

ELECTRICITY BASICS 1 (основы электричества)

Vocabulary

Word	Translation
electricity	электричество; электроэнергия
lead	вести; приводить
in-depth study	глубокое изучение
electron	электрон;
electrical charge	электрический заряд
current	ток;
resistance	сопротивление;
conduct	проводить
measure	измерять
units of measurement	единицы измерения
ampere	ампер
volt	вольт
ohm	ом
watt	ватт
circuit	электрическая цепь; схема
copper	медь; медный;
wire	провод
flow of electricity	электрический ток
oppose	сопротивляться
property	свойство
particle	частица
base unit	основная единица

Glossary

Electricity is a form of energy that occurs (возникать) naturally or can be produced. It is expressed (выражаться) in terms (на основе) of movement and interactions (взаимодействие) of electrons.

An **electron** is the particle in an atom that carries (переносить) electric currents.

Current is the flow of electricity.

A **charge** is the physical property of an object that makes it undergo (переносить) a negative or positive force when it is near another electrically charged object.

Resistance is how much an object opposes an electric current passing through (через) it.

For electricity **to conduct**, it passes through an object.

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An **ampere** is the base unit of electric current. It is equal (равен) to one coulomb (кулон) per (за) second.

A **volt** is a unit used to measure the electric force of an object.

An **ohm** is a unit that measures electrical resistance.

A **watt** is a unit that measures power. It is equivalent to one joule (джоуль) per second.

A **circuit** is a system of electrical conductors that electricity flows through.

Ex 1 Listen the text, read and translate it

The basics of electricity

Professor Vanessa Thompson, Tuesday, Thursday, 12-2

In this class, students learn about the basics of electricity. First, they learn how electricity is created. This leads to an in-depth study of electrons. Then students learn about electrical charge, current, and resistance. They also find out how a material conducts current. Finally, students learn how to measure electricity. They study units of measurement such as amperes, volts, ohms, and watts. At the end of the class, students do a final project. Each student builds his or her own electrical circuit.

Exercise 2: Answer the following questions based on the text.

1. What is the name of the class?
2. Who is the instructor?
3. What days does the class meet?
4. What time does the class start and end?
5. What is the first topic students learn about?
6. What do students study after learning about electrons?
7. What units of measurement are mentioned in the text?
8. What do students do as their final project?

Exercise 3: True, False Questions:

1. The class is called "The Basics of Electricity."
2. The instructor's name is Professor Johnson.
3. The class meets on Mondays and Wednesdays.
4. The class meets from 12:00 to 2:00.
5. Students learn how electricity is created first.
6. Students study units like amperes, volts, ohms, and watts.
7. Students build their own electrical circuit as a final project.
8. Students study atoms before electrons.
9. The class meets in the evening.
10. Students do not have a final project.

Exercise 4. Match the terms with their definitions:

- | | |
|------------|--|
| 1. Amperes | A. Unit of electrical resistance |
| 2. Volts | B. Unit of electrical power |
| 3. Ohms | C. Unit of electrical current |
| 4. Watts | D. A closed path for electricity to flow |
| 5. Circuit | E. Unit of electrical voltage |

Exercise 5. Complete the sentences with the correct words:

1. The class is on _____ and Thursday.
2. Students learn about _____ charge, current, and resistance.
3. They learn units like amperes, _____, ohms, and watts.
4. Each student builds his or her own _____ circuit.

Exercise 6. Fill-in

Word Bank: charge, circuit, current, electricity, resistance, watts

1. Students learn how _____ is created.
2. They study electrical _____, _____, and _____.
3. They learn units like _____, volts, ohms, and _____.
4. Each student builds an electrical _____.

Exercise 7. Find and correct the errors:

1. The class is called "The Basics of Chemistry."
2. The instructor is Professor Johnson.
3. The class meets on Monday and Wednesday.
4. Students build a robot for their final project.
5. The class meets from 10:00 to 12:00.

Exercise 8: Find the Synonym

1. happens - _____
2. shows - _____
3. carries - _____
4. go through - _____
5. against - _____
6. same - _____

Exercise 9: Match the term on the left with its correct definition on the right.

