

Министерство сельского хозяйства Российской Федерации
федеральное государственное бюджетное образовательное учреждение
высшего образования «Вологодская государственная
молочнохозяйственная академия имени Н.В. Верещагина»

Технологический факультет

Кафедра иностранных языков

АНГЛИЙСКИЙ ЯЗЫК

*Методические рекомендации
для аудиторной и самостоятельной работы
студентов I курса по направлению подготовки
35.03.06 «Агроинженерия»*

Вологда – Молочное
2023

УДК 820.0-3 (071)
ББК 81.2 Англ р 30
A674

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A 647 Английский язык: Методические рекомендации для аудиторной и самостоятельной работы студентов 1 курса по направлению подготовки 35.03.06 Агроинженерия/ Сост. Т.А. Маркова. – Вологда-Молочное: ФГБОУ ВО Вологодская ГМХА, 2023. – 61 с.

Настоящие методические рекомендации для аудиторной и самостоятельной работы предназначены для студентов инженерного факультета по направлению подготовки 35.03.06 Агроинженерия. Они представляют собой сборник текстов, снабженных списками слов, вопросами и лексико-грамматическими упражнениями, схемами и иллюстрациями. Работая с текстами заданий, студенты изучают специальную лексику по своей будущей специальности и получают первые навыки перевода специальной литературы.

Печатается по решению редакционно-издательского совета ФГБОУ ВО Вологодская ГМХА.

УДК 820.0-3 (071)
ББК 81.2 Англ р 30

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Введение

Данные методические рекомендации предназначены для аудиторной и самостоятельной работы студентов 1 курса по направлению подготовки 35.03.06 Агроинженерия.

Методические рекомендации соответствуют учебной программе и тематическому плану дисциплины «Иностранный язык».
















Цель методических рекомендаций – научить студентов читать и переводить специализированные тексты, а также вести беседу на английском языке с использованием профессиональной лексики.









Тексты пособия заимствованы из английской и американской технической литературы и затрагивают следующие темы: виды двигателей, их устройство и принципы работы, автомобили и вождение, сельскохозяйственная техника.

Для достижения успеха в обучении английскому языку после каждого текста даны списки ключевых слов с переводом и фонетической транскрипцией, вопросы на понимание содержания текстов, лексико-грамматические упражнения, развивающие навыки перевода как с английского на русский, так и с русского на английский язык. В пособии используются иллюстрации, таблицы, схемы и диалоги, которые не только помогают заинтересовать студентов в изучении английского языка, но и способствуют формированию мышления будущего специалиста.

Учебные задания для аудиторной и самостоятельной работы предназначены для студентов инженерного факультета.

Contents

| | |
|------------------------------------------------------------------------------------------------------------------------------------------------|----|
| <i>Введение</i> | 3 |
| Chapter 1. Engines | 5 |
|  Text 1. Engines | 6 |
|  Active grammar: Plural of Nouns | 7 |
|  Active grammar: Uses of ‘Like’ | 9 |
|  Text 2. A Steam Engine | 11 |
|  Active grammar: Comparatives | 14 |
|  Text 3. A Gasoline Engine | 15 |
|  Active grammar: Present Simple | 19 |
|  Dialogue: At the Repairing Shop | 20 |
|  Text 4. A Diesel Engine | 21 |
|  Active grammar: Present Simple Passive | 24 |
|  Text 5. A Steam Turbine | 25 |
|  Active grammar: Superlatives | 28 |
| Chapter 2. Cars and Driving | 30 |
|  Text 6. Electronic Driving – a Model for the Future? | 30 |
|  Active grammar: Degrees of Comparison of Adjectives | 32 |
|  Vocabulary: Parts of a Car | 37 |

| | | |
|-----------------------------------------------------------------------------------|------------------------------------------|----|
|  | Vocabulary: What's inside? | 41 |
|  | Text 7. Inside the Car | 42 |
|  | Vocabulary: The Interior of a Car | 47 |
|  | Text. Finding a Fault in a Car | 50 |
|  | Dialogue: Tracing a Fault | 50 |
| | Chapter 3. Agricultural Machines | 54 |
|  | Text 8. The Agricultural Tractor | 54 |
|  | Text 9. Tractor Types | 57 |
|  | Keys | 60 |
| | List of Sources | 61 |

Chapter 1: Engines

Read and translate the text:

Text 1. Engines

The great machines that make things which we use every day are run by powerful engines.

