to factors that could impact the outcome:

Can you add another egg?

What things do you need to consider?

Does the surface of the object make a difference?

Do you need to add more structure to the suspension?

Does the shape of the object make it more difficult / easy?

Which knot worked the best?

The next step.....

Here are some other links to egg STEM based activities:

<https://littlebinsforlittlehands.com/egg-science-experiments-for-easter-stem/>

<https://www.science-sparks.com/10-egg-science-experiments/>

How this links to the RNLI:

The RNLI uses knots every day from securing tow lines whilst out at sea to mooring boats up in harbours. Often some of these knots are needed to be performed under the pressure of a rescue in some horrendous weather conditions.

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).