



Department of
Education

Alcohol and other Drugs Virtual Reality Resource

Resource Pack

Lessons 1 and 2

The human brain, its functions
and alcohol and other drug use

Shaping the future

[Status]
6/01/2025



Resource pack

This resource pack is part of the Alcohol and other Drugs Virtual Reality Resource. The resource is designed to give students the opportunity to explore alcohol and other drug use and its impacts on our brains and bodies. The use of a virtual reality (VR) headset with 2 preloaded lessons is necessary to run the class. Accompanying classroom lesson plans with resources are provided. The virtual reality component in each lesson takes roughly 20 minutes to complete, followed by classroom activities and resources for students. At the end of each lesson is a short 5-minute survey which will be used to gauge the effectiveness and acceptability of the VR lessons amongst students. This information will be gathered from the headsets and used as part of an evaluation of the project. All information gathered is anonymous and will be stored and used in accordance with Department recordkeeping and privacy policies.

Included in your resource pack is:

- VR headsets (according to the number ordered/requested)
- Two (2) VR lessons preloaded on the VR headset that does not require internet connectivity
- A teacher resource pack which contains:
 - lesson overview and plan (Lesson 1 and 2)
 - classroom lessons (student handouts and teacher resources)
- Quick start up-guide for VR headsets (including troubleshooting)
- Parent and carer information template.

It is imperative that **lesson 1 be completed before lesson 2**, as information in lesson 1 forms the foundational learning required for lesson 2.

This resource is designed to align with Teaching for Impact which outlines how teachers can implement quality teaching in Department of Education schools.

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Lesson 1 – the brain and its functions – lesson overview

Year 9 syllabus	
<p>Health and Physical Education Healthy and active communities</p> <ul style="list-style-type: none"> Impact of external influences on the ability of adolescents to make healthy and safe choices relating to: <ul style="list-style-type: none"> alcohol and other drug use (WA9HEHPH1). 	<p>Science Science Understandings Biological sciences</p> <ul style="list-style-type: none"> Multi-cellular organisms rely on coordinated and interdependent internal systems to respond to changes to their environment (WA9SSUB2).
<p>Learning intentions Through virtual reality (VR) – students will:</p> <ul style="list-style-type: none"> understand the functions of the brain and nervous system understand how alcohol and other drugs can impact the developing brain recognise healthy alternative choices to AOD use 	<p>Success criteria Students will:</p> <ul style="list-style-type: none"> identify different functions of the brain and nervous system suggest examples of alternative healthy choices to AOD use describe healthy and unhealthy choices related to AOD use and impact on everyday life.
<p>Key messages:</p> <ul style="list-style-type: none"> the brain is the most complex organ in the human body dopamine is a neurotransmitter responsible for feelings of pleasure, satisfaction and motivation AOD use releases dopamine which can trick the brain into thinking this is healthy behaviour alcohol and other drug use is particularly harmful during adolescence neuroplasticity is the brain’s ability to adapt to our experiences and the environment. <p>Key terms: central nervous system (CNS), cerebrum, brainstem, cerebral cortex, cerebellum, neuron, neurotransmitters, dendrites, cell body, axon, dopamine, dependency, neural pruning, neuroplasticity.</p>	
<p>Prior Knowledge: Prior to running this lesson, students should know what a drug is. Students should also understand the general function of the human brain. Explain to students that AOD refers to alcohol and other drugs.</p>	

Introduction – Whole class (10 minutes)

The teacher will:

- explain and discuss learning intentions, success criteria, key messages and key terms
- explain the structure of the lesson – VR experience, classroom activities
- introduce VR headsets and emphasise expectations for appropriate use
- inform about in-headset knowledge check questions and in-headset survey
- inform about VR evaluation survey at the end of lesson 2.

Activity #1: VR experience – The human brain and its functions (20 minutes)

This VR lesson will explore:

- the functions of the brain and nervous system
- the role dopamine plays in AOD use
- how AOD use can be harmful to adolescent development
- how the brain can change in positive ways when adopting new skills and behaviours.

