

LEVEL CROSSING 1-0-1

Living Switched On

From special journeys to everyday commutes, the rail network helps get us where we need to be. Even if we're not travelling, we need to be Switched On to the risks the rail environment can pose.

We can all enjoy life's adventures when we spot signs of danger, look out for our friends and always stay Switched On.

Young people often make responsible choices around the tracks but there can be times when independent decision-making can be compromised. Living Switched On has been designed to help young people aged 12-16 explore a range of themes such as peer pressure, the perils of group mindset and how at times accidents happen as a result of small bad decisions rather than one big mistake.

Living Switched On encourages young people to gain the knowledge that could keep them safer around the railway, whilst also exploring the impact ripple that rolls out across communities and the rail industry workplaces when accidents happen.

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CURRICULUM LINKS

KS3 & KS4

- **PSHE**
Health and wellbeing: Self concept, Managing risk and personal safety. Relationships: Relationship values, Social influences
- **Citizenship**
- **English**
Reading, Spoken English

S1-S5

- **PSE**
Health and Wellbeing: Self Concepts, Managing Personal Safety and Risks, Relationships. Social Influences
- **Citizenship**
- **English**
Reading and Talking

These resources can also be used within SMSC planning and delivery.

WHY IS THERE A NEED TO INCORPORATE RAIL SAFETY INTO YOUR TEACHING?

There are 20,000 miles of track, 30,000 bridges, tunnels and viaducts plus thousands of signals, level crossings and stations across our rail network. There are more than 19,000 trespass incidents on the tracks every year.

Learning to hazard spot and address potentially dangerous behaviour is crucial at any age. Schools have recognised the importance of teaching about a range of safety behaviours through PSHE and Citizenship lessons in school. The rail industry wants to support this vital work.

HOW TO RUN THE ACTIVITIES AT SCHOOL

This resource has been designed to be flexible and easy to use with a range of options for delivery. This teacher guidance document contains tips for delivery and a loose script that can be adapted by educators to best suit the needs of their learners.

You may wish to show students this resource and conduct the activities during:

- A normal timetabled lesson, for example, PSHE or Citizenship
- A topic focus week, for example, Rail Safety Week

HOW TO USE THE RESOURCE AND WORK-SHEET IN OTHER SETTINGS

We're aware that youth groups and families may also want to use this resource with young people. The Level crossing 1-0-1 resource can be used for home learning, with students responding individually to the questions, rather than engaging in any group discussion. Discussion may take place between the home educator and the student, or questions can be used for individual written reflections.

RESOURCE OVERVIEW

NAME OF RESOURCE	FORMAT	LEARNING OUTCOMES
Level crossing 1-0-1 resource	Interactive PDF	<ul style="list-style-type: none">• I can identify, describe, and demonstrate safety signs and behaviours at a level crossing.• I can explain reasons for safety signs and behaviours at a level crossing, and consequences of disregarding these, for myself and others• I know that taking risks around rail tracks and level crossings can end in serious injury or death, which can have an impact on others and the wider community, as well as myself• I can demonstrate ways to keep my friends safe, and resist pressure from friends to take risks or behave unsafely around the rail environment• I know when to report situations of danger to the emergency services

GETTING STARTED

- Resources can be accessed via the [Switched On website](https://www.switchedonrailsafety.co.uk)
- Living Switched On also incorporates films and activities from You vs Train, an existing Network Rail resource warning about the risks of trespassing on the railway
- Living Switched On hosts a range of resources from films to quizzes and group discussions

we recommend that educators familiarise themselves with the content and plan an appropriate approach for their students

- Some resources explore dangerous behaviour and we recommend sharing trigger warnings i.e. let students know the nature of the content and give them the opportunity to opt out if they feel it might trigger difficult emotions

LEVEL CROSSING 1-0-1 RESOURCE

Overview

This resource focuses on one element of the rail infrastructure where a lack of knowledge, distraction and complacency can have significant and often life-changing consequences – the level crossing.

Containing three sections, this resource is designed to get your students clued up on all aspects of level crossings. Students will work through the interactive resource, learning about the different types of level crossings that can be found across the UK, the signs that keep us safe, and how to make safe decisions when interacting with level crossings, including how to resist peer pressure. The final section of the resource will put their level crossing knowledge to the test with a short recap quiz.

