



**DESIGN AND
IMPLEMENTATION
OF A SITE VISIT IN
THE GREEK
TELECOM –
PROPERTIES OF
MATERIALS USED IN
TELECOMMUNICATION**

**TEACHING AND
LEARNING
ACTIVITIES**

ADAPTED VERSION

MATERIALS SCIENCE PROJECT

UNIVERSITY-SCHOOL
PARTNERSHIPS FOR THE DESIGN
AND IMPLEMENTATION OF
RESEARCH-BASED ICT-ENHANCED
MODULES ON MATERIAL
PROPERTIES

SPECIFIC SUPPORT ACTIONS

FP6: SCIENCE AND SOCIETY: SCIENCE
AND EDUCATION



**MATERIALS
SCIENCE**



SCIENCE AND SOCIETY



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DESIGN AND IMPLEMENTATION OF A SITE VISIT IN THE GREEK TELECOM – PROPERTIES OF MATERIALS USED IN TELECOMMUNICATION

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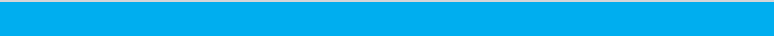
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**UNIT 1:
MATERIALS
AROUND US –
THE PROPERTY
OF ELECTRICAL
CONDUCTIVITY –
OPTIC FIBER**

1.1.1. Exploration via experimental activities

On your desk there are objects made of copper. Identify the properties of copper.

Wires, copper foils, plates, electrical plates, coffee pot, small copper vessel.

What are their colors?

Try to bend or twist them.

How easy is it to do this?

Take the scissor and try to cut or carve them.

How easy is it to do this?

Stabilize the copper foil on a piece of wood. Nail the copper foil.

Does the copper foil stand in this kind of treatment?

Put the one edge of an object made of copper close to the fire.

Does copper stand in heating or does it start to melt? Does the whole copper object get warm or not?

1.1.2. Exploration via literature & the internet

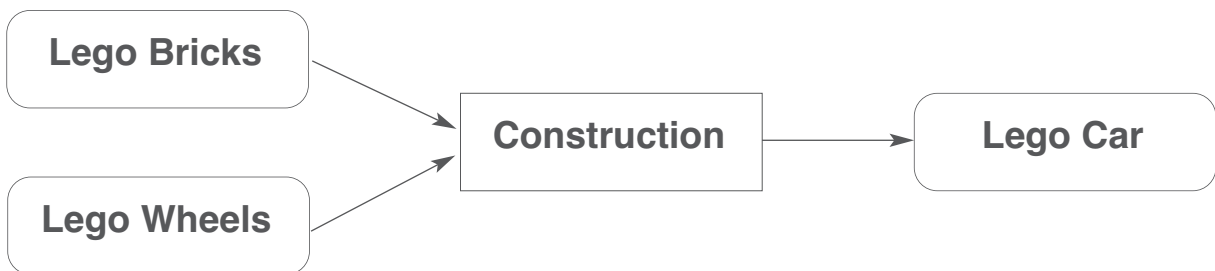
In the books that are on your desk as well as on the internet in a special icon you can find information about different materials and technological products. In order to answer the following questions and to take part in the conversations that will follow, you have to search in the list of books those that refer to copper and in the internet the information about copper.

What technological products are made of copper?

The procedure of the industrial production can be represented by a flow chart. In every flow chart there is input, output and a procedure.



For example, a flow chart can represent the way a Lego car is being manufactured.



MAKE A FLOW CHART ABOUT THE PRODUCTION OF A COPPER PRODUCT (WHICHEVER YOU WANT).



CONVERSATION WITH MY GROUP

Information from the members of the other expert groups. Each member has to inform the other members about his/her findings, bases on the experiments and the literature. While one member informs, the rest keep notes on the blank spaces below.

COPPER		
PROPERTIES	RAW MATERIALS	TECHNOLOGICAL PRODUCTS

PLASTIC		
PROPERTIES	RAW MATERIALS	TECHNOLOGICAL PRODUCTS

SEMICONDUCTORS		
PROPERTIES	RAW MATERIALS	TECHNOLOGICAL PRODUCTS

OPTIC FIBER		
PROPERTIES	RAW MATERIALS	TECHNOLOGICAL PRODUCTS



DISCUSSION WITH THE WHOLE CLASS

Information from the members of the other groups. Below you can write anything you found interesting in the final discussion and possible questions.

1.2.1. Exploration via experimental activities

On your desk there are objects made of plastic. Identify their properties.