Activity #2: Classroom activities – VR key concept reflection and making healthy choices (20 minutes)

Student handouts - students will:

1. a) reflect on key concepts from the VR activity using think-pair-share
b) match key terms with correct definitions raised in the VR activity
2. in groups of 3, discuss scenarios of unhealthy choices of AOD use and identify healthier alternatives.

Plenary (5 minutes)

Based on students' responses from *Classroom Activity #2*, the teacher will:

- reinforce the concept that using alcohol or drugs during adolescence can negatively impact our brains
- highlight the concept of neuroplasticity; the brain can change when we adopt new skills and form positive, healthier habits.

Flexible delivery suggestions:

If devices are to be shared within a class, the following adaptations can be made:

- Task 1a- Think, pair, share activity can be used to gather student prior knowledge and be built on following VR experience
- Task 2- scenario activity can also be used before to gain student prior knowledge.

E.g. students discuss 1 point per scenario and add to activity following the VR experience.

Student handout

Task 1a- Think, pair and share

Think, pair, share

Task

(Think) Individually, reflect for 1 minute what you learnt from the VR experience **OR** what you know about the brain and alcohol and other drugs.

(Pair) With your partner, share your thoughts and record them in the box below.

(Share) Highlight one key message to share with the whole class.

Student handout

Task 1b - Term and definition match up

Matching terms and definitions

Draw a line from the term to the correct definition

Key term	Definition
Neuroplasticity	The body's chemical messengers between neurons.
Dopamine	A chronic health condition that occurs when someone is unable to stop consuming a drug or engaging in an activity, even if it is causing physical or psychological harm.
Addiction	Units of the brain and nervous system responsible for receiving sensory input from the external world, for sending motor commands to our muscles, and for transforming and relaying the electrical signals at every step in between.
Nerve cell	The ability of the nervous system to change its activity in response to internal or external stimuli by reorganising its structure, functions, or connections.
Neurotransmitter	A chemical released in the brain that makes you feel good.

Student handout

Task 2 - Impact of AOD use and healthy alternatives

In groups of 3 students

Just like the brain is negatively impacted by AOD use, when we practise new skills to adopt healthy behaviours, the brain can change in positive ways.

For each scenario:

1. Identify 2 possible negative impacts.
2. Brainstorm 2 behaviour choices that could be considered a healthier alternative.

Scenario	Possible negative impacts	Alternative healthy choices
Drinking energy drinks to stay up late watching shows/series on a school night.	1. 2.	1. 2.
Smoking cigarettes outside of school. Lately, increasing to smoking during school lunch breaks.	1. 2.	1. 2.
Drinking alcohol that was offered by a friend at an unsupervised party.	1. 2.	1. 2.

Teacher resource

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Neurotransmitter	A chemical released in the brain that makes you feel good.

Teacher resource

Task 2 - Impact of AOD use and healthy alternatives

Scenario	Possible negative impacts	Alternative healthy choices
Drinking energy drinks to stay up late watching shows/series on a school night.	<ul style="list-style-type: none"> • tired • agitated • difficulty concentrating in class • not completing homework. 	<ul style="list-style-type: none"> • stop consuming energy drinks • reduce the number and frequency of energy drinks consumed • replace the energy drinks with a glass of water or a healthy snack • catch up on missed shows/series on the weekend instead of watching them late at night • use the money you save from buying energy drinks to buy some new shoes or clothes every few months • keep your room device/screen free and aim for an earlier bedtime • read a book or listen to music or a podcast if you're not ready for sleep.
Smoking cigarettes outside of school. Lately, increasing to smoking during school lunch breaks.	<ul style="list-style-type: none"> • short of breath • difficulty doing sport • low on cash • not spending much time with mates • coughing and health issues • getting in trouble at school. 	<ul style="list-style-type: none"> • stop using cigarettes • reduce the number and frequency of cigarettes used • replace the cigarette with a glass of water or a healthy snack • try the 4 d's (drink water, deep breath, delay use, do something else) • do something with friends who don't smoke during lunch breaks • join in with any school activities that happen before school, during recess/lunch breaks and after school • set a goal to save money for a wanted item or experience • ask for help from a trusted friend or family member • speak to your doctor about alternative options and support to quit smoking.
Drinking alcohol that was offered by a friend at an unsupervised party.	<ul style="list-style-type: none"> • doing or saying something you normally wouldn't • getting in trouble with parents or police • not knowing what was in the drink or its strength • hungover the next day • fights/falls/injuries. 	<ul style="list-style-type: none"> • say 'no' when offered alcohol (most young people are choosing to say 'no') • practice refusal skills and have a few statements rehearsed (i.e. "No thanks, I don't like the taste") • hang out with friends that don't drink alcohol • bring your own non-alcoholic drinks with you • not attend the party if it is unsupervised • inform a trusted adult of the location of the party, who else is attending, and how you can be contacted • know how to seek help and who to contact if an emergency arises.

