

**Remember:
read the
Teacher Notes
first!**

Lesson 1

Bringing in ideas about physical activity

Students explore the physical activity of people in and around the rail network. They investigate risks to the health and wellbeing of people moving in and around the rail network in their local area.

Learning intentions

1. **Describe** health and safety hazards on the rail network.
2. **Describe** how to manage a health and safety hazard on the rail network.

1.1 Define terms

- **What is a rail network?** (Physical assets: *terminal facilities, rail yards, railway stations, tracks, overhead wires and masts, rail substations, level crossings, overbridges and pedestrian walkways, tunnels, bridges, signalling systems, communication systems*; administrative processes and regulations; personnel and management required to repair tracks, sell tickets, schedule trains etc.)
- **What is a hazard?**
- **What is physical activity?** (Walking, running, cycling)

Ask students to:

- **brainstorm** everything they know about *physical activity on and around the rail network*. Ask them to think about all the different ways the rail network is used by people who are physically active. They should use text, quotes, drawings and/or images to express these ideas. If prompts are required, provide examples describing physical activity at various places on the rail network (YouTube, still images, popular media, online and TV news stories etc.). *Note: Our high school student media library might be a good place to start.* <http://tracksafeeducation.com.au/students/high/media-library/>
- **place** these ideas on a separate blank hexagon. They can do this electronically using the HookED SOLO Hexagon Generator: <http://pamhook.com/solo-apps/hexagon-generator/> or manually using the included resource **HookED Hexagon Template**.
- **make** connections between individual hexagons by looking for reasons to make straight edge connections (tessellating the hexagons). Students should explain orally or by annotation why they have made the connection.
- **explore** the node where three hexagons share a corner (or simply look at a cluster of hexagons) and make a generalisation about the nature of the connected ideas.
- **step back** from the resulting tessellation (clusters of hexagons) and make a group/class claim – “Overall we think ‘physical activity on and around the rail network’ is [make a claim] ... because [give a reason] ... because [give evidence].” Keep this definition statement as evidence.

Extension: Ask students to take photos of the rail network in your local community and use them to create visual definitions of the terms used above. Use photo editing software to annotate the images in a style that will appeal to an identified group of young people. For example, create a meme or add a caption, speech bubbles or hashtags.

Online photo editor suggestions:

Gimp: <http://www.gimp.org> Pixlr: <http://pixlr.com>

Canva: <https://www.canva.com/> Be Funky: <https://www.befunky.com/>

1.2 Identify hazards for pedestrians in places on and around the rail network

NOTE: Students could practise this observation activity using a place within the school grounds.

Ask students to:

Identify a place on or around the local rail network, for example:

railway stations	platforms	level crossings	overbridges	pedestrian walkways
tracks	rail yards	terminal facilities	overhead wires	rail substations

List the different groups of pedestrians who use this space each day – for example, young people, family groups, pre-teens, adults with pre-schoolers, adolescents, older people, people with mobile suitcases, people in wheelchairs, people using walking frames or sticks, people with prams and strollers, people running late, people pushing bicycles or riding scooters.

Identify a group of pedestrians who may be at risk of a fall or another train-related injury when using this space.

Organise a “safety walk” though the area with the local rail authority, if your school is located near a railway. If not, create an ‘imagined’ walk through.

Invite members of the group you have identified as being at risk to join you and take part in the “safety walk”.

On the visit, ask students to:

- **Practise** walking safely through a place on the rail network.
- **Apply** strategies to keep safe when walking through a place on the rail network.
- **Identify** possible pedestrian hazards you meet when walking through a place on the rail network.
- **Identify** possible management strategies for pedestrian hazards you meet on the rail network.
- **Take** notes, photos or video to record these potential pedestrian hazards and possible management strategies for the place.
- **Record** any “safety walk” feedback and suggestions from the group representatives.
- **Record** any “safety walk” feedback and management suggestions from the local rail authority supervising the visit.

Use the attached **Hazard checklist** to help you look for pedestrian hazards and possible management suggestions. Add any potential local hazards that are not already on the list.

Next **write a brief report** to give an overview of the risks to the identified group of pedestrians in the place on the rail network. The report should:

- **Identify** the location of the place in your local area (e.g. on an annotated Google Map).
- **Describe** the potential hazard/s, using sketches and photos to elaborate your description.
- **Explain** why these are potential hazards for the identified group of pedestrians.

Extension: Ask students to **observe** pedestrian behaviour on or around the local rail network – railway station platform, level crossing, escalators, overbridge, pedestrian walkway etc.