Electrological tube, hydraulic tube, Tupperware, wire insulation, mobile phone cover, plastic vessel

What is their color?

Try to bend or twist them.

How easy is it?

Take the scissor or the cutter and try to cut or carve them.

How easy is it?

Take the nail and hammer and try to nail it.

How easy is it?

Put the one edge of a plastic object close to the fire.

Does plastic hold out the heat or does it starts to melt? Does the whole plastic object get warm or not?

1.2.2. Exploration via literature & the internet

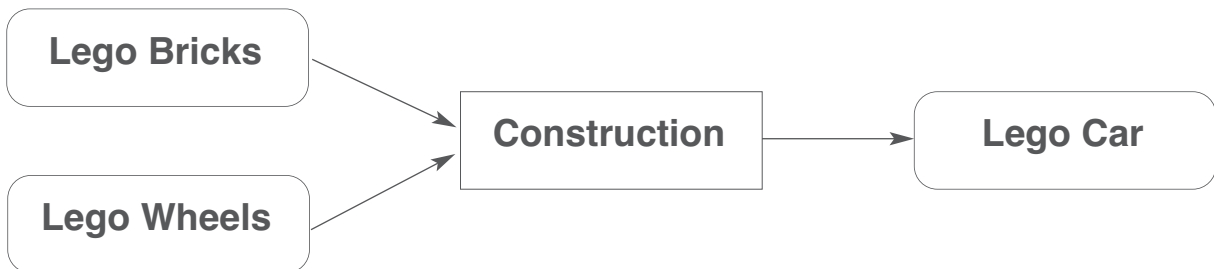
In the books that are on your desk as well as on the internet in a special icon you can find information about different materials and technological products. In order to answer the following questions and to take part in the conversations that will follow, you have to search in the list of books those that refer to plastic and in the internet the information about plastic.

Which technological products are made of petrol?

The procedure of the industrial production can be represented by a flow chart. In every flow chart there is input, output and a procedure.



For example, a flow chart can represent the way a Lego car is being manufactured.



MAKE A FLOW CHART ABOUT THE PRODUCTION OF A PLASTIC PRODUCT (WHICHEVER YOU WANT).



CONVERSATION WITH MY GROUP

Information from the members of the other expert groups. Each member has to inform the other members about his/her findings, bases on the experiments and the literature. While one member informs, the rest keep notes on the blank spaces below.

COPPER		
PROPERTIES	RAW MATERIALS	TECHNOLOGICAL PRODUCTS

PLASTIC		
PROPERTIES	RAW MATERIALS	TECHNOLOGICAL PRODUCTS

SEMICONDUCTORS		
PROPERTIES	RAW MATERIALS	TECHNOLOGICAL PRODUCTS

OPTIC FIBER		
PROPERTIES	RAW MATERIALS	TECHNOLOGICAL PRODUCTS



DISCUSSION WITH THE WHOLE CLASS

Information from the members of the other groups. Below you can write anything you found interesting in the final discussion and possible questions.

1.3.1. Exploration via experimental activities

On your desk there are electronic devices that consist of semiconductors. There is a piece of pyrites, which is the raw material for the construction of semiconductors. Identify their properties.

A piece of pyrites, printed circuit of a mobile phone, printed circuit of a computer, diode, and transistor.

Observe the pyrites.

What shape does it have? What color does it have?

The black diode which is on your desk is made of pyrites and is a semiconductor.

What size does it have? Measure its length with a ruler. How many probes does it have?

A transistor consists of 2 diodes.

What size does it have? Measure its length with a ruler. How many probes does it have?

Observe the elements a printed circuit consists of. How many different elements can you discern? How complicated is the printed circuit?

How small are the elements of the electronic printed circuit?

Measure the length of the smallest element of the circuit.

Measure the length of the biggest element of the circuit.

Measure the length of the electronic printed circuit.

1.3.2. Exploration via literature & the internet

In the books that are on your desk as well as on the internet in a special icon you can find information about different materials and technological products. In order to answer the following questions and to take part in the conversations that will follow, you have to search in the list of books those that refer to semiconductors and in the internet the information about semiconductors.

What technological products are made of pyrites?

What is the basic raw material of semiconductors and where can we find it?

The procedure of the industrial production can be represented by a flow chart. In every flow chart there is input, output and a procedure.



For example, a flow chart can represent the way a Lego car is being manufactured.



