

## STEM connection 8.2

# Designing and making electrical devices

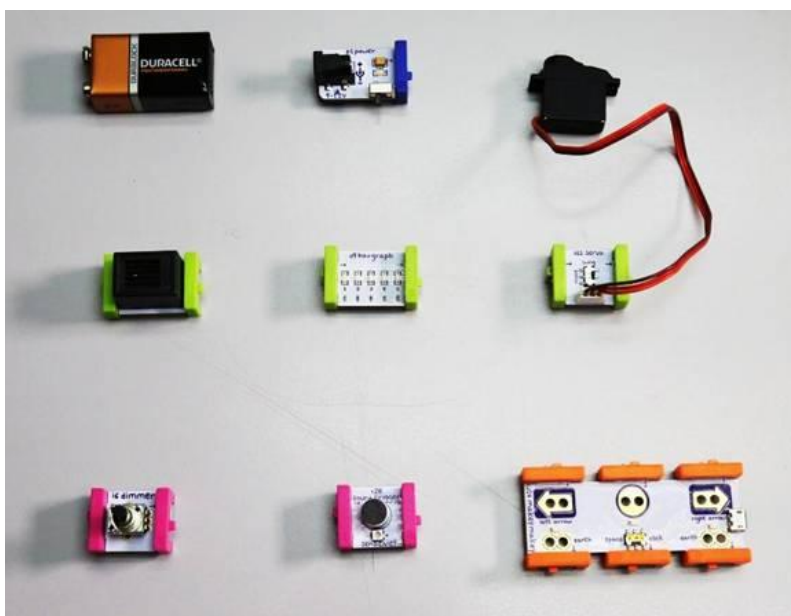
## Student's Worksheets



**Task:** Design and make some creative electrical devices using the latest electronic building blocks 'littleBits'

### Introduction

littleBits makes electronic building blocks which are easy to use. The electronic building blocks are colour-coded, magnetic and reusable. Each bit has its own specific function and can act as LEDs, buzzers, sensors, or buttons. Each of them can snap together with magnets without soldering or wiring. Using these blocks can make more than thousands of combinations of circuits.



In this project, we will use the “Rule your room kit” to create simple electrical devices.

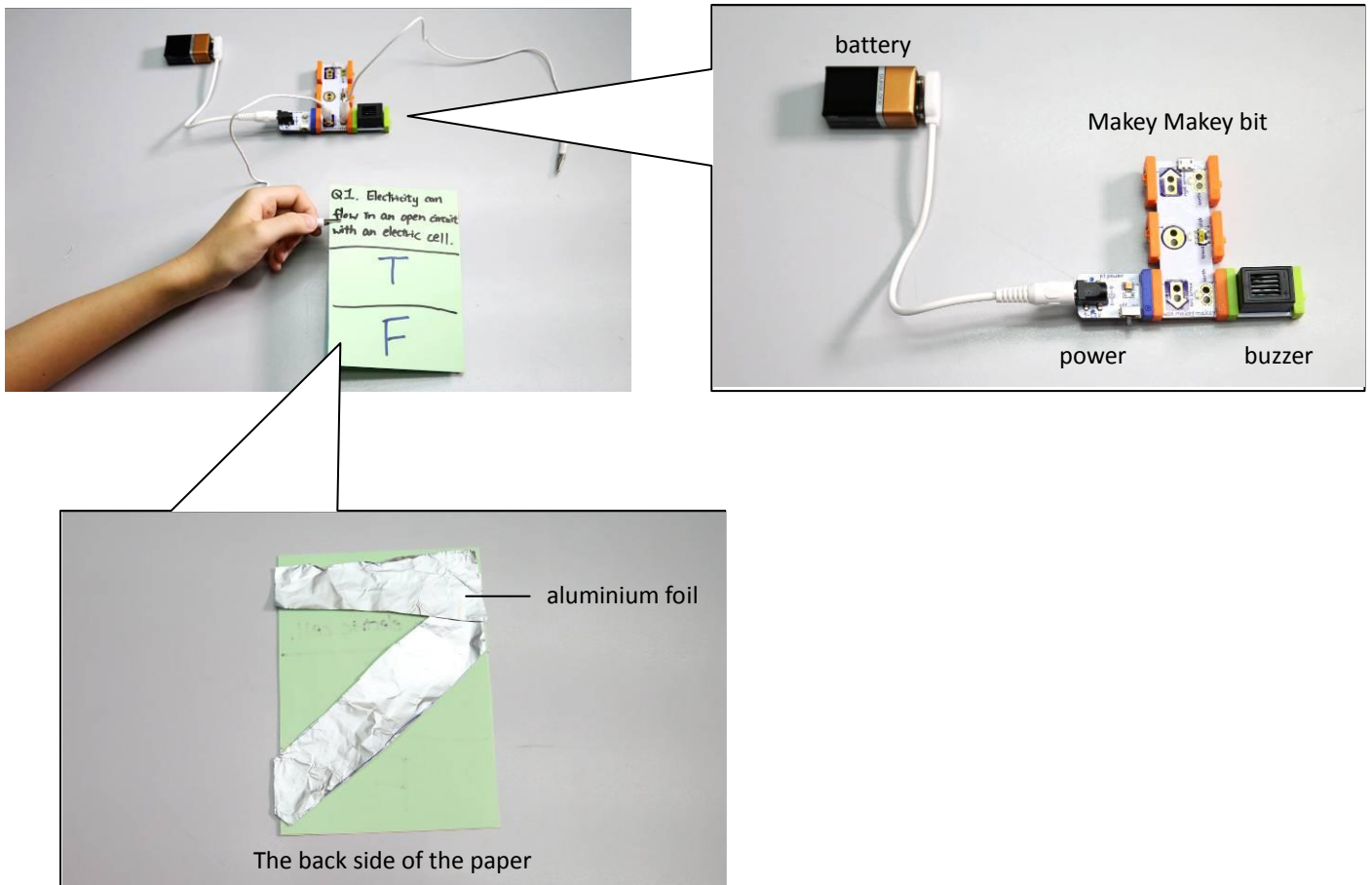
## Part A— Use the ‘Rule your room kit’

