

UNIT 4

FUNCTIONS OF ELECTRONIC COMPONENTS

In this unit you are going to learn about

- electronic components and their functions



Warm-up

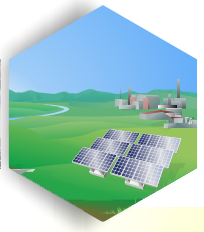
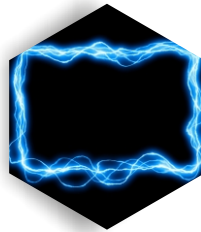
Look at the pictures below and write the correct words underneath them.

energy

device

flow of current

electric charge



THE NEWS

14 August 2010

Amazing!

You may have read about the 71-year-old man in China who charges himself daily with 220V of electricity to keep himself fit. It is said that he cooks fish with the current passing through his body.





Activity 1

Read the following dialogue. Then label the pictures opposite.

Melisa: Do we have any resistors?

Kaan: Yes, we have eight.

Melisa: What about capacitors?

Kaan: I'm not sure. Do you mean these three black components?

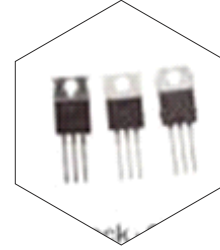
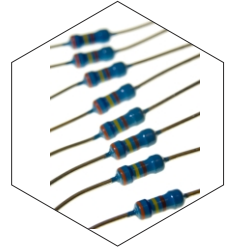
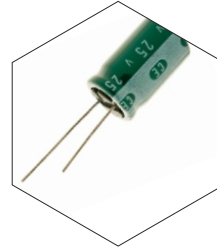
Melisa: No, they're transistors. The green ones are capacitors. Do you know what this black component is?

Kaan: I'm not sure. Is it an inductor?

Melisa: No, the inductors are the circular ones. This is a diode.

Kaan: I see. I think I have a lot to learn about these components!

Melisa: Haha! Yes, you do!



Activity 2

Look at the following electronic components. Translate them into Turkish (Use an online dictionary).

- a. capacitor
- b. diode
- c. transistor
- d. resistor
- e. inductor





Activity 3a

Fill in the missing parts in the following definitions



1. a resistor - resists the _____



2. a capacitor - temporarily stores an _____



3. a diode - lets the current flow in _____



4. a transistor - controls the flow of electrical current within a _____



5. an inductor - stores its _____ in a magnetic field.

LANGUAGE NOTE

Questions

What is a _____ for?
 What does a _____ do?
 What do we use a _____ for?

Function

It is for _____ ing _____.
 It _____.
 We use it for _____.

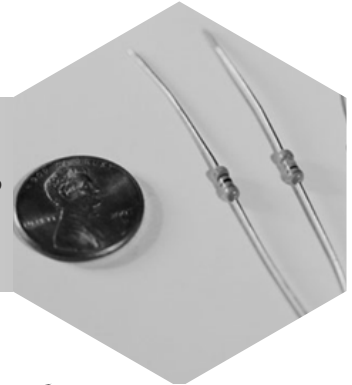


Activity 3b

Now, take turns and ask your partner about the functions of the electronic components.

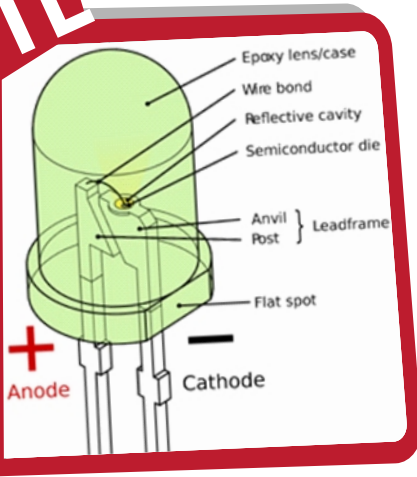
Did you know that?

resistors are one of the most basic components used in electronic circuits? if you put a resistor next to a coin, you get an idea of how small it is.



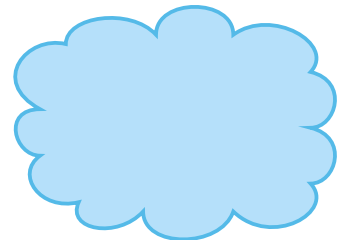
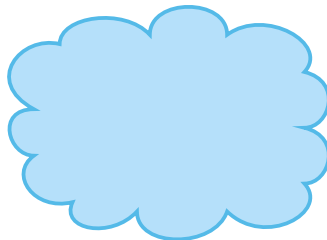
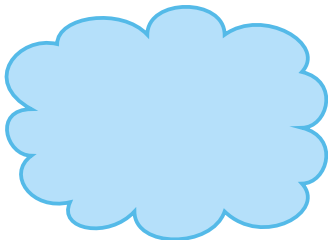
LANGUAGE NOTE

LED Light Emitting Diode



Activity 4.a

Write three places you can use LED Lighting.



Activity 4.b

Think of or find three advantages of using LED Lighting.

- 1 _____.
- 2 _____.
- 3 _____.

