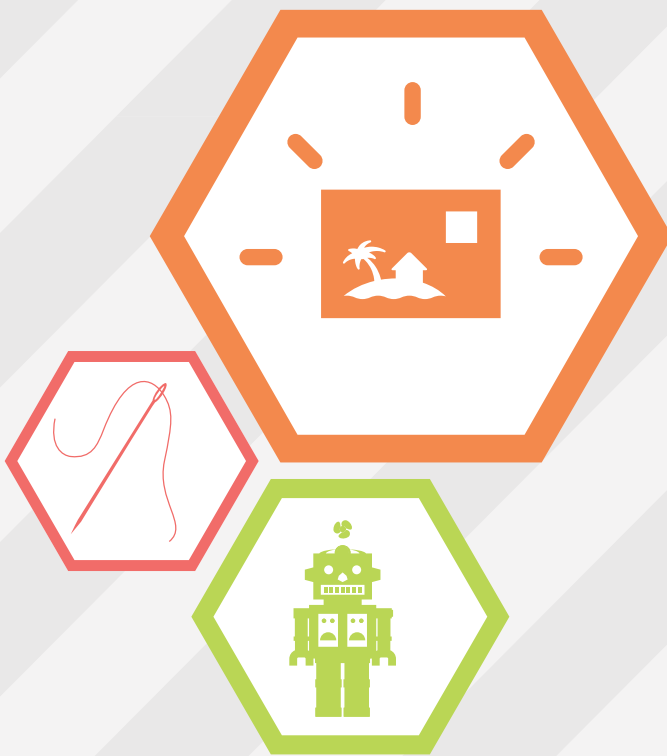


# MAKEIT

## WORKSHOP PLAN



## LED POSTCARD

Over 45 minutes, participants will use a range of craft materials and simple electronic techniques to construct and decorate an LED postcard.



### AGE GROUP

14+



### METHOD

Small Groups

(7:1 participant to facilitator ratio recommended)



### LEVEL

Introductory



### DURATION

45 minutes



### KEY LEARNINGS

Basic Electrical Circuits  
Visual Design & Collage

Version 1.0

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# LED POSTCARD

## INCLUDED IN THIS WORKSHOP PLAN

- > Materials and equipment list
- > Preparation suggestions
- > Recommendations: General advice, notes on general circuit issues, post workshop suggestions and opportunities for further learning
- > Full 45 minute workshop outline

## APPENDICIES

- > Basic circuit diagram
- > Postcard template
- > Design fundamentals info sheet

## MATERIALS AND EQUIPMENT

- Laptop and projector (or large screen)
- Flashing and or standard LEDs in a range of colours (2 per participant)
- Coin cell batteries (1 per participant)
- Pre-cut and stripped hookup wire (50mm long with 10mm tails stripped at each end – minimum of 1 per LED )
- Hot glue guns and glue sticks (share 1 between 2 or 3 participants)
- Scotch tape (1 small roll per participant)
- Pre-cut postcard templates (1 per participant plus a few spares)
- Aluminium Foil (1x 5cm x 5cm square per participant)
- Scissors
- Pointy nose pliers
- Selection of postcards including local examples (1 or 2 per participant)
- A selection of coloured, textured and patterned paper stock
- Pencils and scrap paper for planning
- Coloured art pens
- Photo copies of themed images, text and typography scaled and cropped to useful size
- Design Fundamentals info sheet (appendix)
- POSTCARD TEMPLATE** (appendix)
- CIRCUIT DIAGRAM** (appendix)

## PREPARATION

In preparing for this workshop the facilitator should:

- > Experiment with the simple circuits used in this project
- > Familiarise themselves with the fundamentals of design
- > Become familiar with the diversity, history and potential place of postcards in contemporary communities
- > Pre-cut and fold post card stock
- > Pre-cut and strip hookup wire
- > Prepare themed images, text and typography



## RECOMMENDATIONS

### GENERAL ADVICE

- > Keep the pace up... but don't rush too much. Think of the workshop as a balance between a race to make the craziest postcard and opportunity to experiment with design principles, visual content and application of LEDs in an interesting way. Communicate this in both word and action (body language) and mixing the pace of different components of the workshop between moments of mindful discussion and intense brackets of explosive creativity. The point of the workshop is not to create a masterpiece, it is to create something fun and creative in 45 minutes and to explore the creative horizons of a simple activity like this.

