



Section 1 Vocabulary

A. Read the text and look at the diagrams.

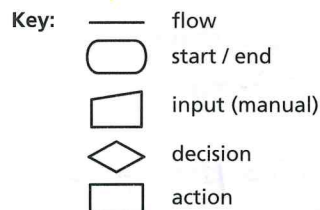
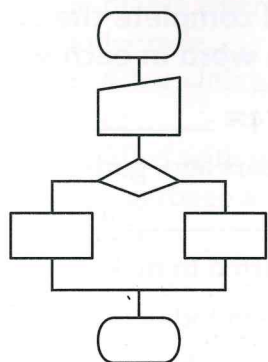
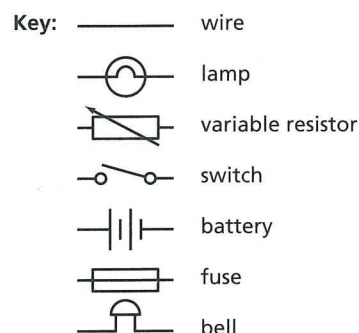
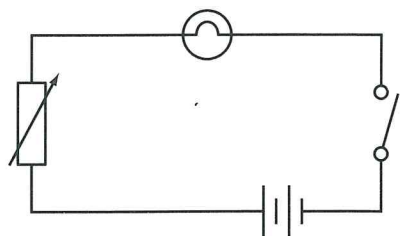


Figure 1: A simple electric circuit

Figure 2: A simple flow chart

We often use **symbols** in technical drawings to represent, or **stand for**, **components** or parts of a system. For example, symbols are used:

- in chemistry for elements, as we saw in Unit 8; for example, H = hydrogen, Fe = iron, NaCl = common salt
- in physics for the components of an **electric circuit** – see Figure 1
- in IT for the **flow** through a **program** – see Figure 2

It is important to learn basic symbols, but sometimes there is a **key** to help you understand the diagram. Even if you don't know the symbols, you can **read** the diagrams from the key.

In the **circuit diagram** (Figure 1), there is a circuit made up of **wire** which includes a **battery**, a **switch**, a **variable resistor** and a **lamp**. We can work out from this that the circuit operates on a battery, not from the **mains**. We can also

work out that if we **close** the switch, we turn on the lamp. What does the variable resistor do? It is a **dimmer switch** – it makes the lamp brighter or dimmer. *ayarlı*

In the **flow chart** (Figure 2) there is a program which has **start**, **input**, **decision**, **action** and **end**. Some manual input, which is probably something typed in from the keyboard, leads to a decision. The decision leads to two different actions.

B. Look at the diagrams and answer the questions.

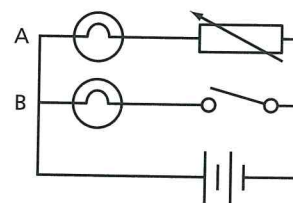


Figure 1

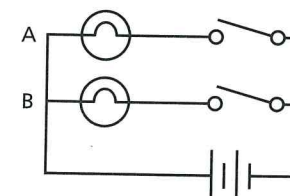


Figure 2

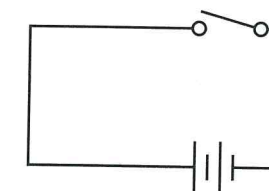


Figure 3

1. What is the source of power in all three wiring diagrams?
2. Which diagram shows two lamps and one switch?
3. How do you control Lamp A in the circuit in Figure 1?
4. What happens when you close Switch A in the circuit in Figure 2?

C. Add a lamp, a fuse and a variable resistor to the circuit in Figure 3.



Section 2 Reading

Making your light circuit

Make the circuit by connecting all the components as shown in the wiring diagram (Figure 4). Turn on the light by closing the switch. Adjust the brightness of the lamp by operating the dimmer switch.

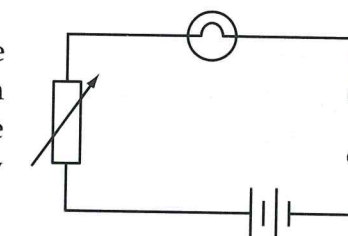


Figure 4

Troubleshooting

If the lamp does not light after closing the switch, follow this troubleshooting procedure. Open the switch before conducting each check. Remember to close the switch after completing each stage to see whether you have solved the problem.

