

Rail Safety - Lesson Plans

Activity 1 - Maths quiz

Curriculum for Excellence Experiences and Outcomes

Having determined which calculations are needed, I can solve problems involving whole numbers using a range of methods, sharing my approaches and solutions with others. **MNU 2-03a**

1. Connecting the Learning - Show pictures on the interactive whiteboard of things in, and outside of, the home that are powered by electricity (e.g. overhead railway lines, television, computer games console, railway electrical substation, electrified third rail etc.) How many different ways can learners group these? (for example, those used indoors/outdoors, those with greater/lesser voltage etc.) Explain that today, learners will use their knowledge and understanding of multiplication and subtraction using real life scenarios relating to the railway.

2. Sharing the Learning Outcomes -

- I can use the correct calculation to solve each word problem.
- I can show my working for each calculation.
- I can share my approach and solution with others.

3. Active Learning - Multiplication brain warm-up (using whiteboards for example. You may wish to start with a 'railway numbers game' to get the calculations going! It may also be necessary to re-cap the correct mathematical vocabulary relating to multiplication and subtraction (e.g. greater than, difference between, times.)

Distribute Worksheet 2 'Power up! Maths quiz' to pupils individually, in pairs or in small groups. As a class, read through each question in turn and encourage learners to look for clues/words which indicate which calculation should be used to solve each word problem.

4. Demonstrating Understanding - Learners should complete each question. You may wish to devise a relevant extension task with a similar rail-related theme for early finishers/added challenge.

5. Review and Recall - Learners should carefully check their answers for accuracy before moving around the room in silence to see how others answered each question. If appropriate, learners could take some additional time to review their answers once more, before having an opportunity to compare answers and explain their working to someone else. As a class, review the key vocabulary in each word problem and invite pupils to share their methods/working with the rest of the class.