### ELECTRICAL CIRCUIT ISSUES

The most common reasons this circuit doesn't work are:

- > You have a weak or broken connection somewhere in your circuit. Trace the circuit and check all the connections thoroughly.
- > The polarity (electrical direction) of one or more of the LEDs is wrong. Check you have them wired in the right way.
- > There's a short circuit (the electricity is taking a shortcut through a conductor that is making a connection somewhere in your circuit. Check everything is secured in place correctly and that nothing in the circuit is touching anything (conductive) that it shouldn't (such as the badge back).

### POST WORKSHOP

- > Don't underestimate the joy participants can draw from making the LEDs light up.
- > If you have correct permissions don't forget to get photos of the participants with their finished postcards and share these through your organisation's social media.
- > Be sure to credit all involved when sharing or showcasing their work.

Continued...

**FURTHER LEARNING**

This workshop can be expanded to any length required by adding to the level of sophistication in the electronics used in the card or by experimenting with popup card and paper craft techniques.



## WORKSHOP OUTLINE

**00:00**

### INTRODUCTION

Welcome participants to the workshop.

Introduce yourself.

Share any relevant health and safety information such as the location of toilets, emergency exits and procedures to be followed.

Ask participants to share their names and previous electronics experience (ask them to keep it short).

Explain to participants that they will be making an LED postcard.

Show them examples of postcards and discuss the history and contemporary place of postcards.

Discuss the practicalities of what makes a postcard:

- > Addressable, postage limits, size?
- > What would you love to get in the mail?

**00:05**

### DISCUSSION ON POSTCARD DESIGN

Discuss themes, visual content, typography, and text.

Discuss the fundamentals of design:

- > Balance
- > Proximity
- > Alignment
- > Repetition
- > Contrast
- > Space

Discuss interesting ways you could use an LED on a postcard (as a point of light, to back light cut out features or elements).



 **00:15 BRAINSTORMING AND PLANNING**

The participants have five minutes to sort through the visual stimulus of the images and postcard resources made available and to make a plan for their design. During this time encourage participants to sketch a plan and gather the resources they'd like to use.

 **00:20 ELECTRICAL CIRCUITS**

Introduce participants to the concept of an electrical circuit as a closed system

Identify and hand out the components (battery, wires, LED, simple switch) of the circuit and have participants arrange these to work with their design.

Participants start decorating their postcard and constructing their circuit using scotch tape, and hot glue to fix components to the cardboard postcard templates provided.

Call tools down.

 **00:35 FINISHING TOUCHES**

Get participants to put the final decorative touches on their postcard and attach the **POSTCARD TEMPLATE** to the back, fixing down the edges and securing the electronics inside.

 **00:40 SHARE**

Participants present their postcards to the rest of the group.

If you have permission, photograph the participants with their postcards as they present.