Supporting resources and equipment required

- Level crossing 1-0-1 interactive PDF to be shown on screen during lesson/class
- Paper/ pens / pencils

Timing

30-45 minutes, although teachers can shorten and extend the lesson to fit schedules.

Suggested timings are as follows:

- Activity one is designed to take 10-15 minutes.
- Activity two is designed to take between 10-15 minutes.
- Activity three is designed to take 10-15 minutes.

Set up

- Set up the Level crossing 1-0-1 interactive PDF on your whiteboard/screen ready to show your students.
 - Where possible, this activity should be done in pairs (or small groups): groups should discuss answers and then a whole class discussion should take place to give students a chance to discuss and reflect on their opinions and that of their peers.
 - Slides will provide a question and then an opportunity for students to click to reveal

more information or the answers, after they have discussed it with their classmates (either in pairs, in groups or as a whole class).

- You may want to give each group access to a computer or tablet and work through the activities together. Rejoining as a class for the final discussion and conclusion.
- You may want to provide pen and paper so that students can write down their answers as you progress through the resource, specifically during section three (the recap quiz).
- There are three sections to this resource:
 - **Section #1:** Getting to know level crossings – this will provide examples of the different types of level crossings and what to expect.
 - **Section #2:** Switched off scenarios – this will focus on possible scenarios that may occur around level crossings and ask students to think about how to make safe decisions, including how to resist peer pressure.
 - **Section #3:** Recap quiz – to consolidate learning.

Resource guidance

- **Slide 1 (Intro slide):** Start by explaining that level crossings are a common part of the rail environment and we need to be Switched On to the signs, sounds and rules so that we can keep ourselves and others safe.

SECTION 1

GETTING TO KNOW LEVEL CROSSINGS

- **Slide 2:** Ask students which of the images on the screen show a level crossing. Students should discuss in their pairs/groups. Once students have reached a consensus click on an image.
 - **Answer:** All of the images show a level crossing.
 - » Emphasise that there are different types of level crossings which come in different shapes, sizes and have different signs and rules that you need to be aware of.

- **Level crossings (slide 4):** As a class read through the text on screen. Emphasize there are different users who interact with level crossings. As a class click on each button to reveal images showing how different users interact with a level crossing.
- **Safety measures (slide 5):** Ask students what they think some of the safety measures at, and approaching, level crossings are. Guide students to look at the images and to identify the safety measures present. Students should discuss in their pairs/groups. Call on groups for their answers and click on the part of the image they have identified to reveal whether they are correct or not.
 - **Answers:**
 - » Warning signs and lights
 - » Barriers or gates
 - » Road markings
 - » Sirens or alarms
- Remind students that it's important to remember not all level crossings will have all of the safety measures seen on this slide, in place. Whether we are walking, cycling, or driving a motorcycle or car, we all need to be aware of level crossings and what the warning signs mean.
- As a bonus question, ask students if they can spot any other safety measures.
 - Point out the telephone on the right hand side of the right image. Emphasise that this can be used to call the signallers if there is an emergency.
- **Warning lights (slide 6):** Read the text on screen. Ask students what you should do when you see warning lights. Students should discuss in their pairs/groups. Call on students/groups for their responses and then click on the button to reveal the correct answer.
 - **Answers:**
 - » **When the amber lights come on you must stop.** If the amber lights come on and you have already crossed the stop line, you should continue as quickly and safely as possible.
 - » **When the red lights flash you must stop, wait and do not cross.** You need to remain stationary until the lights stop flashing. There may be more than one train, so don't cross until the lights have stopped flashing.
- » A few crossings have red and green lights. You must only cross when the green lights are showing. **This applies whether you are walking, cycling, or driving.**
- **Barriers (slide 9):** Read the text on screen. Ask students what you should do when you encounter barriers lowering at a level crossing. Students should discuss in their pairs/groups. Call on students/groups for their responses and then click on the button to reveal the correct answer.
 - **Answers:**
 - » The barriers are lowered when a train is approaching. **Do not cross when the barriers are lowering.**
 - » Do not begin to cross the track until the barriers are fully raised, whether you are walking, cycling or driving.
 - » Wait until the barriers are fully open to cross.
- **Alarms and sirens (slide 12):** Read the text on screen. You may want to call on volunteers to read the information. Once you've read the text, click on the audio button to listen to a typical level crossing alarm.