MAKE A FLOW CHART ABOUT THE PRODUCTION OF AN ELECTRONIC PRODUCT: FROM THE RAW MATERIAL TO THE ELECTRONIC PRODUCT.



DISCUSSION WITH MY GROUP

Information from the members of the other expert groups. Each member has to inform the other members about his/her findings, bases on the experiments and the literature. While one member informs, the rest keep notes on the blank spaces below.

COPPER		
PROPERTIES	RAW MATERIALS	TECHNOLOGICAL PRODUCTS

PLASTIC		
PROPERTIES	RAW MATERIALS	TECHNOLOGICAL PRODUCTS

SEMICONDUCTORS		
PROPERTIES	RAW MATERIALS	TECHNOLOGICAL PRODUCTS

OPTIC FIBER		
PROPERTIES	RAW MATERIALS	TECHNOLOGICAL PRODUCTS



DISCUSSION WITH THE WHOLE CLASS

Information from the members of the other groups. Below you can write anything you found interesting in the final discussion and possible questions.

1.4.1. Exploration via experimental activities

On your desk there is an optic fiber. Identify its characteristics.

An optic fiber, magnifying glass, laser flash light, straw, white paper.

Straighten the straw. Light the one end with the laser. On the other end place the white paper.

What do you observe? Does the light pass through the straw? Is there a red spot on the white paper?

Try the same experiment with the straw twisted 90°.

What do you observe now? Does the light pass through the twisted straw? Is there a red spot on the white paper?

The optic fiber is made of glass or plastic and is protected by a black cover. Repeat the 1st experiment with the optic fiber straightened.

Does the light pass through the optic fiber? Is there a red spot on the white paper?

Repeat the 1st experiment with a twisted optic fiber.

Does the light pass through the optic fiber? Is there a red spot on the white paper?

Take the magnifying glass. Observe the one end of the optic fiber while (a) covering the other end with your hand, (b) turning the other end towards the light.

What colour does the optic fiber have?

1.4.2. Exploration via literature & the internet

In the books that are on your desk as well as on the internet in a special icon you can find information about different materials and technological products. In order to answer the following questions and to take part in the conversations that will follow, you have to search in the list of books those that refer to optic fibers and in the internet the information about optic fibers.

What technological products are made of glass?

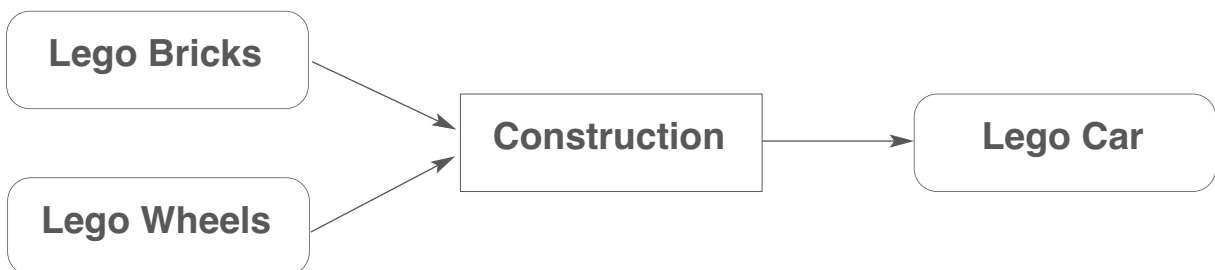
Which glass product is widely used in telecommunications?

What is the basic raw material of glass and where can we find it?

The procedure of the industrial production can be represented by a flow chart. In every flow chart there is input, output and a procedure.



For example, a flow chart can represent the way a Lego car is being manufactured.





DISCUSSION WITH MY GROUP

Information from the members of the other expert groups. Each member has to inform the other members about his/her findings, bases on the experiments and the literature. While one member informs, the rest keep notes on the blank spaces below.

