

# Network Rail's

S.T.E.M.

Activities

# Pack

Issue 4

# Introduction

At Network Rail the safety of our passengers is paramount, and we continuously aim to 'put them first'. Acknowledging this we have created a STEM Activities Pack encouraging you stay at home and keep your children educated and occupied during these unprecedented times.

We have created this pack of activities and resources, because we understand how challenging juggling work, parenting and home schooling must be. We will update the pack weekly with:

## **STEM Activities**

The pack contains STEM resources for different age groups, with information on what you can expect the children to learn and also how you can link that to the railway, so they can understand how it connects to your job too. We will be adding to these resources regularly to try to keep them entertained

## **Additional Learning Resources**

At the back of the pack you'll find a summary of other available learning resources with links. The aim of this section is to make it as easy as possible for you to know what resources are available, rather than having to trawl to find them. We will continue to add to this section and welcome you to share anything you find with the team, so it can be included. We will review the usefulness of these resources to expand and provide more detail, as the pack grows each week.

*Please get in touch with the team if we can help, if you have any ideas or suggestions or things you feel would help you and other parents. The team can be contacted on [earlyengagement@networkrail.co.uk](mailto:earlyengagement@networkrail.co.uk). We will begin to gather the questions we hear most often into one place and will add a Frequently asked questions page into the document soon.*



# BREAKING NEWS



The answer to your home schooling prayers!  
With schools closed, check out our engaging engineering projects

**FREE** resources

FOR AGES 3 - 19

Register today at [www.LeadersAward.com](http://www.LeadersAward.com)

Follow @Primaryengineer on Instagram, Facebook and Twitter for  
regular updates and take part in our online engineer interviews

Register at <https://leadersaward.com> to download free home learning, classroom resources, live engineer interviews and discover the world of STEM. The deadline for the Primary Engineer: 'If you were an engineer, what would you do?' has also been extended! Register to take part in this fantastic competition at home!

# Free Science Curriculum Access



Developing Experts is delighted to team up with Network Rail to offer its complete curriculum for children aged 4 to 14 years in science free to schools. It's ideal for teaching, revision, and remote home learning and provides a growing library of over 700 interactive, online lessons with practical investigations, handouts and assessment quizzes, fully mapped against the National Curriculum. Lessons come with experts from university and industry and are narrated with unforgettable stories - told through stunning images and videos.

Find out more about the platform <https://jwp.io/s/NZnqmDHu>  
To request a free account email [sarah@developingexperts.com](mailto:sarah@developingexperts.com)

# Virtual Faraday Challenge

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The Faraday Challenge is open for anyone between 7-15, young people can do this at home, in school, individually or as a group or family, without the need for special equipment. The Virtual Faraday Challenge brings together STEM subjects (science, design and technology, engineering and math's) in an engaging way and encourages the development of young people's problem solving and communication skills. It challenges young people to see if they can assist the work of Airbus in helping people around the world in times of need and work in the way engineers do in designing a new product.



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The best entries will receive a prize and may even feature on our website. To find the brief and details on how to enter visit, <https://education.theiet.org/faraday-challenge-days/virtual-faraday-challenge/>

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Women in Science and Engineering want to engage more girls to consider studies and careers in STEM, they have created an interactive quiz to help girls find rewarding careers in STEM.



MY SKILLS MY LIFE

Take part in the quiz to discover your personality type, and see how your skills match up to Science, Technology, Engineering and Maths (STEM) careers. Connect with real people in STEM careers who have the same personality as you. What do they do? What do they earn? How did they get there? It's all about your skills, and how you can make them work for your life. [To find out more, get in touch!](https://www.myskillsmylife.org.uk)

FOR MORE INFO VISIT:

<https://www.wisecampaign.org.uk/>

TO PLAY THE GAME VISIT:

<https://www.myskillsmylife.org.uk>



is a  
campaign  
by



## Designing and Modelling

Design and build a model of different areas in your house, garden or town!



5-8



9 - 11



12 - 14



15+

### WHAT YOU'LL NEED

- Any materials available to help you build your model
- A pencil and paper to draw out your design plan

### DURATION:

- o 1-2 hours

Click [HERE](#) to Access the Lesson

### LEARNING OUTCOME(s) / RAIL LINK

Consider the following:

- o Here at Network Rail, we need designers and construction teams to help create buildings, track, bridges and more – they're essential to our business.
- o This activity will encourage young children to develop their design skills, their confidence in construction and understanding of materials.
- o Many of our Roles at Network Rail require our staff to work together! Encourage your children to work as a team to complete this challenge.



Kids D.I.Y.



SUPPORT  
NEEDED...



ALL HANDS  
ON DECK!