Ask students what you should do when you hear an alarm or siren at a level crossing. Students should discuss in their pairs/groups. Call on students/groups for their responses and then click on the button to reveal the correct answer.

 - **Answer: You must not cross if you hear a warning sound or message.**
- **Signs (slide 15):** Read the text on screen. Ask students what should you do when approaching a level crossing? Students should discuss in their pairs/groups. Call on students/groups for their responses and then click on the button to reveal the correct answer.
 - **Answer:** On approach to a level crossing, pedestrians, cyclists and drivers of all vehicles should slow down and pay attention to the instructions on the signs (as well as any warning lights and alarms) – they are designed to keep you safe. **Remember, the train always has right of way.**
- Check for understanding of the last phrase. If students are confused explain to them that trains do not stop for others unless it is an emergency. Even then, a train traveling at full speed can take up to 2km to stop fully.

- **What do you think each sign means? (slide 18):**

Explain to students that they're now going to learn about the different signs that you might encounter around a level crossing to better understand what each means.

Ask students what they think each sign means and at what type of level crossing would they typically find it? Students should discuss in their pairs/groups. Call on students/groups for their responses and then click on each sign to reveal the correct answers:

- **Answers:**

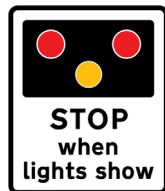
This indicates that there is a level crossing ahead that uses either automatic barriers or gates.



This sign warns there is a level crossing ahead which doesn't have a gate or barrier. All users need to be extra careful when crossing.



This is an advanced level warning, instructing level crossing users that they must stop when the lights show as a train is due to pass over the crossing. This sign is typically found at level crossings where the road meets the track.



Pedestrian crossing – this sign tells us its only safe to cross if the green light shows. If there is no light showing follow the instructions on the sign.



This sign is often found at pedestrian crossings. Before crossing over the tracks you should Stop, Look and Listen to ensure a train isn't approaching. Once you have checked thoroughly that a train isn't approaching, carefully cross over the tracks. There may not be any audible warning system in place so users should remain vigilant.



- **Gates (slide 19):** Read the text on screen. Ask students what should you do if you encounter a level crossing with a gate like the one in the image. Students should discuss in their pairs/groups. Call on students/groups for their responses and then click on the button to reveal the correct answer.

- **Answers:**

- » Always check that the green light shows before crossing.
- » Keep checking for trains while the gates are open and as you cross.
- » After crossing, make sure all gates are fully closed.
- » Every crossing is different. Always follow the instructions on the signs at the crossing for your own safety.

- **Slide 22:** Read the text on the screen and move to the next slide.

- **Staying safe (slide 23):** Ask students to discuss in their groups why the words on screen can lead to accidents around level crossings. Guide students to think of examples. Call on students/groups for their responses and then click on the button to reveal the correct answers.

- **Answers:**

- » **Assumption:** Don't assume there is only one train or use previous experience to guess when the train is coming. **There is no set amount of time from a warning activating to the train arriving.** Trains can come from either direction at any time and there may be more than one train.
- » **Blocked exit:** **Make sure your exit is clear before walking, cycling or driving onto the crossing.** When driving you may find yourself stationary on the approach to a crossing, but you should always ensure you are not queuing on the track.
- » **Concentration:** **It's easy to get distracted, especially by phones, music and conversation.**
- » **Temptation:** **It might be tempting to jump the lights or race around barriers but this is extremely dangerous and puts lives at risk.**

- » **Time: Cross quickly and safely – do not stay on the tracks.** If pedestrians are crossing in a group, each individual should check to make sure there is enough time and space to cross safely – especially the people at the back of the group! Children should be close to an adult and dogs on a lead.
- » **Speed: If driving, you should approach the crossing with caution whether the lights are flashing or not.** It's important to cross at a safe speed.
- Emphasise that trains travel at high speeds, they are exceptionally heavy and difficult to stop. Accidents involving trains at level crossings are often fatal or cause life-changing injuries.