COPPER		
PROPERTIES	RAW MATERIALS	TECHNOLOGICAL PRODUCTS

PLASTIC		
PROPERTIES	RAW MATERIALS	TECHNOLOGICAL PRODUCTS

SEMICONDUCTORS		
PROPERTIES	RAW MATERIALS	TECHNOLOGICAL PRODUCTS

OPTIC FIBER		
PROPERTIES	RAW MATERIALS	TECHNOLOGICAL PRODUCTS

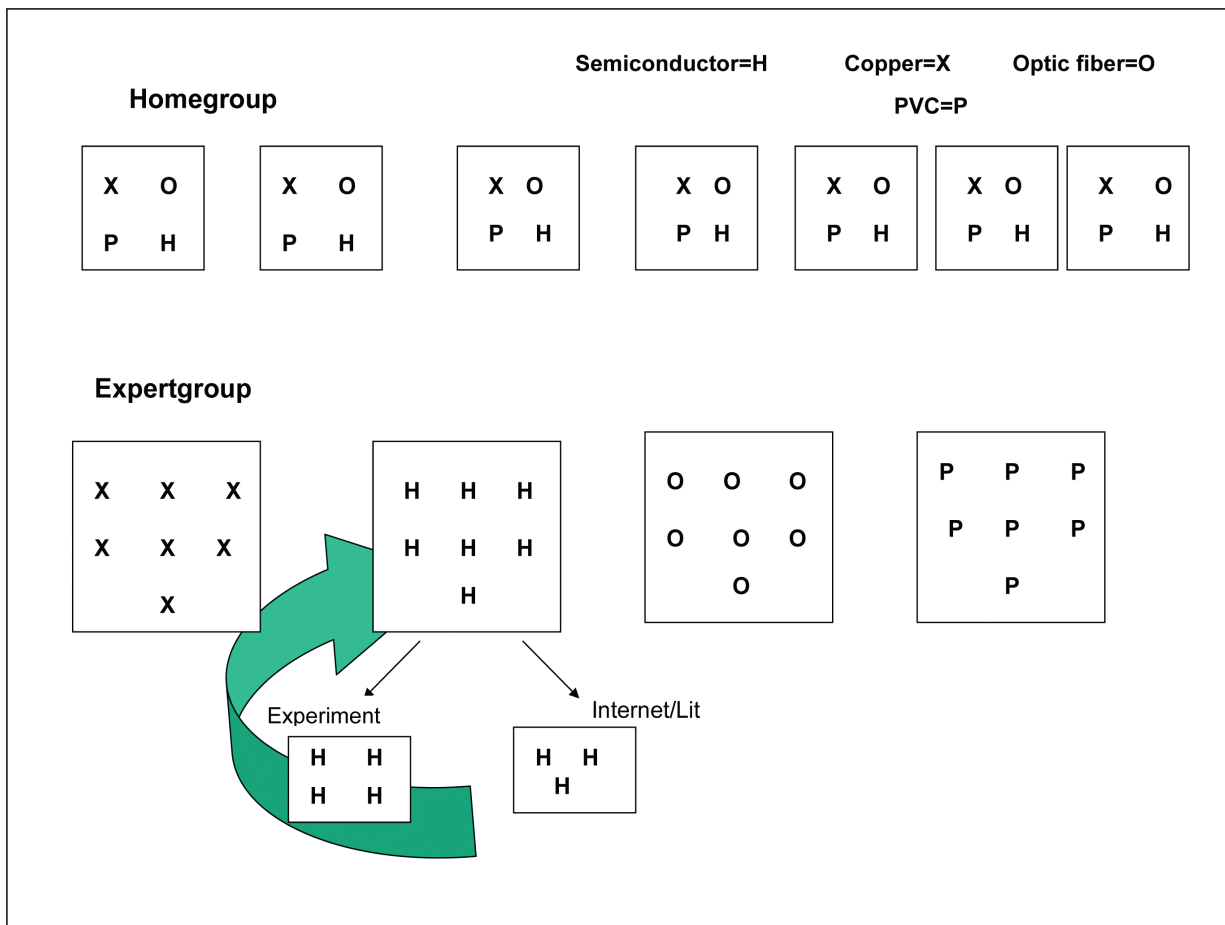


MAKE A FLOW CHART ABOUT THE PRODUCTION OF AN OPTIC FIBER: FROM THE RAW MATERIAL TO THE OPTIC FIBER.



DISCUSSION WITH THE WHOLE CLASS

Information from the members of the other groups. Below you can write anything you found interesting in the final discussion and possible questions.