Term	Definition
1. Current	a) The physical property that makes an object experience a force near other charged objects.
2. Charge	b) A unit that measures electrical resistance.
3. Volt	c) The flow of electricity.
4. Watt	d) A system of conductors that electricity flows through.
5. Circuit	e) A unit that measures power, equivalent to one joule per second.
6. Ohm	f) A unit used to measure electric force.

Exercise 10: Listen to the dialogue and fill in the missing words

Alex: Hi, Emma! I heard you're taking a class on 1 _____. What's it called?

Emma: Hi, Alex! Yes, it's called "The 2 _____ of Electricity." It's really interesting!

Alex: Who's the instructor?

Emma: The instructor is Vanessa Thompson. She's really good at explaining things.

Alex: When does the class meet?

Emma: It meets on 3 _____ and Thursdays from 12:00 to 2:00.

Alex: That's a good time! What do you study in the class?

Emma: First, we learn how electricity is created. Then we study 4 _____ in detail.

Alex: That sounds complicated!

Emma: It is, but it's also fascinating. We also learn about electrical 5 _____, current, and 6 _____.

Alex: What about materials? Do they 7 _____ electricity?

Emma: Yes! We learn how different materials conduct current. That's really useful.

Alex: What else do you study?

Emma: We learn how to 8 _____ electricity. We study units like amperes, volts, 9 _____, and watts.

Alex: Wow, that's a lot of new terms!

Emma: Yes, but they're all important. And at the end of the class, we do a final project.

Alex: What kind of project?

Emma: Each student builds their own electrical 10 _____. I'm really excited about it!

Alex: That sounds amazing! I'd love to see it when you're done.

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Emma: Sure! I'll show you. Maybe you'll want to take the class too!

Alex: Maybe I will! Thanks for telling me about it.

Emma: No problem! I'm sure you'd enjoy it.

Useful Phrases from the Dialogue:

English	Russian
What's it called?	Как это называется?
Who's the instructor?	Кто преподаватель?
When does the class meet?	Когда проходят занятия?
What do you study?	Что вы изучаете?
That sounds interesting!	Это звучит интересно!
That's a good time!	Хорошее время!
I'm really excited about it!	Я очень рада этому!
I'd love to see it!	Я бы хотел это увидеть!
Thanks for telling me!	Спасибо, что рассказал!
No problem!	Без проблем!

Exercise 11: True/False Questions about the Dialogue

1. Emma is taking a class called "The Basics of Electricity."
2. The instructor's name is Professor Johnson.
3. The class meets on Mondays and Wednesdays.
4. The class meets from 12:00 to 2:00.
5. Emma studies how electricity is created.
6. Emma also studies electrons in detail.
7. Emma learns about electrical charge, current, and resistance.
8. Emma studies how materials conduct current.
9. Emma studies units like amperes, volts, ohms, and watts.
10. At the end of the class, students build a robot.
11. Alex is not interested in the class.
12. Emma promises to show Alex her circuit project.

Exercise 12: Write your dialogue based on the provided templates.

Dialogue Template 1: Talking About a Class

A: Hi, [Name]! I heard you're taking a class on [subject]. What's it called?

B: Hi, [Name]! Yes, it's called "[Class Name]." It's really interesting!

A: Who's the instructor?

B: The instructor is [Instructor's Name]. [He/She]'s really good at explaining things.

A: When does the class meet?

B: It meets on [days] from [time] to [time].

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A: That's a good time! What do you study in the class?

B: First, we learn how [topic] is created. Then we study [topic] in detail.

A: That sounds complicated!

B: It is, but it's also fascinating. We also learn about [key concepts].

A: What else do you study?

B: We learn how to [activity]. We study [specific terms].

A: Wow, that's a lot of new terms!

B: Yes, but they're all important. And at the end of the class, we do a final project.

A: What kind of project?

B: Each student [project description]. I'm really excited about it!

A: That sounds amazing! I'd love to see it when you're done.