## Computer Coding

Activities and games and to help you understand and try your own computer coding



5-8



9 - 11



12 - 14



15+

### WHAT YOU'LL NEED

- A laptop, smartphone or electronic device to access the activities

### DURATION:

- o 1 hour

Click [HERE](#) to Access the Lesson

### LEARNING OUTCOME(s) / RAIL LINK

Consider the following:

- o Computer coding is important for most company development nowadays, and here at Network Rail, we value these skills as they keep our communications, signalling and day to day activities running.
- o This activity will encourage young children to develop their computer coding skills in a fun and relaxed way through videos, games and activities



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## Understanding our Natural Resources

Activities and videos for understanding how to use natural resources and where to find them



5-8



9 - 11



12 - 14



15+

### WHAT YOU'LL NEED

- Laptop, smartphone or electronic device to access videos

### DURATION:

- o 1 hour

Click [HERE](#) to Access the Lesson

### LEARNING OUTCOME(s) / RAIL LINK

#### Consider the following:

- o Network Rail is pledging to become more sustainable despite our increasing number of passengers. In order to do this, we need to ensure we're using sustainable resources to reduce our ecological/environmental footprint.
- o This activity will help your children to understand how innovation, creativity and sustainability can increase their skill sets and save the environment

### PARENT INVOLVEMENT (Star Rating)

*A scale the level of involvement from the parent required to complete the task*



## Balloon Powered Car

Make a balloon-powered car to learn about some of the aspects of friction and extreme design that design engineers face and work with all the time.



5-8



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12 - 14



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### WHAT YOU'LL NEED

- A bottle and 4 bottle caps
- Wooden skewers (or an alternative)
- Balloon
- Straws
- Scissors and tape

Click [HERE](#) to Access the Activity Sheet

### DURATION:

- o 45 mins

### LEARNING OUTCOME(s) / RAIL LINK

Consider the following:

- o Design is an important part of STEM as all human made tangible items have had some form of design, more so for engineering and technology which is something Network Rail highly encourages.
- o This activity will encourage young children to develop their problem-solving skills and design skills.



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## Developing a Programmable System

STEM Challenge to develop your very own tracking programmable system using coding and data processing



5-8



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### WHAT YOU'LL NEED

- A laptop, smartphone or electronic device to access the system

### DURATION:

- o 2-3 hours

Click [HERE](#) to Access the Programmable System

### LEARNING OUTCOME(s) / RAIL LINK

Consider the following:

- o Developing a programmable system is a great skill to have when considering STEM as it becomes more prevalent in society and business.
- o This activity will encourage young adults to consider IT and programming in their future whilst increasing their problem-solving skills



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## Being Persuasive and Building a Debate

Use these videos to improve your persuasion and communication skills to help communicate your point of view



5-8



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### WHAT YOU'LL NEED

- A laptop, smartphone or electronic advice to access the videos

### DURATION:

- o 30 minutes

Click [HERE](#) to Access the Videos

### LEARNING OUTCOME(s) / RAIL LINK

Consider the following:

- o In order to 'sell' your ideas, projects, decisions and your own brand, arguing skills and persuasion skills are really useful. You can use these skills in interviews, meetings, presentations and more.
- o Try out your new skills with friends, maybe begin your own debate about a subject you're interested in.



## Understanding Different Materials

Watch these videos to gain a better understanding of how materials are different from one another, how they can be used for different things and how each one can be beneficial to the user.



### WHAT YOU'LL NEED

- Laptop/Desktop or Mobiles Device (i.e. iPad)
- A house filled with different types of materials

### DURATION:

- Roughly an hour to watch the videos and complete the two activities

Click [HERE](#) to Access the Videos and Activities

### LEARNING OUTCOME(s) / RAIL LINK

Consider the following:

- At Network Rail, we rely on a variety of different materials from different place to keep the trains running. This can range from the steel that forms the rails to the h-vis clothing our operations and maintenance teams wear.
- Being aware of how different materials can benefit or hinder different things is a great skill to have and will improve your resourcefulness!
- Don't forget to search for the different materials around your house and have a think about their use – do the bricks and cement keep your house upright? Is your duvet soft and warm? Are your cupboards strong and large enough?

### PARENT INVOLVEMENT (Star Rating)

*A scale the level of involvement from the parent required to complete the task*



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## BBC Bitesize Exercise Clips

Encourage your children to keep healthy and active by understanding the importance of exercise with these BBC Bitesize clips.



5-8



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### WHAT YOU'LL NEED

- Laptop/Desktop or Mobiles Device (i.e. iPad)
- Stationery (for extended activity)

### DURATION:

- 5 clips short clips with durations between 1-2 minutes.

Click [HERE](#) to Access the Lesson

### LEARNING OUTCOME(s) / RAIL LINK

Consider the following:

- At Network Rail the health and wellbeing of our staff is imperative, and we encourage everyone to remain healthy both mentally and physically.
- Consider why it is important to exercise and the benefits it has on the body.
- Extended Activity: Children can showcase their knowledge by creating a poster advertising why we should exercise.

### PARENT INVOLVEMENT (Star Rating)

*A scale the level of involvement from the parent required to complete the task*



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## Squashed Tomato Challenge

STEM Challenge where students design and build a model to move tomatoes up and down a 'mountain' without damaging them.



5-8



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### WHAT YOU'LL NEED

- Full list of recommended resources found in the activity sheets on the link.

### DURATION:

- o 2-3 hours

Click [HERE](#) to Access the Lesson

### LEARNING OUTCOME(s) / RAIL LINK

Consider the following:

- o Network Rail transport goods as well as people around the country daily, and endeavour to do this safely without causing any damage. How can your children transport the 'goods' from one location to another without causing any damage?
- o This activity will encourage young children to develop their problem-solving skills, understanding that the first option may have to be adjusted several times in order to find a suitable solution.
- o Many of our Roles at Network Rail require our staff to work together! Encourage your children to work as a team to complete this challenge.

