**Тема:**  «История открытий в электротехнике»

**Цель:** Повторить грамматический материал , продолжить изучать лексическую тему «история науки».

**Задачи:** Отработать навык работы (в т.ч. перевода) с профессиональной лексикой по теме «электричество», повторить тематический материал, актуализировать имеющиеся знания.

**Специальность:** 13.02.09 Монтаж эксплуатации линий электропередачи, 13.02.11 Техническая эксплуатация и обслуживание электрического и электромеханического оборудования (по отраслям)

**Время выполнения:** 90 минут

1. **Study the new words.**
2. **Read the text.**
3. **Do the tasks.**

**Glossary:**

take for granted

advent

to solve

needle

to spin

toolbox

precursor

observations

embrace

measure

1. **Read the text, do the tasks.**

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| --- | --- | --- | --- | --- |
| |  | | --- | | **A Brief History of Electrical Engineering** | |  | | |  | | --- | | Chances are, you take for granted your ability to easily detect the presence of static electricity. *But before the advent of the 17th Century, nobody had shag carpeting or electric dryers – so finding static electricity wasn’t as easy as scuffing your feet across the floor and touching a doorknob.* Fortunately, the father of modern [electrical engineering services](http://www.enerdyneinc.com/discipline_electrical.asp) was able to solve that problem.  That man was William Gilbert – possibly the world’s very first [electrical engineer](http://www.enerdyneinc.com/discipline_electrical.asp). He invented the versorium – essentially a metal needle mounted on a base, and able to spin freely*. The versorium could distinguish between charged and non-charged objects; it would spin toward charged objects, letting the user know that they were carrying some amount of static electricity.* While you’re unlikely to find a versorium in the toolbox of a common [electrical engineer](http://www.enerdyneinc.com/discipline_electrical.asp), it was the precursor to the electroscope, a device that same electrical engineer uses to detect the magnitude of an electric charge.)  Despite a few important discoveries in the intervening years, [electrical engineering](http://www.enerdyneinc.com/discipline_electrical.asp) didn’t grow much as a discipline until the 19th Century, when scientists like George Ohm and Michael Faraday made new observations and developed new theories. Then, in the late 1800s, the legendary “War of Currents” pit electrical engineer against electrical engineer, colleague against colleague, and scientist against scientist.  Thomas Edison, famed for inventing the light bulb and the phonograph, embraced the standard method of direct-current, or DC, power distribution. Produced by batteries and dynamos, DC describes the unidirectional flow of an electrical charge. *But George Westinghouse, the electrical engineer who built a fortune by making improvements to America’s railroad system, threw his weight (and his money) behind the development of a power network based on alternating current, or AC, a more efficient transmission method whose magnitude changes cyclically.*  In the 20th Century, [electrical engineering](http://www.enerdyneinc.com/discipline_electrical.asp), like many technologies, expanded by leaps and bounds. By 1900, the radio was already in common use (thanks in large part to Tesla), and developments over the next few decades made radio even more useful. Guglielmo Marconi, the inventor of the telegraph, made radio useful worldwide, developing the first transatlantic radio transmissions. During and after World War II, radio became more prevalent in communications and guidance.  The rest is history. The development of the integrated circuit in 1958 led to the advent of electronic engineering, after which came the personal computer, the microprocessor, and a variety of signal and control systems.  And it all started with a device that measured static electricity. | | |

**Do the following tasks:**

1. **Translate the lines, given in italics**
2. **Answer the following questions:**
3. Who was the father of modern [electrical engineering?](http://www.enerdyneinc.com/discipline_electrical.asp)
4. What was the versorium’s function?
5. What is electroscope?
6. What Thomas Edison is famous for?
7. Who has invented the telegraph?
8. **Find the equivalents to the following word combinationin the text:**
9. Принимать как должное
10. Электрический фен
11. **Разрешить проблему**
12. Полученный от батареи гальванических элементов или диномомашины
13. Циклично изменяется
14. Главенствовало в мире коммуникаций
15. Устройство измеряющее статичное электричество

1. **Give a proper translation to the following sentences, use your glossary to translate an underlined word:**
2. Чтобы разрешить эту проблему вам придется найти инженера-ядерщика.
3. Я потерял твой ящик с инструменом.
4. Ваши измерения не верны. Переделайте!
5. Наблюдения должны быть систематическими. Ваши носят поверхностный характер.
6. Ваш предшественник тоже думал, что электричество прощает ошибки в рассчетах.
7. Факты должны охватывать всю область исследования.
8. **Mark the dates with the event:**
9. *19th Century\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_’*
10. 1800\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
11. 1900\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
12. 1958\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Be ready to give an answer

[**https://www.youtube.com/watch?v=Jb2efXqrYEo&ab\_channel=Electricity%26Magnetism**](https://www.youtube.com/watch?v=Jb2efXqrYEo&ab_channel=Electricity%26Magnetism)