Engines are machines for changing heat into motion. They make something move or move themselves. Your body is an engine. The food you eat gives heat. As you run and jump, you move and work. In this way you are like an engine.

All heat engines burn some kind of fuel.

There are different kinds of engines. In some engines a piston pushes back and forth.

In some engines a rotor revolves round and round.

In some engines no parts move. A change in pressure inside the engine cylinder makes them go.

Do you know these words?

| | | |
|--------------------|------------|-------------------------------|
| engine | [ˈendʒɪn] | двигатель |
| to run | [rʌn] | приводить в движение |
| powerful | [ˈpaʊəfl] | мощный |
| to change | [tʃeɪndʒ] | превращать |
| fuel | [fjuːəl] | топливо, горючее |
| heat | [hi:t] | тепло |
| to heat | | подогревать |
| motion | [ˈməʊʃn] | движение |
| piston | [ˈpɪstən] | поршень |
| pressure | [ˈpreʃə] | давление |
| to revolve | [rɪˈvɒlv] | вращать(ся) |
| rotor | [ˈrəʊtə] | ротор, рабочее колесо турбины |
| to be like | | быть похожим |
| different | [ˈdɪfrənt] | различный |
| to push | [puʃ] | толкать |
| back and forth | | назад и вперёд |
| to make | [meɪk] | зд. заставлять |
| It is ... that ... | | именно |

1. Answer these questions:

1. What do powerful engines run?
2. What do engines change heat into?
3. Why is your body like an engine?
4. What do all heat engines burn?
5. What do pistons do in engines?

2. Play this game with your partner.

Active grammar: Plural of Nouns

One, two – What’s the plural?

Game for two players (or two teams). Answer in 10 seconds and fill in the empty table. Take turns to ask and answer.

Peter: B3 is a “box”. What’s the plural, Eva?

Eva: Two ... boxes.

Peter: I think that’s right. (Eva writes down the word.)

Eva: OK. H2 is a “mouse”. What’s the plural, Peter?

Peter: Two ... *etc.*

Afterwards, use the Key (p. 59) and check your lists for the correct answers.

One point for each correct word. A bonus point for every correctly spelled answer.

| | 1 | 2 | 3 | 4 |
|----------|----------|----------|----------|-------------|
| A | tooth | life | woman | loaf |
| B | piano | sheep | box | party |
| C | man | boy | deer | information |
| D | watch | child | leaf | foot |
| E | goose | half | series | calf |
| F | wife | roof | class | church |
| G | news | lorry | knife | shelf |
| H | glass | mouse | salmon | tattoo |

| | 1 | 2 | 3 | 4 |
|----------|----------|----------|----------|----------|
| A | | | | |
| B | | | | |
| C | | | | |

| | | | | |
|----------|--|--|--|--|
| D | | | | |
| E | | | | |
| F | | | | |
| G | | | | |
| H | | | | |

3. Write the plural form of the following nouns:

engine, machine, body, fuel, kind, piston, rotor, part, change, thing, day.

4. Translate these groups of words having the same stem and say what parts of speech they are:

engine – engineer – engineering – enginery

machine – machinery – machinist

motion – motive – motivate

revolve – revolution – revolver

change – changeable

heat – heater

press – pressure – pressurize

power – powerful – powerless

5. Find the English equivalents for these word combinations in the text:

1. мощные двигатели

2. преобразовывать тепловую энергию в кинетическую

3. заставлять что-либо двигаться

4. изменение давления

5. различные виды двигателей

6. толкать взад и вперёд

7. внутри двигателя

6. Fill in the blanks using the proper forms of the given verbs:

to use, to change, to move, to push, to work

1. Could you ... your car, please? It's blocking the road.

2. – I can't open the jar.

– Try putting it in hot water. That sometimes... .

3. All drivers should really know how to ... a flat tire.

4. Are we allowed to ... a dictionary in the test?
5. ... the green button to start the engine.
6. Five mornings a week she ... on campus.
7. The car had run out of gas so they ... it into a side-street.
8. Now that we have a car we very rarely ... the buses.