For background information, view: Network Rail Releases Cautionary CCTV Footage of People, Falling Down Escalators, in UK's Birmingham New Street Station: http://youtu.be/NX0Db52rb_Y

Discuss the claim that the biggest hazard to a pedestrian's health and safety on the rail network is often their own behaviour.

Hazard checklist

Some example answers have been provided. Add any potential local hazards that are not already on the list.

Potential hazard for pedestrians	Where is the hazard?	Why does it present a health and safety hazard for pedestrians using the place?
Surfaces clearly marked as hazardous e.g. "yellow line" areas at stations or yellow cross hatch zones around level crossings		
Poorly lit surfaces and areas		
Uneven surfaces e.g. service covers on footpaths		
Change in materials making the surfaces		
Gaps between surfaces		
Loose material surfaces e.g. gravel shoulders on rural roads		
Steps, stairways or escalators		
Ramps		
Absence of marking distinguishing steps from ramps		

Potential hazard for pedestrians	Where is the hazard?	Why does it present a health and safety hazard for pedestrians using the place?
Lack of grab rails where levels change		
Poorly maintained surfaces		
Surfaces that may become wet and slippery		
Rubbish on surfaces		
Rapidly moving trains in close proximity to pedestrians	Railway platforms, level crossings	Because the rapidly moving train creates gusts of wind (flow draft) by pushing through the air and then the displaced air back-fills the space left by the train, pedestrians may lose their balance and fall.
Rapidly moving trains in the same space as pedestrians	Anywhere on the rail corridor where pedestrians unintentionally or intentionally move onto the tracks – because they trespass, ignore safety signs and signals, or slip, trip or fall etc.	
Vehicles sharing the same spaces as pedestrians		
Cyclists, skateboarders or people on scooters sharing		

Potential hazard for pedestrians	Where is the hazard?	Why does it present a health and safety hazard for pedestrians using the place?
the same spaces as pedestrians		
Joggers, runners, people walking dogs or dragging suitcases sharing the same space as pedestrians		
More than one pedestrian sharing the same space		
Objects that could topple over or collapse onto pedestrians		
Objects that could block movement or narrow the available access for pedestrians		
Places where queues could develop or people congregate and block or disrupt movement of pedestrians		
Hazardous areas where pedestrians could be pushed or shoved by sudden movements in a crowd		

Potential hazard for pedestrians	Where is the hazard?	Why does it present a health and safety hazard for pedestrians using the place?
Cross-flow areas where pedestrians will cross paths getting to different places		
Noisy environments (external or through use of personal music players) distracting pedestrians from warning signals, bells, sirens and other hazards		

Appendix: Differentiated assessment rubrics

We have provided guidance for how students may achieve differentiated standards within these learning activities.

Health & Physical Education

This rubric may assist you in assessing student achievements against the Achievement Standards. Results can be recorded via your normal assessment record method.

1. Describe health and safety hazards on the rail network.

Extended ideas	My description identifies several relevant hazards on the rail network AND explains why these are hazards AND makes a generalisation about the extent of hazards on the rail network.
Connected ideas	My description identifies several relevant hazards on the rail network AND explains why these are hazards.
Loose ideas	My description identifies several relevant hazards on the rail network.

2. Describe how to manage a health and safety hazard on the rail network.

Extended ideas	My description identifies how to manage several relevant hazards on the rail network AND explains why these safety management strategies are used AND makes a generalisation about the effectiveness of the use of these safety management strategies.
Connected ideas	My description identifies how to manage several relevant hazards on the rail network AND explains why these safety management strategies are used
Loose ideas	My description identifies how to manage several relevant hazards on the rail network.

Rail Safety

This rubric may assist you in assessing student achievements within the suggested rail safety outcomes of this lesson. Results can be reflected in the included [assessment of learning](#).

Identify potential hazards on and around the rail network.

(What are potential hazards on and around the rail network?)

Extended ideas	<p>I can identify many relevant hazards for people on and around the rail network <i>[using text, oral language, drawing, visual arts, dance, drama, music etc.]</i> AND can explain why these hazards need to be managed to keep people safe AND can reflect on my role in helping to manage these hazards.</p>
Connected ideas	<p>I can identify many relevant hazards for people on and around the rail network <i>[using text, oral language, drawing, visual arts, dance, drama, music etc.]</i> AND can explain why these hazards need to be managed to keep people safe.</p>
Loose ideas	<p>I can identify many relevant hazards for people on and around the rail network <i>[using text, oral language, drawing, visual arts, dance, drama, music etc.].</i></p>