### PARENT INVOLVEMENT (Star Rating)



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## Learning to Use a Map

Refresh your memory of your local area and gain knowledge in creating and reading maps



5-8



9 - 11



12 - 14



15+

### WHAT YOU'LL NEED

- Pens
- Colouring pencils
- Memory of your local area

### DURATION:

- Roughly an hour

Click [HERE](#) to Access the Activity Sheet

### LEARNING OUTCOME(s) / RAIL LINK

Consider the following:

- Here at Network Rail, having a concept of what local areas look like is important for rail development, track expansion, connecting countryside areas and ensuring the environment and countryside is protected. Being able to use and create maps is an important skill to have when considering the development of your local area.
- Remember to colour your map so you can see what parts are green areas and which parts are residential
- You can use google maps and online pictures if you can't remember what your local area is like

### PARENT INVOLVEMENT (Star Rating)

*A scale the level of involvement from the parent required to complete the task*



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## Urbanisation and Population Growth

Learn about how our population is growing, what the impact on this is for the environment and new innovations to stop the impact of this.



5-8



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12 - 14



15+

### WHAT YOU'LL NEED

- Laptop, desktop, tablet or Phone

### DURATION:

- 10 – 15 minutes per activity sheet, video and quiz

Click [HERE](#) to Access the Videos, Quiz's and Activity Sheets

### LEARNING OUTCOME(s) / RAIL LINK

Consider the following:

- At Network Rail, we have a huge interest in the growth of the population as it impacts the amount of people using trains and the amount of areas that will need increased train infrastructure.
- This is something that industries will need expertise in in the future making this valuable information.

### PARENT INVOLVEMENT (Star Rating)

*A scale the level of involvement from the parent required to complete the task*



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## Become a DEN-gineer

Get active today by creating your own free-standing den using the materials you can find around your house. You can create the structure inside your house or in the garden. Remember there needs to be enough space for at least one person to sit in the den!



5-8



9 - 11



12 - 14



15+

### WHAT YOU'LL NEED

- Holding materials such as poles, washing lines, cardboard boxes ...
- Soft materials such as cushions, blankets, sheets ...
- Fastening materials such as pegs, elastic bands, tape ...

Click [HERE](#) to Access the Full Instructions

### DURATION:

- Roughly 45 minutes

### LEARNING OUTCOME(s) / RAIL LINK

Consider the following:

- Here at Network Rail, we look for more than engineers. We want problem solvers, innovators, team workers and good communicators. Being able to source materials from a variety of rooms will contribute to problem solving, resourcefulness and potentially team work if this is a group activity. This activity should also challenge your creativity and building skills
- Remember, it's okay when things don't work first time – just try again!
- Don't forget to tell an adult what you're doing before you start.

### PARENT INVOLVEMENT (Star Rating)

*A scale the level of involvement from the parent required to complete the task*



## Write a Newspaper Article

This is a good opportunity to showcase your knowledge on an area of your choice. This could be Coronavirus related, wellbeing advice, current events or something else entirely.



5-8



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12-14



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### WHAT YOU'LL NEED

- Pens
- Colouring pencils
- An interesting subject to write about

### DURATION:

- Roughly 30 minutes to an hour

### LEARNING OUTCOME(s) / RAIL LINK

Consider the following:

- Being able to write effectively is a skill that is needed in later life, whether you're promoting information, writing to colleagues or creating a blog, the way you write is important.
- Remember to create a catchy title, use quotes, alliterations, metaphors and similes, structured paragraphs and varied sentence lengths.
- Once you've written your Article, don't forget to draw the picture for the front page.

### PARENT INVOLVEMENT (Star Rating)

*A scale the level of involvement from the parent required to complete the task*

Click [HERE](#) to Access the  
'Activity Sheets'

## Bridge Building

Create a 50 cm (span) bridge using the materials listed below that can hold the weight of a food tin and other weighted objects.



5-8



9 - 11



12 - 14



15+

### WHAT YOU'LL NEED

- Straws (or try dried pasta, pens, or any long material)
- String
- Tape
- Elastic Bands
- Food tin (or any weighted object))

Click [HERE](#) to Access the  
STEM instructions

### DURATION:

- Roughly 30 mins

### LEARNING OUTCOME(s) / RAIL LINK

Consider the following:

- Creating bridges are a fun way to improve your knowledge of balance, weight and your own dexterity.
- The rail industry requires more than just technical minds, creativity is key for any job on the railway. Help your children to explore their creative side whilst building this structure

### PARENT INVOLVEMENT (Star Rating)

*A scale the level of involvement from the parent required to complete the task*

## Climate Change

Look through the documents attached and discover more about climate change through videos, documents and activities



5-8



9 - 11



12 - 14



15+

### WHAT YOU'LL NEED

- Laptop, desktop, tablet or Phone

### DURATION:

- 10 – 15 minutes per activity sheet

Click [HERE](#) to Access the  
'Activity Sheets'

### LEARNING OUTCOME(s) / RAIL LINK

Consider the following:

- Climate change is a growing issue that will affect life as we know it. It is important to understand how climate change began, what makes it worse, what will happen if human kind doesn't act and how we can stop it.
- This is something that industries will need expertise in in the future making this valuable information.

