

to prevent – предотвращать,  
to defend – обороняться,

preventive –  
defensive –

c) *Think of possible nouns.*

to excite – возбуждать, волновать  
to separate – разделять  
to induce – наводить, индуцировать  
to combine – соединять

excitation –  
separation –  
induction –  
combination –

d) *Think of possible nouns.*

Eg. effective – эффективный, действенный  
effectiveness – эффективность

sensitive – чувствительный  
helpless – беспомощный

sensitiveness –  
helplessness –

e) *Translate the nouns with the suffix -ist*

scientist, economist, specialist, geologist, materialist.

f) *Think of possible adjectives.*

Eg. usual – обычный

unusual – необычный

steady – постоянный  
possible – возможный  
regular – регулярный  
measurable – измеримый  
perfect – совершенный

unsteady –  
impossible –  
irregular –  
immeasurable –  
imperfect –

2 *Define the basic forms of the following adjectives. Translate into Russian.*

powerful, powerless, effective, thoughtful, instructive, thoughtless,  
successful, active, weightless, motionless, youthful, meaningful,  
descriptive.

3 *Translate into Russian, paying attention to the suffixes.*

scientist, physicist, recognition, inventor, automation, communication,  
contribution, decision, rotation, business.

4 *Translate into Russian paying attention to the prefixes.*

unreal, inactive, improper, ineffective, impracticable, inaccurate,  
inexpensive, unlike, uneasy, impossible, unusual.

5 *Translate into Russian.*

theory – theoretic – theoretical – theoretically – theorist; base – basic – basically; to produce – productive – productively – production; to radiate – radiation – radiative – radiator; inform – information; magnet – magnetic – magnetism – magnetise.

### Vocabulary Practice Activities

1 *Read out the following words. Try to memorize them. Ask the teacher questions about unfamiliar vocabulary.*

electricity – электричество

power – сила, энергия, мощность

engineering – техника, машиностроение

a switch – выключатель

to happen – происходить, иметь дело

to produce – производить, вырабатывать

light – свет, освещение

man-made = artificial – искусственный

to discover – открывать

electric arc – электрическая дуга

discharge – разряд

to last – длиться, продолжаться

to invent – изобретать

a candle – свеча

a source – источник

recognition – признание

to improve – улучшать, усовершенствовать

incandescent lamp – лампа накаливания

famous – знаменитый, известный

carbon – углерод

filament – нить накала

tungsten – вольфрам

electric device – электроприбор

important – важный, значительный

as well – так же

automation – автоматизация

imagine – представлять, вообразить

communication – связь

contribution – вклад, содействие

spaceship – космический корабль

research – научное исследование

aid = help – помощь

measuring device – измерительный прибор

mankind = humanity – человечество

2 Find the Russian equivalents.

- |                        |                             |
|------------------------|-----------------------------|
| 1 to make possible     | a) вольфрамовая нить накала |
| 2 engineering progress | b) важный источник          |
| 3 for a long time      | c) долгое время             |
| 4 a famous inventor    | d) искусственное освещение  |
| 5 carbon filament      | e) сделать возможным        |
| 6 important source     | f) технический прогресс     |
| 7 incandescent lamp    | g) лампа накаливания        |
| 8 tungsten filament    | h) угольная нить накала     |
| 9 artificial light     | i) известный изобретатель   |

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- |                                 |                          |
|---------------------------------|--------------------------|
| 1 measuring devices             | a) на благо человечества |
| 2 nuclear power                 | b) радиосвязь            |
| 3 for the good (use) of mankind | c) без электричества     |
| 4 main factors                  | d) вырабатывать свет     |
| 5 radio communication           | e) измерительные приборы |
| 6 a great contribution          | f) ядерная энергия       |
| 7 without electricity           | g) огромный вклад        |
| 8 in recent years               | h) основные факторы      |
| 9 to produce light              | i) за последние годы     |

3 Read the following sentences out choosing the proper term.

- 1 Electricity is the power that has made possible the (*producing, discovering, engineering*) progress of today.
- 2 Probably the most important use of (*chemistry, electricity, automation*) in the modern home is producing light.
- 3 In 1876 Pavel Yablochkov invented an arc that burned like a (*switch, motor, candle*) for a long time.
- 4 The source of light (*measured, invented, called*) by Yablochkov won world-wide recognition.
- 5 The uses of (*contribution, devices, electricity*) in our home do not end with lighting.
- 6 But we should not forget that electricity is the most important (*lamp, source, carbon*) of energy in industry as well.
- 7 Automation is (*useful, impossible, electric*) without electricity.
- 8 Our life can't be (*produced, imagined, developed*) without telephones, telegraph and radio communications.
- 9 In recent years electricity has made a great (*power, mankind, contribution*) to radio communication.
- 10 There are more and more electric (*devices, filaments, experiments*) helping us in our homework.