7. Find the words in the text which correspond to these definitions:

1. form of energy arising from random motion of molecules of bodies, capable of transmission by conduction, convection, or radiation;
2. material for burning as fire or source of heat or power;
3. mechanical device consisting of several parts working together, used as a source of power;
4. having great power or influence;
5. to consume by fire;
6. revolving part of a machine;
7. able to be distinguished, unlike.

8. Uses of 'like'.

Active grammar: Uses of 'Like'

a. Read the information.

'Like' has different meanings depending on the grammar of the sentence.

1. **like** = enjoy something in general

Use *like* + gerund.

A: What do you **like doing** at the weekends?

B: I **like going** to the mountains.

2. **would like** = want something or want to do something

Use *would like* + infinitive or a noun

A: What **would** you **like to do** this weekend?

B: **I'd like to see** 'The Lord of the Rings'.

C: **I'd like a** quiet **night** at home.

3. **be like** = asking about character or characteristics

Don't use *like* in the answer.

A: What **is** your town **like**?

B: It's quite big and very busy.

4. **look like** = asking about appearance

Don't use *like* in the answer.

A: What does your father **look like**?

B: He's tall and he's got black hair.

b. Choose the correct alternative:

1. A: *Do you like / Would you like* a glass of water?

B: Yes, please.

2. A: *Do you like / Would you like* chocolate?

B: Yes, I eat it every day.

3. A: Are you free this afternoon? Nadia *would like / likes* to meet you for a coffee.

B: Yes. Tell her I can meet her at 4 p.m.

4. A: What time *do you like / would you like* to leave?

B: Let's leave at 6.30 p.m.

5. A: *Do you like / Would you like* going out in the evening?

B: Yes, but I don't stay out late.

6. A: Do you have Phil's email address? *I like / I'd like* to write to him, but I don't have his address here.

B: Yes. It's Philip.Denton@aoi.com

7. A: I prefer the old part of the city.

B: Why? What *does it look / is it like*?

8. A: What *is / does / looks* your new teacher like?

B: She is really good. I like her.

9. A: *Would you like / Do you like / Are you like* cooking?

B: Yes, I love it.

9. Translate the sentences into English:

1. Мощные двигатели приводят в движение большие станки.

2. Тепловые двигатели превращают тепло в движение.

3. Все тепловые двигатели сжигают какое-либо топливо.

4. Существуют различные двигатели.

5. Некоторые двигатели имеют поршни или роторы.

6. В некоторых двигателях нет движущихся частей.

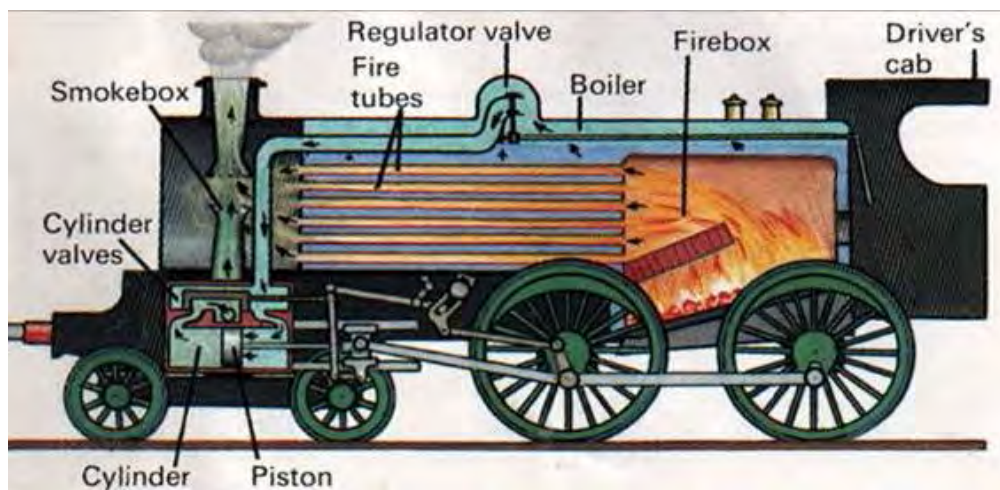
7. Изменение давления внутри цилиндра двигателя заставляет их двигаться.