SECTION 2

SWITCHED OFF SCENARIOS

- **Slide 24:** Explain that in this section students will be presented with four scenarios. The questions will appear one at a time. Students should discuss their responses in pairs/groups and then as a class you will click again to reveal the correct answer.
- **Slide 25:** Work through the questions and answers for scenario #1 using the format mentioned above.
 - ? **1. What has happened in this scenario?**
Answer: A pair have stopped on the level crossing to take a photo. They are not obeying the signs and are acting dangerously.
 - ? **2. What are the possible causes?**
Answer: They want to get a "cool" photo. Causing an accident or getting life-changing injuries is not cool.
 - ? **3. What are the potential hazards?**
Answer: Both might be hit by a train. They could also have stepped on an electrified rail. They could sustain life-changing injuries or worse they could die.
 - ? **4. What should the pedestrian have done?**
Answer: Followed the instructions on the signs, and proceeded to cross the railway. You should never stop on a crossing.

- **Slide 26:** Work through the questions and answers for scenario #2 using the format mentioned above.

? **1. What has happened in this scenario?**

Answer: The boy thinks he can make it to the other side even though the level crossing barriers are coming down and the red lights are flashing.

? **2. What are the possible causes?**

Answer: He could be in a rush to get to the other side/ get somewhere else. His friends are on the other side and he doesn't want to get left behind.

? **3. What are the potential hazards?**

Answer: A train is coming and he could trip and fall over. Trains travel very quickly and the boy could be hit. He could sustain life-changing injuries or worse he could die.

? **4. What should the pedestrian have done?**

Answer: Once he had seen the flashing lights and lowering barriers he should have remained on his side of the level crossing. You should never rush to cross a level crossing. You should wait until the barriers have gone up and the lights have stopped flashing before crossing.

- **Slide 27:** Work through the questions and answers for scenario #3 using the format mentioned above.

? **1. What has happened in this scenario?**

Answer: A dog, who isn't on a lead, is running onto the crossing.

? **2. What are the possible causes?**

Answer: The owner is nowhere to be seen and they don't have their dog on a lead. The owner may not be aware they were walking close to a railway when they took their dog off the lead.

? **3. What are the potential hazards?**

Answer: The dog may be hit by the train, the owner might be tempted to run after their dog either onto the crossing or down the track and sustain life-changing injuries or worse. The train might be forced to make an emergency stop. However a train travelling at full speed can take up to 2km before coming to a complete halt, meaning it's highly unlikely that it would avoid hitting the dog or pedestrian.

? **4. What should the pedestrian have done?**

Answer: The owner should have their dog on a lead.

- **Slides 28:** Work through the questions and answers for scenario #4 using the format mentioned above.

? **1. What has happened in this scenario?**

Answer: There is a queue of cars and one car is stopped on the crossing.

? **2. What are the possible causes?**

Answer: A car ahead might have broken down, or there is bad traffic. The driver was not paying attention to the situation ahead.

? **3. What are the potential hazards?**

Answer: A train might be due through the crossing, and the car would be in its way. This could result in life-changing injuries or worse.

? **4. What should the driver have done?**

Answer: Do not enter the crossing unless your exit is clear. Always stay behind the stop line until it is safe to cross. Avoid distractions and pay full attention to the warning lights, alarms and barriers.

- **Bonus question:** What should you do if your car or motorcycle breaks down on a level crossing?
 - **Answer:**
 - If a vehicle breaks down or is involved in an accident on a level crossing, all passengers should get out of the car / off the motorcycle and move safely away from the crossing.
 - Next, if there's an emergency telephone at the crossing you can use this to contact the signaller who can warn and stop the trains. If there is no phone, call the emergency services and tell them what has happened.
- **Slide 30:** Read the text on the screen.

SECTION 3

RECAP QUIZ

- **Slide 31:** Explain to students that this section will put their new level crossing knowledge to the test. Options for the answers will appear on the screen and they should discuss in pairs/groups

the correct answer. Once consensus has been reached, click to reveal the correct answer.