4 Translate into Russian paying attention to the underlined words. Use a dictionary to check that you understand them.

- 1 Wherever we look around us, we can find this power serving us in some way.
- 2 But in Petrov's experiments the arc flame lasted for only a short time.
- 3 In 1876 Pavel Yablochkov invented an arc that burned like a candle for a long time.
- 4 Nearly all of the measuring devices used in developing nuclear power for the use of mankind are electrically operated.
- 5 Electricity is the power that has made possible the engineering progress of today.
- 6 Do you know that the first ever man-made electric light illuminated the laboratory of the St. Petersburg physicist Vasily Petrov in 1802?

5 Draw lines connecting the pairs of synonyms.

- |             |                  |
|-------------|------------------|
| 1 to use    | a) several       |
| 2 to happen | b) artificial    |
| 3 modern    | c) various       |
| 4 man-made  | d) instrument    |
| 5 some      | e) to employ     |
| 6 different | f) to aid        |
| 7 famous    | g) power         |
| 8 device    | h) up-to-date    |
| 9 to help   | i) to take place |
| 10 energy   | j) humanity      |
| 11 mankind  | k) well-known    |

6 Draw lines connecting the pairs of opposites.

- |             |                |
|-------------|----------------|
| 1 possible  | a) often       |
| 2 charge    | b) long        |
| 3 modern    | c) natural     |
| 4 seldom    | d) remember    |
| 5 short     | e) impossible  |
| 6 different | f) similar     |
| 7 young     | g) out of date |
| 8 man-made  | h) to begin    |
| 9 forget    | i) old         |
| 10 to end   | j) discharge   |
| 11 more     | k) less        |

7 Complete the sentences in a suitable way.

- 1 The uses of (...) in the home do not end with lighting.
- 2 There are more and more (...) devices helping us in our homework.

- 3 Electricity is one of the most important (...) of energy in industry as well.
- 4 Automation is one of the main factors of technical (...) today.
- 5 Little could be done in modern research laboratory without the (...) of electricity.
- 6 The source of light invented by Yablochkov won world-wide (...).

recognition	source	aid	electricity	electric	progress
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### Grammar in Situations and Drills

1 *Translate the following sentences into Russian paying attention to the forms of adjectives and adverbs.*

- 1 Probably the most important use of electricity in the modern home is producing light.
- 2 Artificial daylight lamps are much cheaper than incandescent lamps and last much longer.
- 3 There are more and more electric devices helping us in our homework.
- 4 Electricity is the most important source of energy in industry too.
- 5 Tungsten is a metal (sometimes called wolfram) with one of the highest melting points known.
- 6 Our atomic age is more than 2,000 years old.
- 7 The atom is the smallest part of a chemical element.

2 *Translate into Russian paying attention to Passive Voice.*

- 1 The lamp's filament is heated by the passage of electric current.
- 2 The first alternating current generator was designed and used with Yablochkov's candle.
- 3 Compared with the existing gas lamps electric candles were so brilliant that they were used by many European cities.
- 4 Switches are commonly used to open and close a circuit.
- 5 Tungsten can be heated to 3,000°C.
- 6 Lamps today are filled with electrically inert gas.
- 7 Our life can't be imagined without telephone.
- 8 Nearly all the measuring electrically operated devices were used in developing nuclear power for the use of mankind.

3 *Compare the following sentences and translate them into Russian.*

- In 1876 Pavel Yablochkov invented an arc that burned like a candle.
- An arc burning like a candle was invented by Pavel Yablochkov in 1876.

- Lodygin made another important improvement in the incandescent lamp.
- Another important improvement in the incandescent lamp was made by Lodygin.
- A worker in a modern manufacturing plant uses over 10,000 kilowatt-hours of electric energy a year.
- Over 10,000 kilowatt-hours of electric energy a year are used by a worker in a modern manufacturing plant.
- In recent years electricity has made a great contribution to radio communication between spaceships and also between astronauts and the earth.
- A great contribution to radio communication was made in recent years.

4 Translate into Russian the sentences with **it is (was)... who, that, then, which** construction.

- 1 It was a young Russian engineer Alexander Lodygin who made the first successful incandescent lamp.
- 2 But it is also electricity that gives them life.
- 3 It was he who introduced tungsten filament in a vacuum.
- 4 It was our country that built the first atomic power station in the world.
- 5 It was in 1875 when the telephone was invented.
- 6 It is physics that considers the phenomena of matter and energy.
- 7 It was in October 1957 that the first Sputnik was launched.
- 8 It was the Soviet man Y.A.Gagarin who first flew into space.

**For study  
Perfect Tense**

Active	Passive
to have + Participle II	to have + been + Participle II
<u>Present</u> : He has received a letter.	The letter has been received.
<u>Past</u> : He had received a letter by the evening yesterday.	The letter had been received by the evening yesterday.
<u>Future</u> : He will have received the letter by the evening tomorrow.	The letter will have been received by the evening tomorrow.

1 Translate into Russian the following sentences with **Present, Past, Future Perfect**.

- 1 They have introduced new methods of work.
- 2 I have never been to Paris.
- 3 The new ideas have been discussed in this article.