Read and translate the text:

Text 2. A Steam Engine

The steam engine was the first high-speed engine ever invented. The principle of the steam engine is simple. When water is boiled, it changes into steam. If steam is kept inside a boiler, it pushes against the sides. The more the steam is heated, the more pressure it has. (If the steam pressure becomes too high, the boiler may explode.) It is the pressure of steam that we put to work.

A steam engine has two important parts. One is a boiler where a fire turns water into steam. The steam goes through a pipe to the other important part – the steam chest with a cylinder and a piston in it.

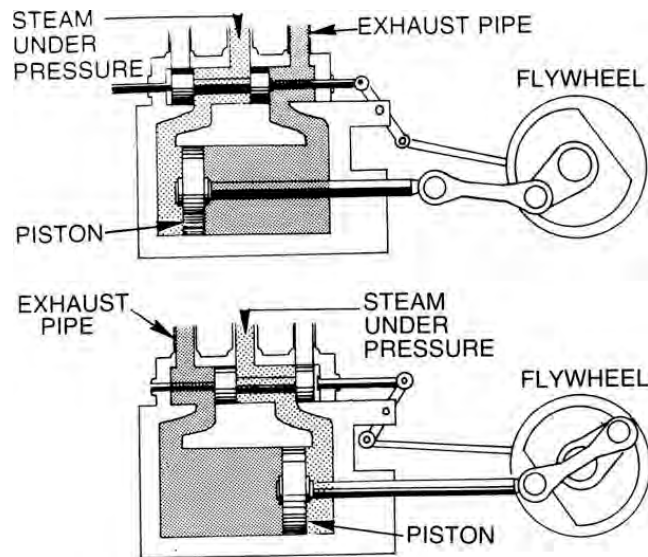


Steam enters one end of the cylinder and pushes the piston back. Then it enters the other end, pushing the piston forward again.

How is it done? The thing is that there are valves, or openings, in the steam chest. These valves let steam in first at one end, then at the other. As the piston moves in the cylinder, it opens and closes the valves automatically, so that fresh steam enters just when the piston has reached the end of its stroke.

After the steam has pushed the piston, it is cooler and has less energy. As the piston is pushed again by fresh steam the used steam goes out through another valve.

A rod from the piston is connected to a wheel. When the piston goes forward, the wheel makes half a turn. As the piston goes back, the wheel makes the other half a turn.



There was a time when steam engines were widely used. We even had steam cars. But now steam engines are mostly used in locomotives, and fewer steam locomotives are made each year. Some day steam engines will be only in museums.

Do you know these words?

| | | |
|------------------|----------------|----------------------------|
| to boil | [boil] | <i>кипятить</i> |
| boiler | [ˈboilə] | <i>паровой котел</i> |
| to invent | [ɪnˈvent] | <i>изобретать</i> |
| high-speed | [ˈhaɪˈspi:d] | <i>скоростной</i> |
| to explode | [ɪkˈspləʊd] | <i>взрываться</i> |
| through | [θru:] | <i>через</i> |
| to put to work | | <i>заставлять работать</i> |
| the ..., the ... | | <i>чем ..., тем ...</i> |
| cylinder | [ˈsɪlɪndə] | <i>цилиндр</i> |
| firebox | [ˈfaɪəbɒks] | <i>топка</i> |
| to connect | [kəˈnekt] | <i>соединять(ся)</i> |
| pipe | [paɪp] | <i>труба</i> |
| steam | [sti:m] | <i>пар, паровой</i> |
| to reach | [ri:tʃ] | <i>достигать</i> |
| fresh steam | | <i>свежий пар</i> |
| used steam | | <i>отработанный пар</i> |
| steam chest | [sti:m tʃest] | <i>паровая коробка</i> |
| stroke | [strəʊk] | <i>ход поршня</i> |
| power stroke | [ˈpaʊə strəʊk] | <i>рабочий ход поршня</i> |

| | | |
|--------------|--------------|--------------|
| rod | [rod] | шатун |
| wheel | [wi:l] | колесо |
| to turn into | [tə:n 'ɪntu] | превращать в |
| turn | [tə:n] | оборот |
| valve | [vælv] | клапан |

1. Answer these questions:

1. What was the first high speed engine?
2. When is water changed into steam?
3. What do we put to work in a steam engine?
4. Where does the fuel burn?
5. What do we see in the steam chest?
6. What pushes the piston?
7. What connects the piston to a wheel?
8. Are steam engines used now?