### PARENT INVOLVEMENT (Star Rating)

*A scale the level of involvement from the parent required to complete the task*



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ON DECK!



## Time Capsule Activity Sheets

Challenge the creative minds of your children with this COVID-19 activity pack. Whether it's colouring or interviewing their parents, children can create memories to remember 2020 in a positive light!



5-8



9 - 11



12 - 14



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### WHAT YOU'LL NEED

- Pencils
- Colouring Pens
- Paint (optional)
- ... and the creative minds of your children!!!

### DURATION:

- 10 – 15 minutes per activity sheet

Click [HERE](#) to Access the  
'Activity Sheets'

### LEARNING OUTCOME(s) / RAIL LINK

Consider the following:

- Things do not always go to plan on the railway and resilience and adaptability are too vital qualities often required from our employees. Teaching your children from young how to view to the positives in negative situations can develop these behaviours.
- The rail industry requires more than just technical minds, creativity is key for any job on the railway. Help your children to explore their creative side whilst completing this workbook.

### PARENT INVOLVEMENT (Star Rating)

*A scale the level of involvement from the parent required to complete the task*



## How to be Safe Around Electricity

BBC Bitesize has created a short lesson teaching the importance of safety when handling electric appliances in the home.



5-8



9 - 11



12 - 14



15+

### WHAT YOU'LL NEED

- Laptop/Desktop or Mobiles Device (i.e. iPad)

### DURATION:

- 10 minutes

Click [HERE](#) to Access the Lesson

### LEARNING OUTCOME(s) / RAIL LINK

Consider the following:

- Network Rail is a safety critical company, meaning the safety of our employees and passengers is at the forefront of what we do. 'Everyone Home Safe Every Day' is our promise to the nation, underpinning all our work and activities.
- Children should watch the animated clip, outlining safety considerations to be taken around the home and complete the activity underneath to show their understanding.
- Challenge Children to 'Close Call' any behaviours at home that could be deemed as 'unsafe'.

### PARENT INVOLVEMENT (Star Rating)

*A scale the level of involvement from the parent required to complete the task*



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## Balloon Cup Racers

Have your children manoeuvre their 'cup transport' models around the course using the wind force from a balloon.



5-8



9-11



12-14



15+

### WHAT YOU'LL NEED

- Plastic cups (preferably of different sizes)
- Clear Table/Board
- Masking Tape (to create your course)
- Balloons
- Stationery (for cup model design)



### DURATION:

- 15-20 minutes: Model Design
- 5-10 minutes: Course Design
- 15-20 minutes: Practical Task

### LEARNING OUTCOME(s)

- Consider how different cup sizes impact the amount of force needed to move the cup.
  - Children should also consider how their designs impact the weight of the cup and in turn the force required for movement
- **Safety Consideration:** More force may increase the speed, but it will also decrease the control of the cup resulting in the cup falling off the course
  - Children should consider the effect of speed and control on safety.

### RAIL LINK

When designing a train many factors have to be accounted for such as materials, speed, infrastructure and most importantly safety.

### Consider the following:

- Imaginative designs/add on features can increase the passenger experience on the train, but can too much decrease efficiency?
- Higher Speeds can get passengers from A to B quicker however how does this impact the safety of the passengers?
- Lower Speeds can increase safety but how will the mood of the passengers be affected with an increased journey time?
- The rail infrastructure is varied around the UK. Will different course designs impact the amount of speed and control required to complete the course?

### PARENT INVOLVEMENT (Star Rating)

*A scale the level of involvement from the parent required to complete the task*



Kids D.I.Y.



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NEEDED...



ALL HANDS  
ON DECK!

## Balloon Cup Racers

Have your children manoeuvre their 'cup transport' models around the course using the wind force from a balloon.

### INSTRUCTIONS

1. Gather the materials that you need to create your cup and course.
2. Decorate your cup models making sure they are different weights and sizes.
3. Using masking tape, parents will need to create the course. This can include straight lines or curves.
4. Place your cup models at the beginning of the course.
5. Blow up your balloon but do not tie it.
6. Release the air inside the balloon near the first cup to allow it to move.
7. Note how the design of the cup has impacted how much force is required for movement.
8. Repeat step 6 to move your cup around the course.
9. Once your first cup has reached the end of the course, blow up your balloon again to guide the remaining cups around the course.
10. Reflect on how the force needed may have differed to the first cup.

## Don't Tip the Ship!

Create your paper boat and investigate how the size and shape of the model affects the weight it can carry before it sinks!



5-8



9 - 11



12 - 14



15+

### WHAT YOU'LL NEED

- 1cm<sup>2</sup> paper
- Ice cream tub, or any tub/tank
- Coins (to act as weights)
- Sellotape
- Scissors
- Cloth/Mop (for any spills)
- Optional Extra Materials for the boat (foam, foil, plasticine)



### DURATION:

- 1 hour

### LEARNING OUTCOME(s)

- Consider how different the size, shapes and materials (if you opt to include this option) will affect the amount of coins (weight) the model boat can carry.

