

## Rail Safety - Lesson Plans

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### Activity 1- Electricity Hotspots

#### Curriculum for Excellence Experiences and Outcomes

I am learning to assess and manage risk, to protect myself and others, and to reduce the potential for harm when possible. **HWB 0-16a**

I know and can demonstrate how to travel safely. **HWB 0-18a**

I know how to stay safe when using electricity. I have helped to make a display to show the importance of electricity in our daily lives. **SCN 0-09a**

**1. Connecting the Learning** - If the Live Wire assembly PowerPoint presentation has previously been shown to learners, invite them to form pairs and think, pair and share what they learned about electric railways, the benefits and dangers of electric railways and how they can stay safe around electric railways. If not, you may wish to show this to your class before commencing with this particular lesson. Alternatively, begin by discussing with learners, the closest railway station(s) to their school. If possible, have a few photos of the stations to help jog memories. Ask the children if they think it is safe to walk or play in the railway stations or on/near the railway lines. Why not? Explain that in this lesson, they are going to learn about where electricity can be found on a railway.

#### 2. Sharing the Learning Outcomes -

- I can recognise electric railways.
- I know where electricity can be found on electric railways.
- I know how to stay safe around electric railways.

**3. Active Learning** - Explain that although we can't actually see electricity on the railways, there are clues (electricity hotspots) which tell us that electricity is present. Distribute Worksheet 1 'Find the electricity hotspots' to pairs or small groups of learners and ask them to take a few minutes to discuss where electricity may be found. Ask learners to draw circles around where they think electricity can be found. Next, invite responses from learners. They may guess the overhead power lines and in the track. Show them the second version of the photo revealing the 'hidden places' where electricity is also present, for example by the side of the track or in an underground cable. An interactive slide of these pictures is also available. See slide 19 of the Live Wire PowerPoint presentation. The PowerPoint slide also shows how far electricity can 'jump'. Engage learners in a discussion about how they can stay safe on the railway. Refer to the Rail Life 'Safety Top 3' at the bottom of the worksheet. These can also be found on slides 23-26 of the PowerPoint presentation.

**4. Demonstrating Understanding** - Learners could create posters illustrating where electricity can be found on the railway and/or how far it can 'jump'. They may wish to present these to their peers in another class or classes. If practical, you may wish to arrange a visit to your local train station where learners can see what they have learned in class in a real life setting. In ICT, learners could create an Electric Railway fact sheet which outlines where electricity can be found on the railway and how train passengers can stay safe on the railway.

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**5. Review and Recall** - Ask learners to remind you and each other of where electricity can be found on the railway. Encourage learners to use correct terminology. How many learners can remember the voltage of each electricity source? Can anyone remember how far electricity can 'jump'? Can learners remember the 3 ways they can stay safe on the railway?