B: Sure! I'll show you. Maybe you'll want to take the class too!

A: Maybe I will! Thanks for telling me about it.

B: No problem! I'm sure you'd enjoy it.

Dialogue Template 2: Asking About a Course

A: What course are you taking this semester?

B: I'm taking [Course Name]. It's about [topic].

A: Who teaches it?

B: [Name] teaches it. [He/She]'s very knowledgeable.

A: How often do you have classes?

B: We have classes [frequency] times a week on [days].

A: What time?

B: From [time] to [time].

A: What do you learn?

B: We cover [topics]. We also learn about [additional topics].

A: Do you have any assignments?

B: Yes, we have [assignments]. And we have a final project where we [project description].

A: That sounds like a lot of work!

B: It is, but it's worth it. I'm learning so much!

A: Good luck with your class!

B: Thank you! I'll let you know how it goes.

Dialogue Template 3: Recommending a Class

A: I'm thinking about taking a class on [topic]. Do you know anything about it?

B: Yes! I took [Course Name] last semester. It was great!

A: Really? Who was the instructor?

B: [Name]. [He/She]'s excellent and very helpful.

A: What did you study?

B: We studied [topics]. We also learned about [additional topics].

A: Was it difficult?

B: It was challenging but manageable. The instructor explains everything clearly.
A: What about assignments?

B: We had [assignments]. The final project was to [project description].

A: That sounds interesting! I think I'll sign up.

B: You definitely should! I think you'll enjoy it.

A: Thanks for the recommendation!

B: You're welcome! Let me know if you need any help.

Useful Phrases for Dialogue Templates

English	Russian
I heard you're taking a class on...	Я слышал, ты посещаешь курс по...
What's it called?	Как он называется?
Who's the instructor?	Кто преподаватель?
When does the class meet?	Когда проходят занятия?
That's a good time!	Хорошее время!
What do you study?	Что вы изучаете?
That sounds interesting!	Это звучит интересно!
It's fascinating!	Это увлекательно!
What else do you study?	Что ещё вы изучаете?
Wow, that's a lot!	Вау, это много!
I'm really excited about it!	Я очень рад этому!
That sounds amazing!	Это звучит потрясающе!
I'd love to see it!	Я бы хотел это увидеть!
Thanks for telling me!	Спасибо, что рассказал!
No problem!	Без проблем!
Good luck!	Удачи!
Thanks for the recommendation!	Спасибо за рекомендацию!
You're welcome!	Пожалуйста!

Exercise 13: Instruction: How to Study the Basics of Electricity

Word Bank:

homework, electricity, formulas, electrical, resistance, Tuesday, Vanessa Thompson, amperes, conducts, units, 12, electrons, lessons, project, watts, join, charge, Thursday

1. First, _____ the class called "The Basics of Electricity."
2. The instructor is _____.
3. Attend classes on _____ and _____.
4. Be on time for class at _____ o'clock.
5. Start by learning how _____ is created.
6. Study _____ in detail.
7. Learn about electrical _____, current, and _____. Find out how a material _____ current.
8. Study units of measurement such as _____, volts, ohms, and _____.
9. Memorize the definitions of all electrical _____.
10. Practice calculating electrical values using the _____.
11. Pay attention during _____ to understand the concepts.
12. Complete all _____ assignments.
13. Prepare for the final _____.
14. Build your own _____ circuit as a final project.

Exercise 14: Report: Course Attendance Report

Word Bank:

charge, Tuesday, watts, Vanessa Thompson, electrons, 12, resistance, electrical, Thursday, electricity, amperes, lessons, attended, homework

1. I _____ the course "The Basics of Electricity."
2. The course was taught by _____.
3. Classes were held on _____ and _____.
4. Each session started at _____ o'clock.
5. During the course, I learned how _____ is created.
6. I studied _____ and their role in electricity.
7. I also learned about electrical _____, current, and _____.
8. I studied units such as _____, volts, ohms, and _____.
9. I completed all _____ and participated in _____.
10. For my final project, I built my own _____ circuit.