 **00:45 THE END**

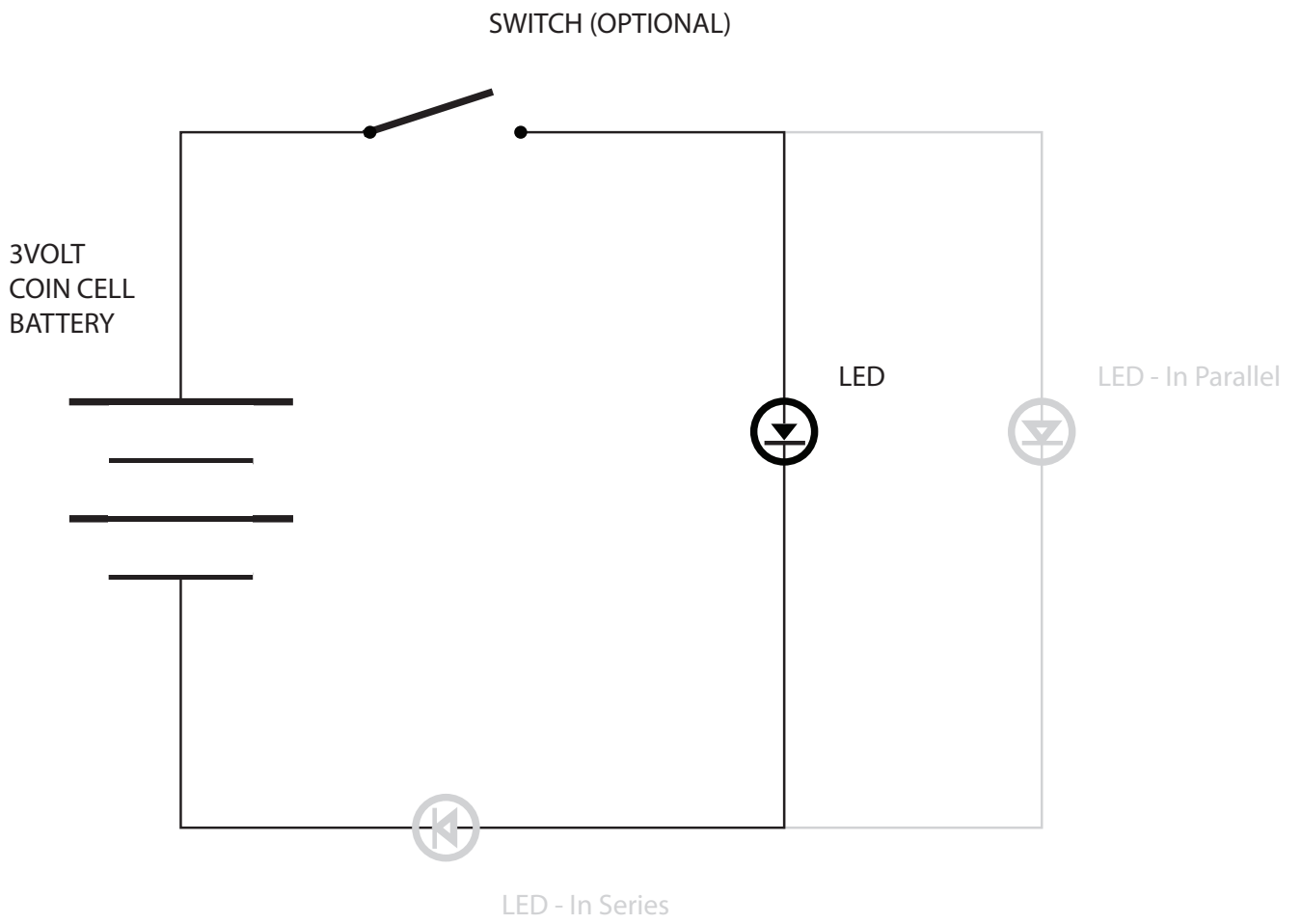
# APPENDIX

CIRCUIT DIAGRAM

POSTCARD TEMPLATE

DESIGN FUNDAMENTALS





A large rectangular frame representing a postcard. A vertical line is positioned on the right side, approximately one-third of the way from the right edge, separating the address area from the rest of the card. In the top right corner, there is a small rectangular box containing the text "Place Stamp Here". Below this box, there are three horizontal lines stacked vertically, intended for an address.

Place  
Stamp  
Here

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## THE PRINCIPLES OF DESIGN

The elements and principles of design are the building blocks. The elements of design are the things that make up a design. The Principles of design are what we do to those elements. How we apply the principles of design determines how successful the design is.

View more at [www.j6design.com.au/6-principles-of-design](http://www.j6design.com.au/6-principles-of-design)

## THE ELEMENTS OF DESIGN

- > LINE – The linear marks made with a pen or brush or the edge created when two shapes meet.
- > SHAPE – A shape is a self contained defined area of geometric (squares and circles), or organic (free formed shapes or natural shapes). A positive shape automatically creates a negative shape.
- > DIRECTION – All lines have direction – Horizontal, Vertical or Oblique. Horizontal suggests calmness, stability and tranquillity. Vertical gives a feeling of balance, formality and alertness. Oblique suggests movement and action
- > SIZE – Size is simply the relationship of the area occupied by one shape to that of another.
- > TEXTURE – Texture is the surface quality of a shape – rough, smooth, soft hard glossy etc.
- > COLOUR – Colour is light reflected off objects. Color has three main characteristics: hue or its name (red, green, blue, etc.), value (how light or dark it is), and intensity (how bright or dull it is).

## THE PRINCIPLES OF DESIGN

- > BALANCE – Balance in design is similar to balance in physics. A large shape close to the center can be balanced by a small shape close to the edge. Balance provides stability and structure to a design. It's the weight distributed in the design by the placement of your elements.
- > PROXIMITY – Proximity creates relationship between elements. It provides a focal point. Proximity doesn't mean that elements have to be placed together, it means they should be visually connected in some way.
- > ALIGNMENT – Allows us to create order and organisation. Aligning elements allows them to create a visual connection with each other.
- > REPETITION – Repetition strengthens a design by tying together individual elements. It helps to create association and consistency. Repetition can create rhythm (a feeling of organized movement).
- > CONTRAST – Contrast is the juxtaposition of opposing elements (opposite colours on the colour wheel, or value light / dark, or direction – horizontal / vertical). Contrast allows us to emphasize or highlight key elements in your design.
- > SPACE – Space in art refers to the distance or area between, around, above, below, or within elements. Both positive and negative space are important factors to be considered in every design.

# The Edge

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