2. Find the English equivalents for the following word combinations:

1. скоростной двигатель
2. превращаться в пар
3. давление пара
4. впускать пар внутрь
5. открывать и закрывать клапаны автоматически
6. выходить через другой клапан
7. сделать пол-оборота.

3. Fill in the blanks using the proper forms of the given verbs:

to connect, to explode, to heat, to boil, to invent, to enter.

1. Alexander Graham Bell ... the telephone in 1876.
2. The kettle is – Shall I turn it off?
3. The hoses which ... the radiator to the engine are leaking.
4. I ... up the remains of last night supper.
5. Seconds after the car crashed, its fuel tank
6. It won't let you ... without a password.
7. Have you ... the speakers to the CD player?
8. In 1949 the USSR ... its first atomic bomb.

4. Look at these sentences and discuss how you make comparative forms. Then complete the Active grammar box.

After the steam has pushed the piston, it is *cooler* and has *less* energy.

Careless driving is *more dangerous* than you think.

| Active grammar: Comparatives | | |
|--------------------------------------|---------------------------|----------------------------------------------|
| | Adjective | Comparative |
| One-syllable adjectives | <i>long</i> <i>big</i> | <i>longer (than)</i> <i>bigger (than)</i> |
| Two-syllable adjectives | <i>boring</i> | _____ |
| Two-syllable adjectives ending in -y | _____ | <i>happier (than)</i> |
| Three-syllable adjectives | <i>interesting</i> | _____ |
| Irregular adjectives | _____ | <i>worse (than)</i> |

5. Complete the sentences using the adjectives and adverbs in brackets in the comparative form.

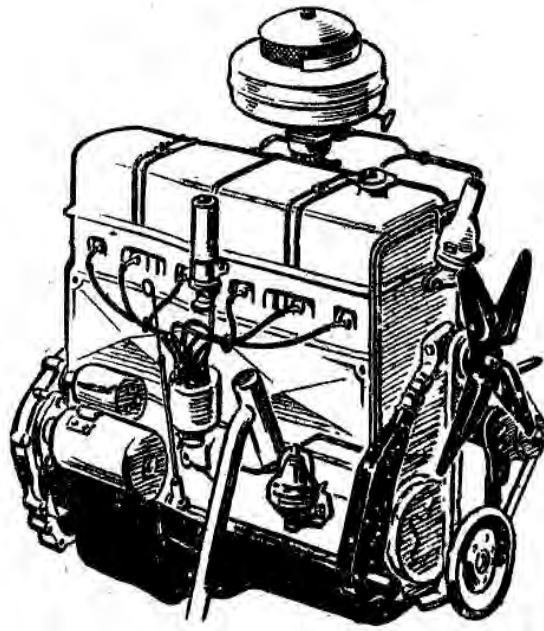
Model: The (much) you read, the (well) you know the subject.

– The more you read, the better you know the subject.

1. The (much) the steam is heated, the (much) pressure it has.
2. The (long) is the night, the (short) is the day.
3. The (little) men think, the (much) they talk.
4. The (much) snow you have in winter, the (good) crop you have in summer.
5. The (young) you are, the (easy) it is to learn.
6. The (early) you start, the (much) you reach.

Read and translate the text:

Text 3. A Gasoline Engine



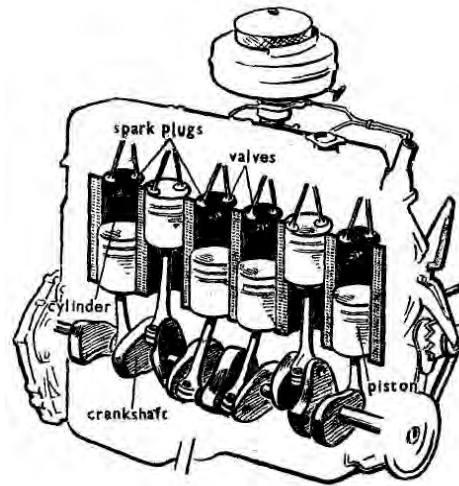
When wood, coal, oil or petrol burns, gases are formed. In gasoline engines these gases push the pistons. The fuel in gasoline engines is petrol. Petrol vapour and air are mixed in the carburettor before they go into the cylinder. In the cylinder this mixture of gases is exploded by a spark. When things are heated, they become bigger. That is what happens to the gases in the cylinder during the explosion.