Lesson 2 – Caffeine, nicotine and alcohol – lesson overview

Year 9 syllabus	
<p>Health and Physical Education Healthy and active communities Impact of external influences on the ability of adolescents to make healthy and safe choices relating to (WA9HEHPH1):</p> <ul style="list-style-type: none"> • alcohol and other drug (AOD) use • risk taking <p>Staying safe Skills to deal with challenging or unsafe situations (WA9HEHPS2):</p> <ul style="list-style-type: none"> • refusal skills 	<p>Science Science Understandings Biological sciences</p> <ul style="list-style-type: none"> • Multi-cellular organisms rely on coordinated and interdependent internal systems to respond to changes to their environment (WA9SSUB2).
<p>Learning intentions Through virtual reality (VR) – students will:</p> <ul style="list-style-type: none"> • explore how using AOD affects the brain and body • develop and use refusal responses involving AOD in a social situation • recognise support people or agencies that can be accessed when further help is needed. 	<p>Success criteria Students will:</p> <ul style="list-style-type: none"> • identify at least 2 effects that stimulants and depressants have on the brain and body • discuss, practice, and evaluate refusal responses related to using AOD in social situations.
<p>Key messages:</p> <ul style="list-style-type: none"> • stimulants and depressants use can lead to changes in the brain and the body • nicotine and caffeine can be addictive • both vapes and cigarettes expose people around you to dangerous chemicals • adolescents are vulnerable to harm from alcohol because their brains and bodies are still developing • alcohol can impact decision making which can affect choices that can lead to harm • having a range of refusal statements ready can help you to make healthy and safe choices in social situations. <p>Key terms: AOD, Central Nervous System (CNS), neurons, synaptic gap, nerve cells, neurotransmitters, dopamine, pre-frontal cortex, caffeine, nicotine, stimulants, depressants, drug harms, drug refusal skills.</p>	
<p>Prior Knowledge: Prior to running this lesson, students understand what a drug is. Students should also understand the structure and function of the human brain (lesson 1). Remind students that AOD refers to alcohol and other drugs.</p>	

Introduction – Whole class (10 minutes)

The teacher will:

- explain and discuss learning intentions, success criteria, key messages and key terms
- explain the structure of the lesson – VR experience, classroom activities
- introduce VR headsets and emphasise expectations for appropriate use
- inform about in-headset knowledge check questions and in-headset survey
- inform about VR evaluation survey at the end of this lesson.

Activity #1: VR lesson – Stimulants and depressants (20 minutes)

This VR Lesson will explore:

- how the brain becomes dependent on alcohol or other drugs
- how the body and brain are impacted by caffeine and the potential harms from high levels of caffeine use
- how the body and brain are impacted by nicotine and the potential harms of cigarettes and vapes
- how the body and brain are impacted by alcohol and its potential harms.

Activity #2: Classroom activities – VR key concept reflection and drug refusal skills (20 minutes)

Student handouts – students will:

1. Reflect on the VR lesson and list stimulant and depressant effects on the brain and body (think-pair-share).
2. Discuss drug related scenarios and develop and identify potential drug refusal statements.

