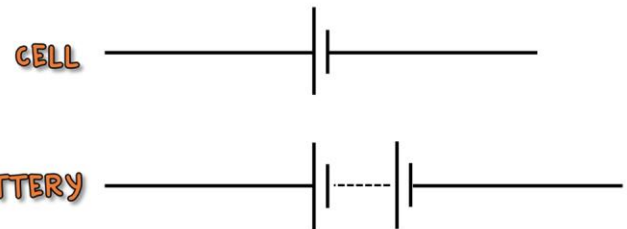
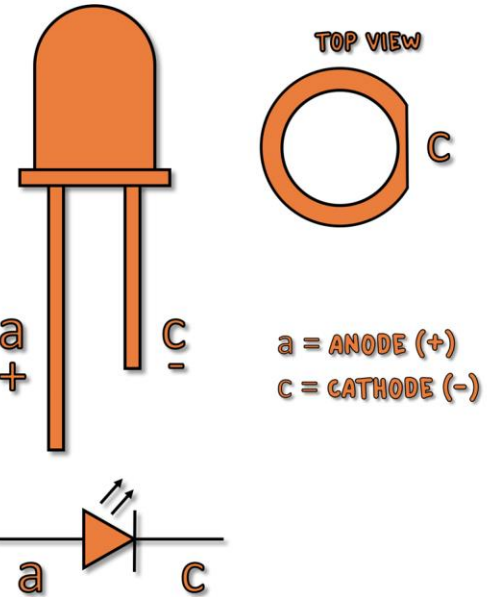
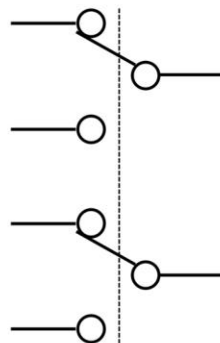
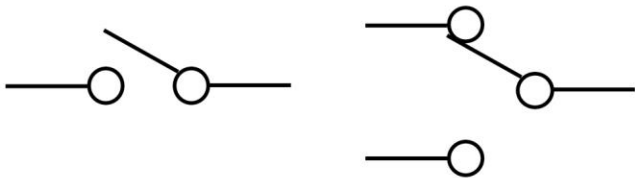
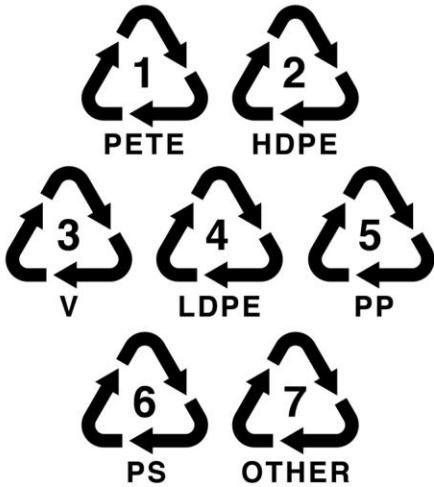


# GraspIT ELECTRONICS



### Systems and components

- Identify common signals used in system diagrams
- Explain open-loop and closed-loop system
- List products which require a system diagram or schematic representation of a system

### Inputs

- Explain how different types of mechanical switches perform different functions
- Explain switch bounce
- Explain the operation of transistors as electronic switches
- Describe the uses of bipolar transistors

### Outputs

- An LED is polarised. What does that mean?
- Which leg is longer – anode or cathode?
- Calculate the suitable current resistor to protect an LED

### Processes and manufacture

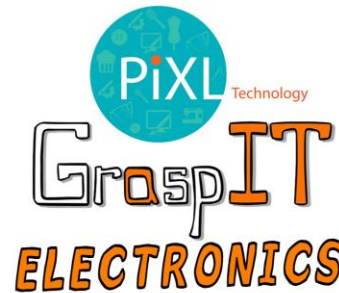
Describe how circuits can be prototyped before manufacture?

Explain the advantages and disadvantages of using CAM in the manufacture of PCBs

Explain the following manufacturing processes:

- Laser cutting
- Line bending
- Vacuum forming
- Injection moulding

Explain the use of a multimeter in testing circuits



### Design and market influences

- Explain how electronic products have an impact on our daily lives. Give an example
- How can you identify if plastics are recyclable?
- Explain the role of standards in the design of electronic products

### Circuit symbols

- Draw the symbols for four different types of switches and diodes, and print out a photo of each.
- Give a use in an electronic product for each type of switch
- Draw the symbols for a minimum of five different output components

### Materials

- Explain the difference between thermosetting plastics and thermoplastics
- What is meant by the term 'properties'? Give an example
- Give an example of a smart material