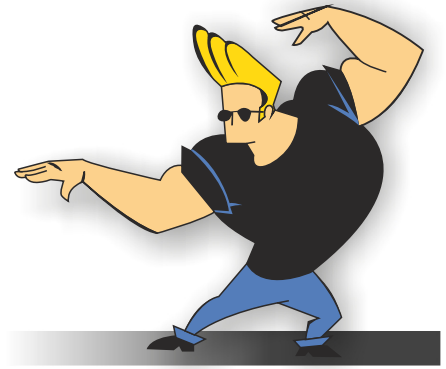


Activity 5.a

In this Activity you will do a different part (A+B).

STUDENT A does 5a.

STUDENT B does 5b.



Activity 5.b

Read the following text. Then write the advantages of using LED lighting.

LED Lighting in healthcare

People who have to stay in hospital often feel anxious. This could make examination processes more difficult. LED lighting can create a more colourful and soft ambience that makes the environment seem less clinical and more human. In addition, LED lighting offers energy-saving potential, especially for corridors and general spaces in the hospital.

LED lighting can change the atmosphere in diagnosis areas and patient rooms, improving the hospital life for both patients and staff.



Glossary

anxious = endişeli
diagnosis = teşhis

Advantages of LEDs in Health Care:

* When you have finished, tell your partner about the advantages of LEDs in health care. Then listen to him/her tell you about LEDs in offices.

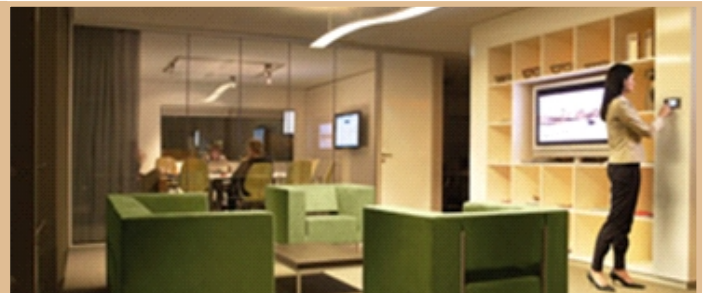


Activity 5.c

Read the following text. Then write the advantages of using LED lighting in offices.

LED in offices

The world of offices and people's working lives is rapidly changing. LED lighting offers great support for these changes: freedom of shape and design, use of colours, effects in intensity and direction, and creating spaces for better people comfort and wellbeing. On top of this, LED brings great energy saving, especially when combined with lighting controls.

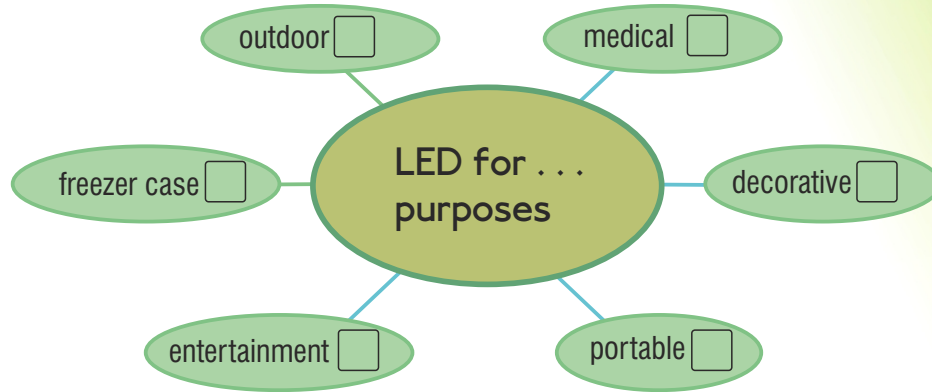


Advantages of LEDs in Offices:

* When you have finished, tell your partner about the advantages of LEDs in offices. Then listen to him/her tell you about LEDs in health care.

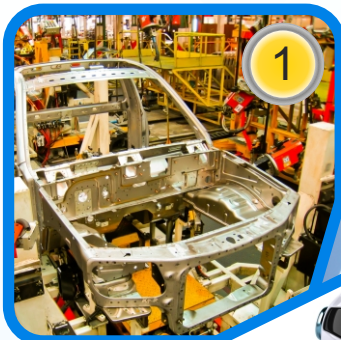
Activity 6

Look at the pictures below. Match the uses of LED lighting with the pictures (1-6) below. Write the number in the space.



Activity 7.a

Match the following sectors with the pictures.



- I.T.
- Automotive
- Medical
- Robotics
- Telecommunications



Activity 7.b

Which manufacturers produce electronic components for the sectors in Activity 7a.

Automotive



Robotics



Medical



Telecommunications



I.T



Panasonic

PROJECT – WORLD'S LARGEST ELECTRONICS MANUFACTURERS

Make groups of four. Choose an electronic components manufacturer (e.g Panasonic). Do some research about your chosen manufacturer. Make a short presentation to the whole class informing them about your chosen manufacturer.

Group Members

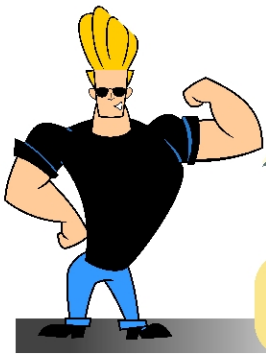
Chosen manufacturer



PROGRESS AND SELF-ASSESSMENT

In this unit,

- I liked _____
- I did not like _____
- I learnt _____
- I learnt the following new words/phrases _____



CHECK WHAT YOU REMEMBER

ASSESSMENT

Below is a photograph of electronic components. How many do you know in English?
Draw an arrow and label as many as possible.

