



Virtual Work Experience: NBN Network Engineer

Micro Unit Outline

- **Relates to:** I.T/Computer Science; digital literacy and online safety; career exploration; work experience

Date		Room	
Period		Class	

Equipment and resources

Each student requires a computer/device with good internet access and earphones.

Accommodations and adjustments



Virtual Work Experience: NBN Network Engineer

Years: 7-11

Duration: 1-2 lessons

Introduction:

- Transform the [Year13 X NBN Network Engineer Virtual Work Experience](#) from an individual student experience to a teacher-led class learning activity.
- Students gain insight into the world of NBN and the different engineering roles it offers, while earning a certificate for their portfolio.
- The Virtual Work Experience may span several lessons depending on the length of your classes.
- Students complete all activities and finish the survey to earn their certificate.

Learning Intentions:

- Understand the role and function of the NBN and Network Engineering.
- Explore skills and pathways in Network Engineering.
- Apply network engineering concepts in practical scenarios.

Enterprise Skills:

- Problem solving
- Critical thinking
- Digital literacy
- Attention to detail

Student Success Criteria:

- ✓ I can explain the roles of Network Engineers and field technicians.
- ✓ I actively engage in the Virtual Work Experience activities to demonstrate my enterprise skills.
- ✓ I reflect on my learning experience and save my certificate to my profile.



NBN Network Engineer

Lesson Activity	Teacher Instruction
<p>Introduction 15 min</p>	<p>Ask Note responses on the board. Add new insights as the answers are revealed throughout the Virtual Work Experience. Reflect upon the questions at the end to measure how students' understanding has deepened. Activate students' prior knowledge by asking:</p> <ol style="list-style-type: none">1. What is the NBN and why is it important?2. How might the roles of Network Engineer and field technician be similar and different?3. What interests and skills does each need? <p>Read and Watch (4 min video) Project the NBN Network Engineer Virtual Work Experience Overview page and read the introduction with the class.</p> <p>Ask students to identify answers to these questions as you watch the video together:</p> <ol style="list-style-type: none">1. What is a big benefit of Network Engineering? It provides opportunities for people to work in the field or in the office (depending on specialisation).2. What might make someone suitable for this role? Love of technology and solving problems; working in a team and a fast paced, changing environment.3. What are some of the opportunities open to Network Engineers? Specialisations: Network Architects, Network Engineers/ Technicians, Network Administrators; world-wide demand/travel; can work in a range of organisations; continuous learning and development



A Day in the Life
15 mins

Read

Read the day in the life of an NBN Network Engineer information with the class.

Watch (video 3 mins)

Watch the day in the life video with the class and ask them to identify answers to these questions:

1. What were Stephanie and Vanessa's pathways?

- **Stephanie (technician):** Art diploma -> different jobs -> IT state department job for 5 years -> applied for the field technician job on Seek.
- **Vanessa (engineer):** Bachelor of mechanical and mechatronics engineering to design car engines -> realised there were few opportunities with cars but lots for nbn networking - > applied for the graduate program.

2. What does name like best about their job?

- **Stephanie:** Meet new people ever day, travelling not being stuck in an office.
- **Vanessa:** Working with people from different units across the company, collaborating with universities.

3. Which skills do they identify as are most important in their role?

- **Stephanie:** problem solving, customer service, being inquisitive/curious, questioning/communication, being good with her hands, willing to get down and dirty to find the problem.
- **Vanessa:** View complex systems from different angles, problem solving

4. What advice do they give to young people interested in entering the field?

- **Stephanie:** Do it! You'll face challenges and find personal growth.
- **Vanessa:** Find your passions and interests to keep you motivated in your work. Seek internships, get hands on experiences, and don't be afraid to ask questions.



Pathways 5-10 mins	<p>View pathways map (click to zoom)</p> <p>Ask students to explain their understanding of:</p> <ol style="list-style-type: none"> 1. Traineeship: leads to a certificate level qualification; usually 1-2 years. 2. Bachelor's Degree: first university qualification; usually 3-4 years. 3. VET: Vocational Education & Training at TAFE or Registered Training Organisation (RTO). Remind students that a VET Diploma or Advanced Diploma may provide entry to, and credit towards, a university degree.
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Supporting Documents

Lesson Activity	Teacher Instruction
Student Sign Up 5 mins	<p>Instruct</p> <p>Provide students with the NBN Networking Engineer Virtual Work Experience link.</p> <p>Click on 'Activities' in the left menu - students will be prompted to log in or sign up.</p> <ul style="list-style-type: none"> • Log in using Google credentials <p>OR</p> <ul style="list-style-type: none"> • Sign up with an email address and password. Enter month and year of birth, and indicate they are studying at school. Skip the mobile verification step by clicking 'next'
Activity 1: Investigating Internet Outages 10 mins	<p>Set up the activity</p> <p>Read the activity description with the class instruct them to complete the activity questions. Note: Students must read through all information with an 'i' to finish the activity.</p> <p>Answers:</p> <ul style="list-style-type: none"> • Q1: Data traffic that fails to pass through the nbn network. • Q2: 4 • Q3: The RSP needs to purchase extra bandwidth (CVC)



<p>Activity 2: Connecting Customers to the Network 10 mins</p>	<p>Set up the activity</p> <ol style="list-style-type: none"> 1. Read the introduction and activity description with the class. 2. Watch the 2-min how the nbn network works video. 3. Watch the 4-min what to expect on the day of your nbn fibre to the premises installation video. 4. Instruct students to answer the multiple choice question on their device: <ul style="list-style-type: none"> • a. Check ticket of work; call customer on approach 5. Read the conclusion together and move to the next activity.
<p>Activity 3: Troubleshooting Customer Connections 10 mins</p>	<p>Set up the activity</p> <p>Read the introduction and activity description with the class. Click through and read about the sections of both diagrams. Instruct students to download the troubleshooting guide and use it to answer 4 multiple choice questions on their devices:</p> <ol style="list-style-type: none"> 1. Plug in the device and switch the power outlet on. 2. Disconnect non-compatible devices from telephone wall socket. Contact the phone/internet provider. 3. Nothing - this is normal. 4. Check all cables have been connected correctly and your gateway is switched on. <p>Read the conclusion together.</p>
<p>Reflection and Extension 15 - 30 mins</p>	<p>Reflect</p> <p>Upon completion, students are prompted to complete a multiple choice survey to measure the impact of the Virtual Work Experience.</p> <p>Deepen students' self-reflection by discussing their answers to questions:</p>



1. How likely are you to study STEM after school?
2. How much do you know about careers in tech?
3. How much better is your understanding of working as a network engineer having taken this virtual work experience?

Return to the introductory questions to reflect on how students' understanding of the occupation has developed.

Certificates

1. Students may download their certificates.
2. Instruct them to upload their certificate to their [e-portfolio](#).

Extend

1. Click on 'Next Steps' in the left side menu to explore related occupations.
2. Explore and shortlist cyber security VET and university courses using the [Good Universities Guide](#).

