

Exploring Circuits Kit

What is it?

The Exploring Circuits kit introduces students to the world of circuits and electronics. The kit explores circuits using three different concepts to gain a firm understanding of electronics. The kits are hands on, inquiry based projects that give the children a love of STEAM.

What is the aim of the kit?

To understand the basics of circuits and electricity while giving them the basis to move on later to more complex circuits and projects. Circuit projects include paper circuits, basic robotics and e-textiles. The kit develops hand eye co-ordination, creativity, fine motor skills and builds self confidence.

What age/year level is it for?

The kit can be introduced to children from 7 years old. The kit is also relevant for high school students who benefit from more complex projects after learning the basics. Lesson plans are included for Levels 3-4 and 4-5 of the curriculum.

Skills learnt?

1. Understanding how circuits work
2. Building a range of circuits using different materials
3. Solving real life problems with technology
4. Creative, design thinking to implement e-textile components into sewing projects
5. Knowledge of circuits and electronics
6. Fine motor skills, hand eye co-ordination, self confidence

What is Lilypad?

Lilypad is a system of sewable electronic pieces designed to make soft, sewable, interactive e-textile projects. It combines electronics and the artistic pursuit of sewing. This kit includes materials to start implementing Lilypad into their projects. For more complex Lilypad projects involving coding see our Maker: Sew kit.



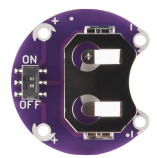










Some of the projects they can make?

Soft textile projects including badges, bags, clothing, wrist bands and masks. Paper circuits including cards, masks and origami. Bristlebot mini robots and doodlebots.

What are the benefits of the kit?

1. The kits teach various skills to the children but there is no defined start or end point. The kit is entirely child led and the outcomes are unique to each child. One set of materials, 30 students, 30 different outcomes and projects. However all students will have gained the same skills and knowledge at the end.
2. The kits tap into the child's interests making it relevant and engaging
3. The number of projects is limitless. There are at least 10 sessions included with the kit
4. Can be used for a wide range of ages.
5. Unique to the market.
6. Supported with project ideas and videos
7. The consumables in the kit can be repurchased through OfficeMax for future use.
8. A strong emphasis on the art side of STEAM while introducing technology, an interesting combination.
9. Designed and tested in New Zealand classrooms to support our curriculum.
10. Lesson plans and project sheets in English and Te Reo.

Exploring Circuits Parts List

Part	Name	12 Student Kit	24 Student kit	Part	Name	12 Student Kit	24 Student Kit
	Felt (24 sheets per pack)	1 pack	2 packs		Vibrating Coin Motor	12	24
	LilyPad Battery Holders	24	48		Coin Cell Batteries	12	24
	LilyPad LED	48	96		Googly Eyes	24	48
	Sewing Needles	12	24		Adhesive Foam Squares	24	48
	Coin Cell Batteries	50	100		3mm LED	36	72
	Conductive thread 12m bobbins	1	2		Copper Tape 30m roll	1	2
	Bristlebot body	12	24				
All kits come in a sturdy storage container.	All Kits come with full lesson plans linked to the NZ curriculum in English and Te Reo.			All kits have access to our online portal with project sheets, instructions	and videos to support the lessons and extend learning		