Keep Sparky Safe

Keep Sparky Safe is an augmented reality (AR) mobile game designed for use in primary schools. Students learn to identify electrical equipment and when they are unsafe because of damage.

What you need to play the game

- Mobile devices with a camera e.g. tablets.

  Android – ARCore enabled device (phone or tablet) running Android 7.0 (Nougat) and later.
  iOS – ARKit enabled devices (phone or tablet) running iOS 11 and later.

- Download the app from the App Store or Google Play

Object of the game

Students move around their real environment following an augmented Sparky the dog. They observe 3D objects popping up on screen which Sparky goes to investigate. The students can look all around the object then decide if Sparky is safe going near or touching it.

The AR component allows students to come face to face with dangerous electrical scenarios, without being in any real danger.

What students will learn

The game teaches students to recognise common electrical equipment including:

- powerpoles and lines
- transformer or switching cabinets
- underground connection pillars (also called green domes)
- substations

All electrical equipment can be dangerous if damaged. The game also shows students how to identify whether it's safe or unsafe.

Before playing the game

A great way to start is by reminding students that electricity is dangerous and can badly hurt or even kill you if you come close to or into contact with it.

For years K–3:

Read the picture book **Sparky and the Electrical Pillar**. If your school didn't receive a copy of the book, a hard copy or PDF version is available through our website **westernpower.com.au/sparky**. The book introduces students to Sparky the dog and his antics, and how electricity can be dangerous.

For years 4–6:

View and discuss the video **Why Sparky got a Shock** at **westernpower.com.au/sparky**. The video looks at different electrical equipment we find in our street environment and the when and why of electric shocks.

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Using the app

Set up

Download **Keep Sparky Safe** from the App Store or Google Play on all the mobile devices you'll be using.

It's a good idea to familiarise yourself with the game first before playing it with your class.

The game is designed for one player per device, but you may want to pair or triple up students to assist with their learning experience and facilitate discussion. You can have one student play the game all the way through and then swap with their partner or get them to take turns during a single game.

Ready to play

1. Hand out the mobile devices to students.
2. Take your class to a large open space such as the oval or basketball/tennis court.
3. As a class, instruct students on how to open the app. The game has sound so get students to check the volume is turned up
4. Read through the game instructions with your class. There are icons that prompt actions during the game. These are:

   • Pointing the device towards the ground and moving it slowly back and forth
   • Tapping the screen anywhere
   • Moving the screen as students walk around to look for equipment
   • Moving a few meters away from their current position

We encourage you to spread out to avoid students bumping into each other. Allocate each group their own area to play. You can even section areas off with markers about 4m apart from each other to allow enough space to move around.

Remind students to keep an eye on the real world and the augmented reality, especially when moving to avoid collisions.

Now students can begin their own directed play.

Play sequence

When playing the game, students observe Sparky the dog exploring his neighbourhood. In all instances it follows this sequence:

1. Scan the ground (this is for the AR to find the surface)
2. Tap to call Sparky – you might need to move the screen to see him
3. Tap for Sparky to find electrical equipment
4. Move around pointing device at object to look around the electrical object – you might need to look up to see all of it
5. Answer the prompt (thumbs up for safe, thumbs down for unsafe)
6. Get feedback and points if correct
7. Move at least 3 metres away from current position
8. Repeat sequence

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They'll all get a slightly different experience from the app, with equipment appearing in different orders.

When playing the game students will earn pawprints and spark bolts by correctly identifying if the electrical equipment that appears is safe or unsafe for Sparky to be near. Equipment will keep appearing until they assign them all correctly.

Everyone can get maximum points. You can check your points tally on the top right hand corner of the screen.

When is the game over?

When the student has correctly identified everything (5 safe and 6 unsafe) the students will be presented with a few screens of post-game questions. You may want to collect the students 'scores' from the test for assessment purposes. You'll need to ask the students for their scores or get them to save them to the device.

After the game

In the resources section of **Electrical Safety with Sparky**, you'll find printable snap playing cards. You can use these to test the students or extend their learning.

We hope your students enjoy the game and we'd love to know what they think. Your feedback will help us with any future teaching resources we produce. Please email **energyeducation@westernpower.com.au** with your comments or questions.