You can search the Internet to learn how to use different components in the ‘Rule your room kit’. You can also study the invention guide of the kit to see which kinds of inventions you can make by using the kit.

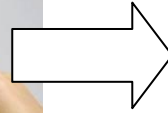
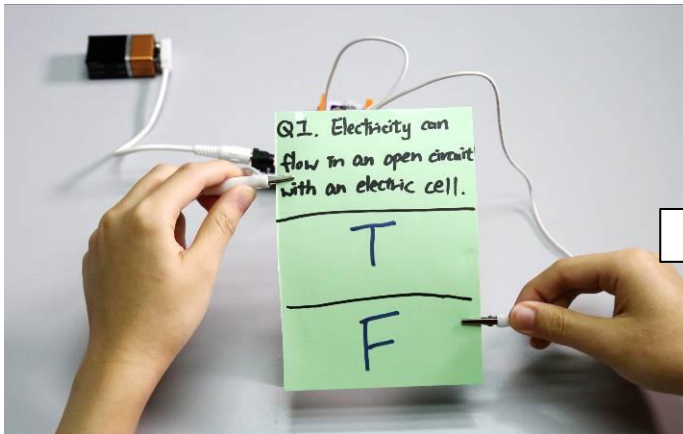


## Part B—Design and make an ‘Answer checking system’

An ‘Answer checking system’ can give a sound when you choose the correct answer of a T/F or MC question. Study the ‘Answer checking system’ made by littleBits below. Think about how it works.



When you choose the correct answer...



a sound is given out!

You can now discuss with your group members and design and make your own 'Answer checking system'. After you have finished the system, you can play a 'Q&A competition' with your classmates using the system!

### Part C—Think about

1. Explain the working principle of the 'Answer checking system'.

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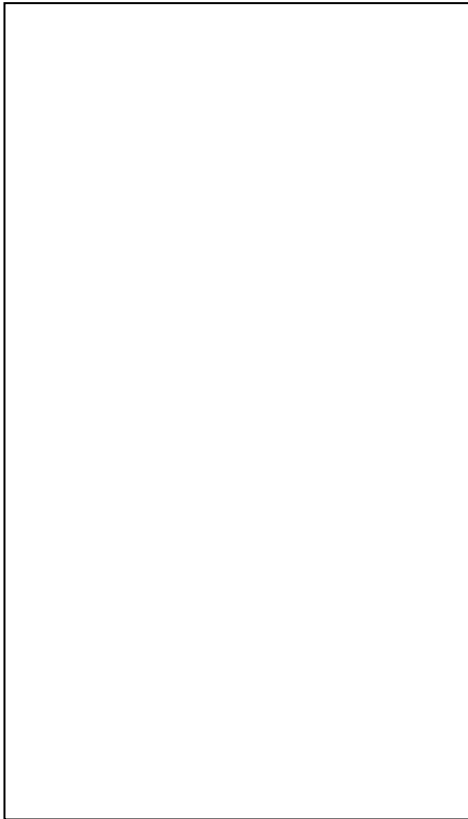
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2. Give one more invention you want to create by using 'littleBits'.  
Briefly describe how you will make it with the aid of a diagram.



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3. Submit [Student's Worksheet](#) to teachers after the lesson.