- You may want to get students/groups to record their answers with a pen and paper
 - the group with the highest correct answers wins!
- **Slides 32- 41:** Work through the questions/ answers. More information has been included below to explain some of the answers further.
 - ? **1. When approaching a level crossing, pedestrians should...**
 - **Answer: C:** Turn down any audible devices, listen for alarms and look ahead.
 - » Serious accidents (including fatal accidents) at level crossings are often caused by people not paying attention, not hearing or seeing warning signals or being distracted.
 - ? **2. What does this sign mean?**
 - **Answer: A:** Level crossing without a gate or barrier.
 - » People need to be extra aware at level crossings without gates or barriers.
 - ? **3. How should people use level crossings in rural areas with no gates, barriers or light signals?**
 - **Answer: C:** Stop, look and listen carefully, then cross quickly and safely.
 - » Trains can travel up to speeds of 125 mph through countryside settings as well as towns and cities. There is very little warning before a train approaches. All crossings must be respected as a potential hazard, and especially those without warning signals. Listen for train horns and look both ways – then walk over the crossing quickly and safely.
 - ? **4. What should cyclists or drivers do when they approach a level crossing?**
 - **Answer: B:** Slow down.
 - » All level crossing users should slow down on their approach to the crossing, warning signals can change quickly.

- **? 5. If lights are flashing red at a level crossing it means that...**
- **Answer: B:** Any users should stop and wait – do not cross.
 - » Flashing red lights are a signal to stop and wait. This applies to pedestrians, cyclists and drivers.
- **? 6. If the red lights continue to flash after a train has passed by, what does this mean?**
- **Answer: A:** There may be another train approaching.
 - » Wait – there may be another train approaching.
- **? 7. When can pedestrians, cyclists or motorcyclists cross a level crossing that has a barrier?**
- **Answer: C:** All level crossing users should cross only when barriers are fully raised.
- **? 8. You were distracted watching something on your phone and realise that your friends are already on the other side of the pedestrian crossing. What should you do?**
- **Answer:** Stop, look and listen and check it's safe to cross before proceeding across the tracks.
 - » Always obey the rules. If it's a Stop, Look, and Listen crossing then don't assume it's still safe for you to cross, check before you cross. It doesn't matter if your friends are ahead of you it's better to stay safe than to risk your life.
- **? 9. You're waiting at a level crossing which has barriers and light signals. A train has already gone past. Your friends jump the barrier and start to cross. They're encouraging you to do the same. What should you do?**
- **Answer: C:** Encourage them to stop crossing. Don't put yourself in danger and remain behind the barriers until it is safe to cross.
 - » Another train could be coming – you should always stay behind the barriers until they are fully raised and the lights have stopped flashing.
- **? 10. What should someone do if their car gets stuck / breaks down on a level crossing?**

- **Answer: B:** Get out of the car and move away and call for help.
 - » Get out of the car and off the tracks as soon as possible. Call for help using the phone by the crossing or call the emergency services.
- **Slide 42:** Pause and collect total number of correct answers. Check for any gaps in learning – you may want to go back over key points if multiple groups/students got specific questions wrong.
- Remind students that it's really important pedestrians stay alert and don't get distracted by their phones or other people at level crossings. Cyclists too need to remember the rules. And, if you are learning to drive a car or motorcycle you'll need to know about level crossings for your theory test, so you're halfway there already!

ADDITIONAL ACTIVITIES

Explore the [Living Switched On resources](#) on the Switched On website, for more rail safety activities to complete with students in the classroom.

If you're looking to help students about another vital part of the railway environment – why not check out our [Overhead line equipment resource?](#) This resource teaches students about the dangers presented by the electrified live wires that help power electric trains, via a quiz and scenario-based activity.

Looking for more resources that tackle topics of peer pressure around the rail environment? Try the [Switched On track back resource](#), which uses a set of high impact photographs, role-play activities and discussion to explore the behaviours of young people's peers and analyse how attitudes to risks may change for the better and for the worse.

Differentiation

- **For learners with lower cognitive or literacy skills who would benefit from additional support or a slower pace of learning** you may wish to draw on resources from the 'Switched On for every journey' programme, which are designed for students aged 7-11. These revisit key rail safety messages in a more supported and accessible way.