The heat is so great that the gases expand very quickly. So they push the piston that revolves the crankshaft to which it is connected. The explosions come fast—one after the other. So millions and millions of explosions take place every day in the millions of gasoline engines that run cars and planes and boats.

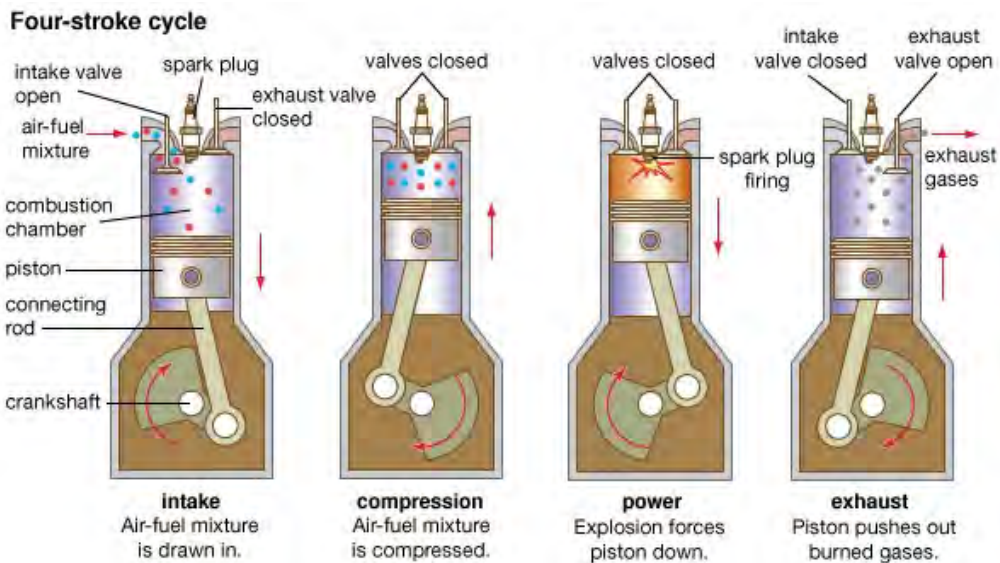
In most gasoline engines the piston (as it moves up and down in the cylinder) pushes, or gives power, in only one stroke out of four.

In the first stroke the piston moves down the cylinder, sucking in a mixture of gases through an opening, or valve.

The valve shuts and in the next stroke the piston moves up, compressing the gases. At this moment a spark runs across the spark plug, exploding the mixture.



The gases from the explosion are heated greatly, and they push the piston down. This is the third or power stroke, the stroke that really works, revolving the crankshaft.



In the last, fourth, stroke before the cycle starts again, the piston moves up, pushing the used gases out through another valve.

The revolving crankshaft sends each piston up and down till the next power stroke.

When an engine has more than one cylinder, the power strokes come one after another—so the engine can turn wheels or propellers smoothly and steadily.

Cars usually have 4 to 8 cylinders. Large airplane engines may have 20, 24 or even 28 cylinders.

Do you know these words?

| | | |
|-----------------|--------------------|----------------------|
| carburettor | [ka:bjʊ'retə] | карбюратор |
| to compress | [kəm'pres] | сжимать, сдавливать |
| crankshaft | ['kræŋkʃɑ:ft] | коленчатый вал |
| to expand | [iks'pænd] | расширяться |
| to explode | [iks'pləʊd] | взрывать(ся) |
| explosion | [iks'pləʊzən] | взрыв |
| gasoline engine | ['gæsəli:n'endʒɪn] | бензиновый двигатель |
| to mix | [mɪks] | смешивать |
| mixture | ['mɪkstʃə] | смесь |
| oil | [ɔɪl] | дизельное топливо |
| petrol | ['petrəl] | бензин, бензиновый |
| spark | [spɑ:k] | искра |
| spark plug | [spɑ:k plʌɡ] | запальная свеча |
| vapour | ['veɪpə] | пар |
| to suck in | [sʌk ɪn] | всасывать |
| cycle | ['saɪkl] | цикл |
| smoothly | ['smu:ðli] | плавно |
| steadily | ['stedɪli] | равномерно |