**UNIT 2:
ELECTRICAL
FEATURES OF THE
MATERIALS, THE
ELECTRIC AND
ELECTRONIC
ELEMENTS:
INSULATORS,
CONDUCTORS,
RESISTORS, DIODE,
PHOTO-RESISTOR,
THERMISTOR**

Investigating Conductivity using
Technological materials

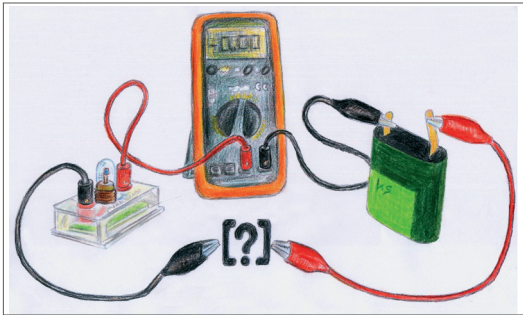
2.1

CLASSIFICATION OF THE MATERIALS ACCORDING TO THE SPECIAL RESISTANCE IN INSULATORS AND CONDUCTORS

2.1.1. Investigation with experiments

On your desk there are the following apparatus and materials:

- Apparatus and materials**
- circuit with a 4,5 V battery
 - lamp 6V
 - A-meter
 - aluminium foil
 - copper wire
 - glass
 - mica



The A-meter must function on a 10A-yellow scale

Instructions

The amount of the electric current running in an electric circuit depends not only on the electric source (battery) but also on the electrical resistance that a conductor puts on the flow of the charge. Each material exerts different resistance on the flow of the current. Each material has its own resistivity. A conductor has very low resistivity and so lets the current flow easily, while an insulator has very high resistivity and does not let the current flow.

Based on this passage, make your predictions on the following activities.

Before the experiment

Prediction

What will happen in the previous circuit, if I place the copper wire in spot [?] ?

Will the lamp light or not?

What will happen in the previous circuit, if I place a piece of glass in spot [?] ?

Will the lamp light or not?

What will happen in the previous circuit, if I place mica in spot [?] ?

Will the lamp light or not?

What will happen in the previous circuit, if I place a piece of aluminium foil in spot [?] ?

Will the lamp light or not?



Why did you make these predictions?

For the copper wire:

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For the piece of glass:

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For mica:

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For the aluminium foil:

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Start the experiment

Construct the circuit as shown in the picture.

Observation

Connect the copper wire in spot [?].

Is the lamp on?

What is the indication in the A-meter?

Zero:

Other than zero:

Then, connect the piece of glass in spot [?].

Is the lamp on?

What is the indication in the A-meter?

Zero:

Other than zero:

Then, connect mica in spot [?].

Is the lamp on?

What is the indication in the A-meter?

Zero:

Other than zero:



2.1.2. Exploration via literature & the Internet

In the books -that are on your desk- as well as on the internet in a relevant icon you can find information about the different materials and technological products. in order to answer the following questions and to take part in the discussions that will follow, search in the literature list the books that refer to conductors and insulators, and on the internet the relevant information also about conductors and insulators.

Which categories do the materials fall in, according to their resistivity?

Which is the metal with the lowest resistivity?

Which is the insulator with the highest resistivity?

Choose and answer one of the two following questions.

What materials are usually (a) conductors and (b) cables' insulator made of?

How many different ways can we use mica in?



DISCUSSION IN MY INITIAL GROUP

Gather information from the other members of the expert groups. Each member should inform the others about his/her findings, both from the experiments and the bibliography search. While one member informs, the rest should keep notes in the following spaces.

Insulators-Conductors-Semiconductors:

Resistors – Combination of resistors:

Diode-Triode (transistor)

Thermistor – Photo-resistor



DISCUSSION WITH THE WHOLE CLASS

Information from the students of the other groups. Below you can note anything you found interesting in the final discussion and any possible questions.

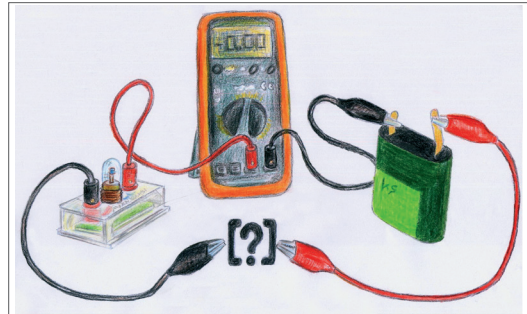
2.2

THE ROLE OF THE RESISTOR IN CONTROLLING THE CURRENT FLOW IN A CIRCUIT

2.2.1. Investigation with experiments

On your desk there are the following apparatus and materials:

- Apparatus and materials**
- circuit with a 4,5 V battery
 - lamp 6V
 - A-meter
 - resistors 10 Ohm and 22 Ohm



The A-meter to be in the scale: 10A yellow

Instructions

The amount of electric current running in an electric circuit depends not only on the electric source (battery) but also on the electric resistance that a conductor puts on the flow of the charge. Resistors are technological products that resist to the current flow. Their resistance is measured in Ohm. Thus, a 5 Ohm resistor has lower resistance than a 7 Ohm resistor. To regulate the current flow in a circuit we insert resistors. Quite often the resistors we need cannot be found. That's why we try to connect the resistors properly, so that we achieve the current flow we want. In the following picture, we can see a basic way we can connect a resistor with others.