### RAIL LINK

Similarly, to this boat exercise, when designing the railway (infrastructure and modes of transport) many factors must be considered including:

- Size/Shape of infrastructure/vehicles
- Cost of Materials
- Meeting the Customers' Needs

### Consider the following:

- Less weight in the vehicle may decrease the likelihood of damage/sinking (increasing safety) but how could this impact customer satisfaction?
- Increasing what the vehicle can carry might meet the customers' needs but what impact could too much weight have on the efficiency and safety of the vehicle?
- Changing the material from cheaper resources (paper) to more sturdier materials may increase efficiency and quality but what impact does it have on cost?
- 

### PARENT INVOLVEMENT (Star Rating)

*A scale the level of involvement from the parent required to complete the task*



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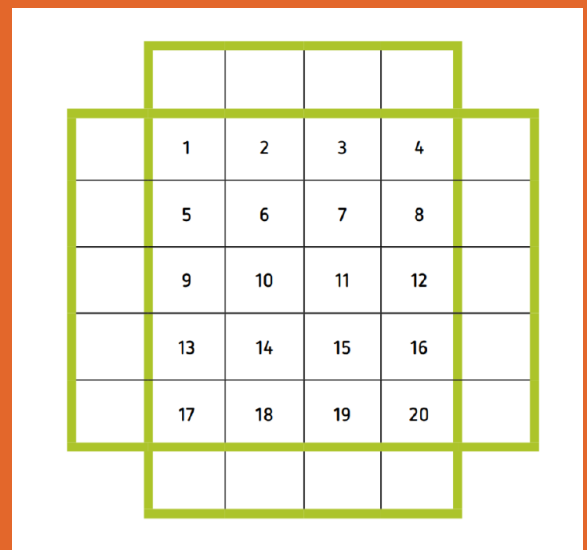
ALL HANDS  
ON DECK!

## Don't Tip the Ship!

Create your paper boat and investigate how the size and shape of the model affects the weight it can carry before it sinks!

### INSTRUCTIONS

1. Fill a tub or tank with water. Place it on a mat or tray so your surfaces don't get slippery with spilled water.
2. Take a piece of squared paper. Create a rectangle of 6 x 7 squares. Cut this out as shown.
3. Fold up the four sides (shown in green). Tape the corners together to make it watertight.
4. Count the number of squares in the base of the boat.
5. Gently place the boat in the tub of water – it will float!
6. Add weights one after the other until the boat sinks. For best results, place the weights equally and in a balance way around the boat. On a real ship, the weight is carefully spread across it to prevent it from tipping.
7. Now try different designs. Does the size or shape of the boat change how many weights it can hold? The only limit is the size of the tub!



## My Skills My Life Quiz

Acknowledging the skills gap and lack of diversity impacting the railway industry, Network Rail has partnered with WISE (Women in Science and Engineering) to develop the 'My Skills My Life' (MSML) Quiz!



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12 - 14



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### WHAT YOU'LL NEED

- Laptop/Desktop or Mobiles Device (i.e. iPad)

### DURATION:

- 10 minutes

Click [HERE](#) to Create a Profile  
and Access the Quiz!

### LEARNING OUTCOME(s) / RAIL LINK

At Network Rail, we firmly believe that you are less likely 'to be what you couldn't see'.

- Complete the personality quiz and read the profiles of female role models whose jobs match your 'career personality type'. Profiles include a description of the role models' job, their pathway to get there and even their salary!
- FOR THE MUMs:** The Quiz is only as good as the profiles you get to read at the end, and we aim to have as many of female workforce's profiles on their as possible! If you are in STEM-related role and believe you could inspire the future generation of female workers – please create a profile by following the instructions on the link below:

<https://www.wisecampaign.org.uk/what-we-do/expertise/welcome-to-my-skills-my-life/how-you-can-get-involved/create-your-role-model-profile/>

### PARENT INVOLVEMENT (Star Rating)

*A scale the level of involvement from the parent required to complete the task*



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## Primary Engineer Leaders Award

'If you were an engineer, what would you do?' is an annual STEM (science, technology, engineering and maths) competition that asks students to identify a problem and design a solution, inspiring them to find the engineer they could be and helping design the future of engineering.



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Click [HERE](#) to access more information and the competition!

This year's Leader Award is accompanied with 7 lesson plans, which will support your delivery of the programme and its key outcomes. Should you choose to use them, they will provide you with a structure that helps you develop specific skills and curriculum knowledge in your pupils, whilst they complete set tasks which are required for the competition. Each of these lessons has been mapped across the relevant English National Curriculum and Scottish Curriculum for Excellence areas, such as KS1-4 English, KS1-3 Design & Technology, Art & Design and P1-S3 Literacy and English, Technologies and Expressive Arts. It provides an exciting opportunity for the cross curricular application of key skills, knowledge and understanding learnt in these subjects, through an innovative, successful and entirely personal project. These resources support the delivery of the programme, which offers young people a platform to speak and write fluently and openly about their ideas, solutions and emotions. The development of multiple means of communication, whether it be spoken, written or drawn, allows young people to express themselves with no restriction.