1. Answer these questions:

1. When are gases formed?
2. What pushes the pistons in gasoline engines?
3. What is the fuel in gasoline engines?
4. Where are petrol vapour and air mixed?
5. How is this mixture of gases exploded?
6. What happens to the gases in the cylinder during the explosion?
7. What do the gases do with the piston and the crankshaft?
8. What takes place in the first stroke?
9. When does a spark explode the mixture?
10. What can you say about the third stroke?
11. What happens to the used gases in the fourth stroke?
12. Why do the wheels turn smoothly?

2. Find the English equivalents for these word combinations:

1. выталкивать отработанные газы
2. вращать коленчатый вал
3. быстро расширяться

4. *сильно нагреваться*
5. *взрываться с помощью искры*
6. *всасывать смесь газов*
7. *сжимать газы*
8. *взрывать смесь*
9. *толкать поршень вниз*
10. *поворачивать колёса*

3. Fill in the blanks using the prompts:

1. As the temperature rises fast, the gases ... very quickly.
(*increase in volume*)
2. In most gasoline engines the piston pushes, or gives power, in only one ... out of four. (*a certain motion of the piston*)
3. In the second stroke the piston moves up and ... the gases.
(*squeeze*)
4. The ... of a gasoline engine consists of four strokes. (*repeated series of operations or states*)
5. The piston pushes the used gases out through another (*device for controlling the passage of gas*)
6. The fuel in a gasoline ... is petrol. (*mechanical device used as a source of power*)
7. When the gases are compressed, a spark runs across the
(*device for firing explosive mixture*)

4. Match the words with their definitions:

- | | |
|----------------|----------------------------------------------------------------------------------------------|
| 1. spark plug | a. the main shaft of an internal-combustion engine to which the connecting rods are attached |
| 2. crankshaft | b. a device for mixing air with a fine spray of liquid fuel |
| 3. oil | c. a liquid which is used as a fuel for motor vehicles |
| 4. petrol | d. a device for firing the explosive mixture in an internal-combustion engine |
| 5. carburettor | e. a viscous liquid derived from petroleum, especially for use as a fuel or lubricant |

5. Complete the Active grammar box with do, does, don't or doesn't.

Active grammar: Present Simple

| | |
|---|----------------------------------------------------------------------------|
| + | I usually go to bed about 10.30. |
| - | They _____ have a nap during the day. He _____ eat before going to bed. |
| ? | _____ you wake up early? _____ she often have a snack before bed? |

Use the Present Simple to talk about routines (things you do every day) and habits (things you do often).

Adverbs of frequency
always, usually, often, sometimes, hardly ever, never
 100% —————→ 0%

6. Choose the appropriate form of the verb in each sentence. Explain your choice.

Grammar: Present Simple Tense

1. Petrol (*burn/burns*) in the cylinder.
2. A spark (*explode/explodes*) the mixture of gases in the cylinder.
3. The heat is so great that the gases (*expand/expands*) very quickly.
4. The piston (*move/moves*) up and down in the cylinder.
5. At this moment a spark (*run/runs*) across the spark plug.
6. When an engine (*have/has*) more than one cylinder, the power strokes (*come/comes*) one after another.
7. The revolving crankshaft (*send/sends*) each piston up and down.

7. Practice the dialogue working in pairs.

Dialogue: At the Repairing Shop

Client: Good afternoon! Can you help me? There's something wrong with the engine.

Master: Hi! What's wrong with it?

Client: I don't know. It wouldn't start. Maybe the pistons and valves are in disorder.

Master: Let's have a look! Well, they are quite right.

Client: And what about the crankshaft, or electric spark plugs? I know absolutely nothing about the operating cycle of the engine.

Master: Just a moment. Don't worry! We shall check up all units and how they work together. My God! There's no petrol in the tank. How can you move drive?

