

# EMPLOYABILITY SKILLS BRIEFING

## ANALYSIS AND PROBLEM SOLVING

**This PDF supports the short video about analysis and problem solving skills and it's one of nine paired videos and PDFs on Tunnelworks, each covering a common employability skill.**

The main aim with these resources is to help you understand what these skills are, and how they are used. You might be surprised to realise that you're probably using many of these skills in your school, social and family lives already.

So, even if you don't have lots of working experience, you do have relevant work skills to talk about when applying for jobs. Use these resources to help identify your skills and practise writing and talking about them. Then you'll be interview ready!

### **What is a good general definition of analysis and problem solving?**

Analysis is the ability to examine information or a situation in detail and identify the important elements, their strengths and weaknesses and use these to solve a problem. Problem solving is the ability to identify the problem, generate potential solutions, think about the impact of these, then choose and implement your solution.

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### **What does that mean in practice on the Thames Tideway Tunnel project?**

The Thames Tideway Tunnel project is a large and complicated construction project where lots of things have to happen at the same time. All employees working on this project will use analytical and problem solving skills – but in different ways. The engineering and workforce teams will often come up against problems when tunnelling. This means they have to recognise a problem quickly, and consider new working practices to improve efficiency and correct faults or issues. Individual team members will also encounter job-specific problems that need solving; and in applying their analytical and problem solving skills, they will contribute to the overall smooth-running and success of the project.

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### **What are two typical examples of analysis and problem solving in action on the Thames Tideway Tunnel project?**

The finance and engineering teams have to work together to manage the budgets of individual elements of the project. If, for example, a type of material costs more money than expected, the teams have to identify the best solution to overcome the increased costs.

Another example is when a tunnelling worker identifies an unexpected rock type along the route of the Tunnel. He has to raise the issue with the project engineers to solve this problem and ensure a safe, practical and alternative solution.

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#### **What are the individual elements in analysis and problem solving?**

These include: the ability to identify and recognise a problem; to get stuck in, contribute and be fully involved; to research and identify appropriate solutions; to share ideas and information; to evaluate the impact of different options and recognise the most important and relevant information.

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#### **At school or at home what sort of activities might help me to develop analysis and problem solving skills?**

If you've worked successfully with a group of classmates or friends then you will have developed and used analysis and problem solving skills. Typical activities include: working with other students in your class to complete a project or presentation; working with other students on a school committee to plan a social event, or working with classmates on a school enterprise project e.g. a new school tuck shop.

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#### **If I'm applying for a job and the employer says they want individuals with good analysis and problem solving skills, how can I talk about things I've done and make them relevant?**

Think about and write down some times when you have had to think hard about something before making a decision. Practice and be ready to talk about them in an interview.

You could give an example of your analysis and problem solving skills by explaining that when you worked as part of a group of students on a school enterprise project you identified there weren't enough funds to buy the raw materials. Working with your classmates you came up with a quick fund-raising idea in order to generate enough money (so creating a solution) for your enterprise project to begin.

Or maybe you have a weekend job and you've decided to start saving up for a couple of things e.g. driving lessons and an end-of-term weekend away with friends. You could explain that because your budget wasn't large, you had to carefully identify areas where you could make savings, create a realistic plan, work out how long it would take for you to save the money, and then stick to your plan in order to achieve your goals.