### PARENT INVOLVEMENT (Star Rating)

*A scale the level of involvement from the parent required to complete the task*



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# READY FOR WORK: INTERVIEW

## HINTS & TIPS

### DON'T PANIC, WE'VE GOT YOU COVERED...

Everyone gets a bit nervous for their first interview, it's normal! Here's a bit of help to get you going...



#### CONGRATULATIONS!

So you've been invited to an interview? Congratulations! This means that your CV or application has been 'shortlisted'. The employer likes what they see and wants to know more by getting to know you in person.

#### INTERVIEWS ARE A TWO-WAY STREET

Interviews work both ways. While the employer is looking for an employee, the candidate (that's you) is looking for an employer. While you are preparing for your interview think of the things that are important to you - Support? Progression? Training? An interview is your opportunity to ask about these things and find out everything you want to know about the job and the company.

#### NO EXPERIENCE...NO WORRIES

Remember, they have seen your CV, they know what experience you have or don't have. When employers are interviewing school leavers, the willingness and ability to learn new skills or develop existing ones and a keen interest in the role, are what matter. Not necessarily the level of experience you have.

#### BE PROUD OF YOURSELF!

The thought of having the spotlight on us during an interview gets our nerves going - this is perfectly normal! We focus on what could go wrong instead of what we have done RIGHT to get to this stage, so be proud of yourself and get preparing!

#### CONFIRMING YOUR ATTENDANCE

Keep an eye on your emails including your junk mail.  
Before you confirm your attendance, check you are definitely available.  
Reply to your invite and confirm if you will or will not be attending. If you can't make the date, let the employer know, they may be able to rearrange.

# READY FOR WORK: INTERVIEW HINTS & TIPS

DON'T PANIC, WE'VE GOT YOU COVERED...



## YOU'LL KNOW WHAT TO EXPECT

Your invite will tell you what will happen during your interview.

It may be an informal chat, or an interview with a couple of members of staff, there may be a task for you to complete. Remember that they would not have invited you for an interview if they didn't think you were worth seeing so don't panic!

## DO YOUR RESEARCH

Have a look at their website and social media pages to get an understanding of who they are as an organisation and what they do. If you know someone who works there or in a similar role - that's great, have a chat with them.

Make a note of anything that stands out to you - this could be something you like the look of or a question you may have.

## HAVE ANOTHER LOOK AT THE JOB DESCRIPTION & YOUR APPLICATION

It's important to have a good understanding of what the job is and what the employer wants. Going back over the job description and your application will help with this. It may also help you work out what sort of questions you may be asked.

There's often parts of roles that we may not fully understand based on the job description - this is normal. Do your research and if you are still unsure, make it one of your questions.

## BE ABLE TO TALK ABOUT WHY THE ROLE INTERESTS YOU

You will need to be able to talk about why you are interested in the role. You could have been inspired by someone you know, had work experience or enjoyed lessons that gave you an insight, have relatable hobbies or something may have stood out to you in the job description. Whatever the reasons, be prepared to talk about them.

## TALKING ABOUT YOURSELF ISN'T A BAD THING!

We get a bit uncomfortable here but it's a really important part of the process.

Be confident in being able to talk about your skills and qualities and be prepared to give examples of when you've used them.

Remember - you have put this information in your application, so all you will be doing is talking about it in a bit more detail.

# READY FOR WORK: INTERVIEW HINTS & TIPS

DON'T PANIC, WE'VE GOT YOU COVERED...



## BE PREPARED

You will normally have around week to prepare for an interview so make the most of it! Do your research, practice answering interview questions, make sure you have copies of any documentation that they have asked for and a copy of your CV / application. If it's video interview, make sure you have the right technology and a quiet space planned. Being well prepared is key to managing those nerves that we want to shake off!

## BE PUNCTUAL

You should always arrive 10 minutes early for your interview. If it's a video interview be sat ready and waiting 10 minutes before - this gives you time to compose yourself, make notes and think of any other questions you may have. If it's face to face, make sure you have left in plenty of time to avoid traffic or any delays if using public transport.

## BE PROFESSIONAL BUT STILL BE YOU!

Looking the part always makes us feel that little bit more confident! Even if it's a video interview make sure that you are in your full interview get up. Be polite at all times but don't be afraid to be yourself. If you're nervous, tell them - they will understand, we've all been there!

## REMEMBER TO ASK FOR HELP IF YOU NEED IT

There's lots of support out there for you. Your school / college Careers Advisor or local job centre can help with interview preparation or you can ask someone at home to help.

## USEFUL LINKS FOR INTERVIEW SUPPORT :

[10 Step Guide to Interview Prep](#)

[What to Wear for an Interview](#)

[Popular Interview Questions](#)

[Managing Nerves & Anxiety](#)

# READY FOR WORK: CV HINTS & TIPS

## DON'T PANIC, WE'VE GOT YOU COVERED...



If you are applying for an apprenticeship, part time or full time job, you may be asked to send in a copy of your CV.

Don't panic if you haven't written one before, we've got you covered!



### WHAT IS A CV?

CV stands for Curriculum Vitae. They can include anything about you that you think makes you right for the job, like your skills, experience or personal qualities.

They shouldn't be any longer than 2 sides of A4, it's ok if yours is only one page though - you're just starting out!