Plenary (5 minutes)

Based on students' responses from *Classroom Activity #2*, the teacher will:

- reinforce the impact stimulants and depressants have on the adolescent brain and body
- highlight the importance of drug refusal skills and encourage further development of refusal statements.

VR evaluation (5 minutes)

Survey for students to complete.

This survey offers an evaluation of student's voice in relation to the VR experience. The questions will gauge the following:

- the students' learning experience
- feedback about the VR experience.

Flexible delivery suggestions:

If devices are to be shared within a class, the following adaptations can be made:

- Lesson 1's Task 1b- term and definition matching activity can be delivered again to reinforce key language and review previous lesson.
- Task 1a- Think, pair, share activity can be used to gather student prior knowledge and be built on, following VR experience

Student handout

Task 1a- Think, pair and share

Think, pair, share

Task

(Think) Individually, reflect for 1 minute on the VR experience and key messages you can recall **OR** what you know about different types of drugs

(Pair) With your partner, write down one example in each box relating to the effects of stimulants and depressants on the brain and body

(Share) Highlight one key message to share with the whole class.

Stimulants- caffeine, nicotine

Depressants- alcohol

Body

Body

Brain

Brain

Student handout

Task 2- Drug refusal strategy scenarios

1. You are 15 and like to go to parties, but you don't want to drink. Your friend wants you to bring an energy drink to mix with their alcohol for a party tonight. What will you say?

3. You don't enjoy smoking or vaping. Whenever you go out with your friends, they put you down or tease you about either not smoking or vaping. The next time they ask you to try some, you will say...

5. You have an exam on Tuesday. Your friends have a pill they say will help you focus during the exam. They swear by it. What is your response?

2. A friend offers you some cannabis. You feel uncomfortable trying it, so you say...

4. You're at a party sitting with friends. One of your friends takes out an alcoholic drink and asks you if you want to try it. Your friends are watching you. What can you say?

Student handout

Task 2- Drug refusal strategies scenarios

You will be given 5 scenarios to discuss and develop refusal statements for each scenario. In your group, discuss the scenarios, and as a group, develop a drug refusal statement for each scenario. Write your answers in the box below.

Refusal strategy (i.e. what could you say or do to help make safe and healthy choices?). Write statements below.
Statement 1:
Statement 2:
Statement 3:
Statement 4:
Statement 5:
List 4 people or services you would feel comfortable chatting with if you felt you needed advice on drugs, alcohol, mental health or wellbeing?
1. 2. 3. 4.

Teacher resource

Task 2- Drug refusal strategies scenarios

Refusal strategy (i.e. what could you say or do to help make safe and healthy choices?). Write statements below.

Encourage young people to be original and creative with their responses. Statements might include but are not limited to:

“Sorry, I don’t want to (smoke/drink/take that), I’ve got footy/netball tomorrow and I’m keen to have a good game”.

“No, I really don’t want to (drink/smoke/take that); it makes me feel horrible”.

“I’ve got a big exam tomorrow, I’ll pass thanks”.

“I don’t like (smoking) the smell is so strong and my parents will definitely smell it”.

“I’m good thanks, I’m on some medication and I don’t think (drinking/smoking) will help with that”.

“I don’t do energy drinks; they make my heart race”.

“Nah, I’m not keen on vaping; you really don’t know what’s in it”.

“Cannabis is illegal, I’m not keen on breaking the law. I want to be able to travel overseas”.

“I don’t take pills; you never really know what is in them”.

List 4 people or services that you would feel comfortable having a chat with if you felt you needed advice on drugs, alcohol, mental health or wellbeing?

- family
- friends
- trusted teacher
- student services manager
- school psychologist
- school nurse
- school chaplain
- call Kids Helpline (1800 55 1800) or Beyond Blue (1300 22 4636)
- local drug and alcohol or mental health worker in the town/city.