Connection in series

When resistors are connected in series the result is an increase of resistance in the circuit

Based on this passage, make your predictions on the following activities.

Before the experiment

Suppose that the terminals in spot [?] are in touch.

Prediction

What will happen in the previous circuit, if I connect a **100hm** resistor in spot [?]?

Will the brightness of the lamp change or not?



What will happen in the previous circuit, if I connect the resistor of **10 Ohm** in series with the resistor of **22 Ohm**?

Will the brightness of the lamp change or not?

Why did you make the previous predictions?

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Start the experiment

Observation

Connect the wires directly in spot [?].

What does the A-meter show?

Connect the resistor of **10 Ohm** in spot [?].

Does the brightness of the lamp change?: *Not change* *It decreases* *It increases*

What does the A-meter show?

Connect the resistor of **10 Ohm** with the resistor of **22 Ohm**.

Does the brightness of the lamp change?: *Not change* *It decreases* *It increases*

What does the A-meter show?

After the experiment

Interpretation: How can you interpret the phenomena you observed, based on the passage you read at the beginning of the work sheet? Why do you see different measurements on the A-meter when we connect the 10 Ohm resistor with the lamp or when in the process, we connect in series and 22 Ohm resistor?

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2.2.2. Exploration via literature & the Internet

In the books -that are on your desk- as well as on the internet in a relevant icon you can find information about the different materials and technological products. in order to answer the following questions and to take part in the discussions that will follow, search in the literature list the books that refer to the resistor's role in a circuit, and on the internet the relevant information also about resistors.

Choose and answer one of the two following questions.

Which are the materials resistors consist of?

How many types of resistors are there?



DISCUSSION IN MY INITIAL GROUP

Gather information from the other members of the expert groups. Each member should inform the others about his/her findings, both from the experiments and the bibliography search. While one member informs, the rest should keep notes in the following spaces.

Insulators-Conductors-Semiconductors:

Resistors – Combination of resistors:

Diode-Triode (transistor)



Thermistor – Photo-resistor

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DISCUSSION WITH THE WHOLE CLASS

Information from the students of the other groups. Below you can note anything you found interesting in the final discussion and any possible questions.

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2.3

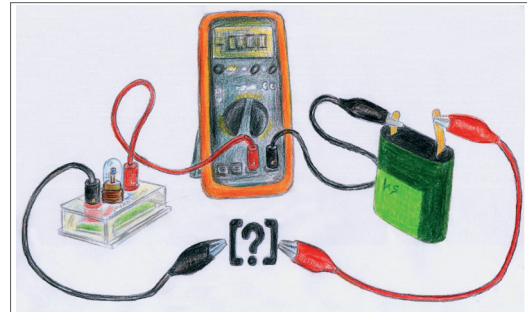
THE ROLE OF THE RESISTOR AND THE DIODE IN THE CONDUCTIVITY OF A CIRCUIT

2.3.1. Investigation with experiments

On your desk there are the following apparatus and materials:

Apparatus and materials

- a 4,5 V battery
- Led
- A-meter
- Resistor 22Ω
- diode 1 (AA113)

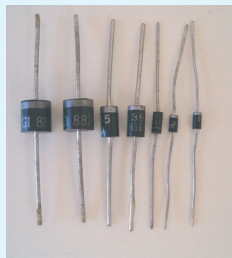


The A-meter to be in the scale: 10A yellow

Instructions

The amount of electric current running in an electric circuit depends not only on the electric source (battery) but also on the electric resistance that a conductor puts on the flow of the charge.

Each material exerts different resistance on the current flow. Conductors exert lower resistance than insulators. Semiconductors behave either as conductors, that is, they let the current flow or as insulators, that is, they don't let the current flow. Resistors are technological products that resist to the current flow. Their resistance is measured in Ohm. That is, a 5 Ohm resistor exerts lower resistance than a 7 Ohm resistor.



Diode is one of the components of a circuit. It consists of two semiconductors. Diode lets the current flow in a circuit only one way. Namely, it is a good conductor only for a certain direction of the current, that's why it is said that it creates some sort of "one way road" in a circuit.