### WHY DO I NEED ONE?

When employers are looking for a new employee they will have an idea in mind of the type of person they want. This will all be put in the job description or advert. Employers will ask people who are interested to apply by sending in their CV.

Employers will look at the CVs they receive and invite the ones that are suited to the role and that stand out, in for an interview.

### SHOULD I WAIT UNTIL I'M APPLYING FOR SOMETHING TO WRITE ONE?

You can wait but there's no time like the present!

Getting your first CV together is a great thing to do while you're not at school. Use the basic information on the next page to start to put one together...then when you want to apply for something, you just need to 'tweak' it.

### ...BUT I'VE JUST LEFT SCHOOL?

This is the bit that everyone worries about! CVs are about YOU!

What you're good at, what you enjoy, the things you do outside of school and even the things you would like to do in the future, as well as your grades and work experience.

### WHAT DOES IT ALL MEAN?

**JOB DESCRIPTION:** Description of the role, duties and responsibilities

**JOB SPECIFICATION:** The requirements needed to do the job

**SHORTLIST:** The process of selecting candidates for interview

**REFEREE:** Someone the employer can contact to ask about your suitability

# READY FOR WORK: CV HINTS & TIPS

## THE BASICS



The good thing about a CV is that the type of information needed, very rarely changes. As you get older and go in to the world of work, you will gain more experience, develop work based skills and maybe even gain more qualifications. Your CV will grow with you. Here are some of the basics...

### CONTACT DETAILS

Sounds simple right? You'd be surprised at how many get it wrong! Put your name, email address and contact number at the top - you can include your address if you like. You do not have to include your date of birth, gender, marital status or a picture.

### PERSONAL STATEMENT / ABOUT ME / INTRODUCTION

This is the most important section of your CV - a good intro will get their attention! Tell the employer who you are, what you are looking for and anything that makes you right for the role. Here's the catch, it can only be a short paragraph but you'll get the hang of it we promise!

### QUALIFICATIONS

List your qualifications and the date you achieved them along with the school / college / sixth form you studied at. If you are waiting on your final grades, you can put your predicted grades but make sure you highlight that you are waiting for your results and when you are due to get them.

### EXPERIENCE

Ok, so you've just left school and you've never had a job so what can you write here? If you are leaving school you can include work experience, voluntary work or details of anything you have done outside of school that has helped you prepare for work. You may have missed work experience due to Covid-19, if this is the case you can list where you were due to go, what you hoped to do and that unfortunately it was cancelled.

### SKILLS

Think about what you enjoy doing, what you are good at and what skills do you have to use? These can be transferrable skills like communication or organisation or skills that are more specific to your interests.

### ACHIEVEMENTS

In this section you can include anything that you are proud of and you feel has helped you to grow. They could be things you have been awarded, taken part in or personal struggles that you have overcome.

### TOP TIPS

- Use a sensible email address and check your phone number is correct!
- Be honest - you may be asked to provide evidence of what you have written
- You can put contact details of your Referees at the end or you can say 'References available on request' but always get permission from that person to have them as a Referee!
- Use a professional font and keep it to a size 12
- If you can, ask someone to look over it for you when you are finished
- For help or to see examples visit My World Of Work by clicking [HERE](#)

## EARLY ENGAGEMENT: PARENT NETWORK

### HELPING YOUR CHILD WITH INTERVIEW PREP & SUPPORT

With schools closed, we know your child may be missing out on things like work experience and employer engagement opportunities.

We'd like to help support our Network Rail families by offering the chance for your child to take part in a mock interview with one of Network Rail's HR or Early Engagement Pros!



### WHO CAN SIGN UP?

Most children will be given the opportunity to take part in work experience or have a mock interview from Year 10 (14-15 years old).

If your child is between 14 (Year 10) - 18 years old and would like some interview practice - you can sign them up!

**This is currently being ran as an opportunity to children of Network Rail employees only.**

### DO THEY HAVE TO BE INTERESTED IN NETWORK RAIL OR STEM CAREERS?

No! We don't even expect them to know what they want to do for a career just yet!

Feeling confident with interviews is all about preparation and communication. Having a practice run and a chance to talk it through with a professional can really help.

...obviously it's great if they ARE interested in STEM or Network Rail careers!

### WHAT WILL YOUR CHILD GET OUT OF IT?

We want to give them the experience of talking to professional, to see interviews as a positive experience and something to look forward to.

We will send them hints and tips on how to prepare as well as giving them helpful feedback.

### HOW WILL IT WORK?

Once you've signed your child up, we will email you confirming the date, time and of course let you know who your child will be speaking to.

As we're all staying safe and staying home at the moment, the interview will either be via video link or phone.

It's nothing to be worried about the questions will be basic, remember they are here to help!



### INTERESTED?...

Click [HERE](#) to sign up, but before you do, make sure you check with your child first!