Stage 1 (Figure 5)

If the lamp still does not light, try moving the dimmer switch to maximum.

Stage 2

If the lamp still does not light after doing this, try replacing the bulb.

Stage 3

If the lamp still does not light, inspect all the connections, especially the two connections to the battery. Try remaking any bad connection.

Stage 4

If all the connections are good, check that the battery is not dead.

Stage 5

If the battery is charged, one of the components must be faulty – the switch, the dimmer switch or even the lamp holder. Try fitting a new switch first, then a new dimmer switch, then a new lamp holder.

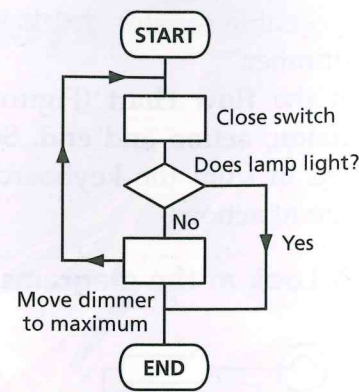


Figure 5

A. Choose the best answer in each case.

1. *Connect*, in this text, means:
 - a. turn on the switch
 - b. adjust the brightness
 - c. join all the components together
 - d. operate the dimmer switch
2. The dimmer switch:
 - a. turns on the lamp
 - b. changes the brightness of the lamp
 - c. turns off the lamp
 - d. operates the circuit
3. If the lamp does not light, check first:
 - a. that the bulb is OK
 - b. that the connections are OK
 - c. that the dimmer switch is on maximum
 - d. that the battery is OK
4. *Troubleshooting* means:
 - a. connecting the components correctly
 - b. finding where the problem is
 - c. fixing a problem
 - d. finding and fixing a problem
5. The opposite of *dead*, in this text, is:
 - a. charged
 - b. bad
 - c. good
 - d. faulty

B. Study the following example sentences.

Using gerunds

Turn on the light by **closing** the switch.
 Close the switch **after completing** each stage.
 If the lamp does not light, **try replacing** the bulb.
 If any connections are bad, **try remaking** them.

C. Find and correct the mistake in each sentence.

1. Make the circuit by connect all the components.
2. Turning on the light by closing the switch.
3. Adjust the brightness before operating the dimmer switch.
4. Open the switch before to conduct each check.
5. Try remake any bad connections.
6. If the lamp does not light, try move the dimmer to maximum.



Section 3 Listening

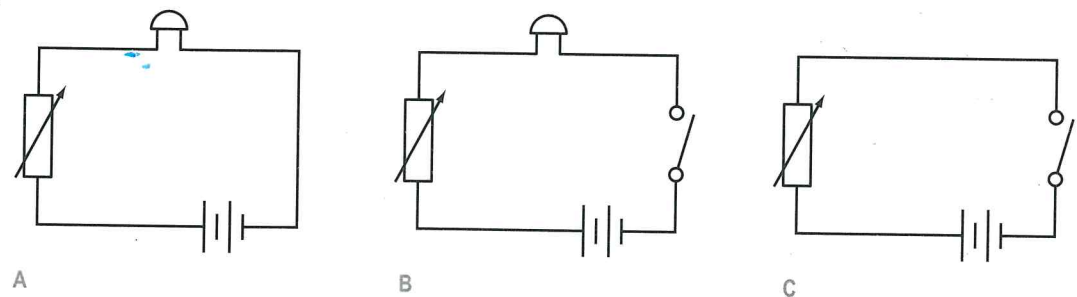
A. Listen and complete the summary of the reading text in Section 2. Write one word in each space.

If the lamp does not light after closing the switch, follow this troubleshooting procedure:

1. Try moving the dimmer switch to _____.
2. Try _____ the bulb.
3. Inspect all the _____ and try remaking any bad connection.
4. Check that the battery is not _____.
5. Try fitting new _____ — switch, dimmer switch, lamp holder.



B. Listen to the conversation and choose the diagram the man drew.



C. Listen again and draw a correct version of the circuit diagram below.