Based on this passage, make your predictions on the following activities.

Before the experiment

Look at the picture of the circuit at the beginning of the work sheet and predict.

Prediction

What will happen in the previous circuit if I connect a **22 Ohm** resistor in spot [?]?

Will the brightness of the lamp change or not?



What will happen in the previous circuit, if I change the polarity of the ends of the resistor, namely, if I reverse the wires on its ends.

Will the brightness of the led change or not?

What will happen in the previous circuit, if I connect diode **AA113** in the spot [?]?

Will the brightness of the led change or not?

What will happen in the previous circuit, if I change the polarity of the ends of the diode, namely, if I reverse the wires on its ends.

Will the brightness of the led change or not?

Why did you make the previous predictions?

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Start the experiment

Construct the circuit according to the picture at the beginning of the work sheet.

Observation

Connect the wires directly in the spot [?].

What does the A-meter show?

Connect the resistor of **22 Ohm** in the spot [?].

Does the brightness of the led change?: *Not change* *It decreases* *It increases*

What does the A-meter show?



Change its polarity.

Does the brightness of the led change?: Not change It decreases It increases

What does the A-meter show?

Connect **diode AA113** in the spot [?].

Does the brightness of the led change?: Not change It decreases It increases

What does the A-meter show?

Change its polarity.

Does the brightness of the led change?: Not change It decreases It increases

What does the A-meter show?

After the experiment

Interpretation: How can you interpret the phenomena you observed, based on the passage you read at the beginning of the work sheet?

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2.3.2. Exploration via literature & the Internet

In the books -that are on your desk- as well as on the internet in a relevant icon you can find information about the different materials and technological products. in order to answer the following questions and to take part in the discussions that will follow, search in the literature list the books that refer to the diode and the transistor, and on the internet the relevant information also about diode and transistor.

Choose and answer one of the two following questions.

How many kinds of diodes do you know and where are they used?

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What is a transistor and why has it marked a revolution in the field of electronics and PCs?

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DISCUSSION IN MY INITIAL GROUP

Gather information from the other members of the specialization groups. Each member should inform the others about his/her findings, both from the experiments and the bibliography search. While one member informs, the rest should keep notes in the following spaces.

Insulators-Conductors-Semiconductors:

Resistors – Combination of resistors:

Diode-Triode (transistor)

Thermistor – Photo-resistor



DISCUSSION WITH THE WHOLE CLASS

Information from the students of the other groups. Below you can note anything you found interesting in the final discussion and any possible questions.

2.4

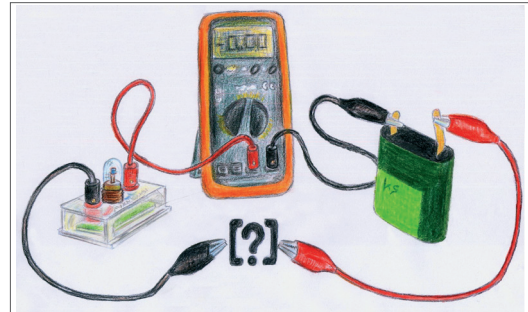
THE ROLE OF A PHOTO-RESISTOR AND A THERMISTOR IN THE CONDUCTIVITY OF A CIRCUIT

2.4.1. Investigation with experiments

On your desk there are the following apparatus and materials:

Apparatus and materials

- Circuit with a 4,5 V battery, LED 3V (red)
- digital multimeter connected as an A-meter
- photo-resistance
- light torch
- a dark coloured piece of cloth
- thermistor



The A-meter to be in the scale: 20mA yellow

Instructions

The amount of electric current running in an electric circuit depends not only on the electric source (battery) but on the electric resistance that a conductor puts on the flow of the charge.

Resistors are technological products that resist to current flow. Their resistance is measured in Ohm. Thus, a 5 Ohm resistor exerts lower resistance than a 7 Ohm resistor.

A special category of resistors is the photo-resistor. Photo-resistors are components whose resistance changes when they meet light.



Another special category of resistors is the thermistor. The resistance of thermistor changes according to temperature. There are two kinds of thermistor. In the first kind, the higher the temperature the higher the resistance grows. In the other kind, the higher the temperature the lower the resistance grows.

Based on this passage, make your predictions on the following activities.

Before the experiment

Look at the picture of the circuit at the beginning of the work sheet.

Prediction

What will happen in the previous circuit if I connect the photo-resistor in the spot [?]?