\*Contact [Laanwan.callender@networkrail.co.uk](mailto:Laanwan.callender@networkrail.co.uk) if you cannot access the link

### **Engineer Steve**

Internal

<https://networkrail.sharepoint.com/sites/myconnect/news/Pages/National/News/Engineer-Steve.aspx>

External

[https://www.youtube.com/playlist?list=PLcieUuOBJRercdh-Rt\\_h2pc3g61DE5Bpz](https://www.youtube.com/playlist?list=PLcieUuOBJRercdh-Rt_h2pc3g61DE5Bpz)

### **Khan Academy**

<https://www.khanacademy.org>

Especially good for maths and computing for all ages but other subjects at Secondary level. Note this uses the U.S. grade system but it's mostly common material.

### **BBC Learning**

<http://www.bbc.co.uk/learning/coursesearch/>

This site is old and no longer updated and yet there's so much still available, from language learning to BBC Bitesize for revision. No TV licence required except for content on BBC iPlayer.

### **FutureLearn**

<https://www.futurelearn.com>

Free to access 100s of courses, only pay to upgrade if you need a certificate in your name (own account from age 14+ but younger learners can use a parent account).

### **Seneca**

<https://www.senecalearning.com>

For those revising at GCSE or A level. Tons of free revision content. Paid access to higher level material.

### **OpenLearn**

<https://www.open.edu/openlearn/>

Free taster courses aimed at those considering Open University, but everyone can access it. Adult level, but some e.g. nature and environment courses could well be of interest to young people.

### **Blockly**

<https://blockly.games>

Learn computer programming skills - fun and free.

### **Scratch**

<https://scratch.mit.edu/explore/projects/games/>

Creative computer programming

### **Ted Ed**

<https://ed.ted.com>

All sorts of engaging educational videos

### **National Geographic Kids**

<https://www.natgeokids.com/uk/>

Activities and quizzes for younger kids.

### **Duolingo**

<https://www.duolingo.com>

Learn languages for free. Web or app.

**The Kids Should See This**

<https://thekidshouldseethis.com>

Wide range of cool educational videos

**Crash Course**

<https://thecrashcourse.com>

You Tube videos on many subjects

**Crash Course Kids**

<https://m.youtube.com/user/crashcoursekids>

As above for a younger audience

**Crest Awards**

<https://www.crestawards.org>

Science awards you can complete from home.

**iDEA Awards**

<https://idea.org.uk>

Digital enterprise award scheme you can complete online.

**Paw Print Badges**

<https://www.pawprintbadges.co.uk>

Free challenge packs and other downloads. Many activities can be completed indoors. Badges cost but are optional.

**Tinkercad**

<https://www.tinkercad.com>

All kinds of making.

**Prodigy Maths**

<https://www.prodigygame.com>

Is in U.S. grades, but good for UK Primary age.

**CBeebies Radio**

<https://www.bbc.co.uk/cbeebies/radio>

Listening activities for the younger ones.

**Nature Detectives**

<https://naturedetectives.woodlandtrust.org.uk/naturedetectives/>

A lot of these can be done in a garden, or if you can get to a remote forest location!

**British Council**

<https://www.britishcouncil.org/school-resources/find>

Resources for English language learning

**Oxford Owl for Home**

<https://www.oxfordowl.co.uk/for-home/>

Lots of free resources for Primary age

**Big History Project**

<https://www.bighistoryproject.com/home>

Aimed at Secondary age. Multi-disciplinary activities.

**Geography Games**

<https://world-geography-games.com/world.html>

Geography gaming!

**Blue Peter Badges**

<https://www.bbc.co.uk/cbbc/joinin/about-blue-peter-badges>

If you have a stamp and a nearby post box.

**The Artful Parent**

<https://www.facebook.com/artfulparent/>

Good, free art activities

**Red Ted Art**

<https://www.redtedart.com>

Easy arts and crafts for little ones

**The Imagination Tree**

<https://theimaginationtree.com>

Creative art and craft activities for the very youngest.

**Toy Theater**

<https://toytheater.com/>

Educational online games

**DK Find Out**

<https://www.dkfindout.com/uk/?fbclid=IwAR2wJdpSJSITf4do6aPhff8A3tAktmnpaxqZbkgudD49l71ep8-sjXmrac>

Activities and quizzes

**Twinkl**

<https://www.twinkl.co.uk>

This is more for printouts, and usually at a fee, but they are offering a month of free access to parents in the event of school closures.

**Ruth's Little Kitchen**

<https://www.instagram.com/ruthslittlekitchen/>

Instagram username: ruthslittlekitchen

A cook-along profile for all ages

**Scouts**

<https://www.scouts.org.uk/the-great-indoors/>

Lots of activities and skills to learn

**Hitachi Rail**

<http://hitachirail-eu.com/LearningResourcesandActivities>

Activity Sheets

**STEM Resources**

[https://www.stem.org.uk/home-](https://www.stem.org.uk/home-learning?utm_source=Adestra&utm_medium=email&utm_term=&utm_content=home%20learning%20support&utm_campaign=B2B%20partner%20update%20May%202020)

[learning?utm\\_source=Adestra&utm\\_medium=email&utm\\_term=&utm\\_content=home%20learning%20support&utm\\_campaign=B2B%20partner%20update%20May%202020](https://www.stem.org.uk/home-learning?utm_source=Adestra&utm_medium=email&utm_term=&utm_content=home%20learning%20support&utm_campaign=B2B%20partner%20update%20May%202020)

**Institution of Engineering and Technology**

<https://education.theiet.org/primary/>