Will the brightness of the led change or not?



What will happen if we connect the photo-resistor in the spot of the circuit and light it [?]?

Will its brightness change or not?

What will happen if we cover the photo-resistor with a dark colored piece of cloth?

Will its brightness change or not?

Why have you made these predictions?

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Start the experiment

Construct the circuit as shown in the picture at the beginning of the working sheet.

Observation

Connect the photo-resistor in the spot [?].

What's the indication on the A-meter?

Light the photo-resistor with a torch.

Does the brightness of the led change?: *Not change* *It decreases* *It increases*

What's the indication on the A-meter?

Cover the photo-resistor with a dark colored piece of cloth.

Does the brightness of the led change?: *Not change* *It decreases* *It increases*

What's the indication on the A-meter?



After the experiment

Interpretation: How can you interpret the phenomena you observed, based on the passage you read at the beginning of the work sheet?

.....
.....
.....
.....
.....

Before the experiment

Prediction

What will happen in the previous circuit if I connect the thermistor in the spot [?]?

Will the brightness of the led change or not?

What will happen if we connect the thermistor in the spot [?] of the circuit and we heat it with a candle?

Will the brightness of the led change or not?

Why have you made these predictions?

.....
.....
.....
.....
.....

Start the experiment

Observation

Connect the thermistor in the spot [?].

What's the indication on the A-meter?

Bring a candle close to the thermistor.

Does the brightness of the lamp change?: *Not change* *It decreases* *It increases*

What does the A-meter show?

After the experiment

Interpretation: How can you interpret the phenomenon you observed, based on the passage you read at the beginning of the work sheet?

2.4.2. Exploration via literature & the Internet

In the books -that are on your desk- as well as on the internet in a relevant icon you can find information about the different materials and technological products. in order to answer the following questions and to take part in the discussions that will follow, search in the literature list the books that refer to the photo-resistor and the thermistor, and on the internet the relevant information also about photo-resistor and thermistor.

Choose and answer one of the two following questions.

What is a photo-resistor made of and where is it used?

What is a thermistor and which are its potential uses?



DISCUSSION IN MY INITIAL GROUP

Gather information from the other members of the specialization groups. Each member should inform the others about his/her findings, both from the experiments and the bibliography search. While one member informs, the rest should keep notes in the following spaces.

Insulators-Conductors-Semiconductors:

**UNIT 3:
SCIENCE AND
TECHNOLOGY OF
MATERIALS, OTE
SERVICES, ITS
SOCIAL OFFER,
PROFESSIONS AND
EDUCATION OF THE
OTE EMPLOYERS.**

Instructions

Enter OTE's webpage: **www.ote.gr**

In the menu click: **THE COMPANY**

In the submenu click: **OTE TODAY**

In the second submenu click: **OUR COMPANY**

Study the relevant text in order to answer the following questions.

Questions

Find two countries where OTE operates apart from Greece.

.....

Mention three different services that OTE offers.

.....

.....

*Would you be interested to ask about any other topic relevant to those you have read during your visit in OTE?
If yes, write your question down.*

.....

.....

.....

.....

.....

Instructions

Enter OTE's webpage: **www.ote.gr**

In the menu click: **THE COMPANY**

In the submenu click: **OLYMPIC SPONSORSHIP**. Study the relevant text.

In the submenu: **OLYMPIC SPONSORSHIP** click the on submenu **Our Athletes**. Study the relevant text.

In the submenu: **OLYMPIC SPONSORSHIP** open the link «**We also supported the Paralympics 2004 (17-28/9/04)**»

Answer the following questions according to the texts you have read.

Questions

Find 3 Olympic winners which OTE supported during the Olympic Games of Athens 2004.

In what way did OTE support the Paralympics of Athens 2004?

Would you be interested to ask about any other topic relevant to those you have read during your visit in OTE? If yes, write your question down.

Instructions

Enter OTE's webpage: **www.ote.gr**

In the menu click: **THE COMPANY**

In the submenu click: **TELECOMMUNICATION MUSEUM**

In the submenu click: **Evolution of Telecommunications, in antiquity.**

Click: **Frektorie. Message transmission by fire**

Study the relevant text in order to answer the following questions.

Questions

If an important event happened in Lemnos and had to be transmitted to ancient Theeva, what course would the fire network follow?

Would you be interested to ask about any other topic relevant to those you have read during your visit in OTE? If yes, write your question down.

**MATERIALS
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MODULES ON MATERIAL PROPERTIES

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