Client: Really? Oh, I have forgotten to fill in the tank! I beg your pardon to trouble you!

Master: No trouble, at all. You are welcome!

Do you know these words?

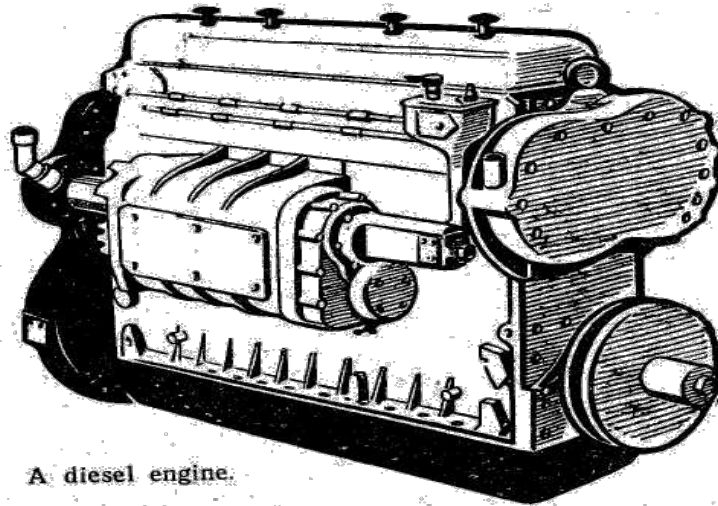
| | | |
|---------------------|------------|--------------------------|
| to be in disorder | [dis'ɔ:də] | <i>быть не в порядке</i> |
| unit | ['ju:nit] | <i>узел, агрегат</i> |
| to fill in the tank | | <i>наполнить бак</i> |

8. Find the English equivalents for these phrases in the text of the dialogue.

1. Мы проверим все узлы.
2. Я забыл заправить бак.
3. Погодите.
4. Он никак не заводится.
5. Что-то случилось с двигателем.
6. Не расстраивайтесь.
7. Прошу прощения за беспокойство.
8. Что с ним случилось?
9. Давайте посмотрим.
10. Не могли бы вы мне помочь?

Read and translate the text:

Text 4. A Diesel Engine



A diesel engine.

A diesel engine (named after its inventor) is like a gasoline engine but simpler.

Diesel engines are usually larger and can do more work. The fuel used in a diesel engine is oil.

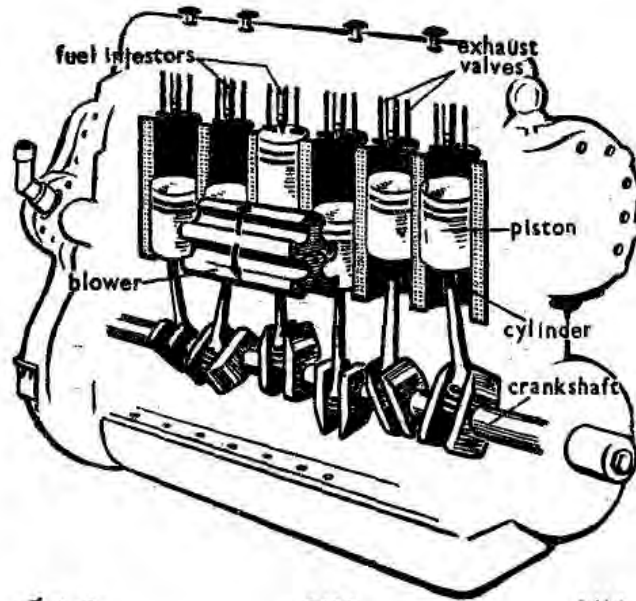
In a diesel engine, only air is blown into the cylinder. It is compressed by the piston till it becomes very hot. At that moment oil is injected into the compressed air. The air is so hot that the oil explodes immediately. It does not need spark plugs. The explosions push the pistons and turn the crankshaft as in gasoline engines.

Diesel engines can be four-stroke ones and two-stroke ones. In two-stroke engines every second stroke (and not every fourth as in four-stroke engines) is a power stroke.

This is a real advantage as the two-stroke engine gives more power.

In a two-stroke diesel, as the piston moves down, a powerful blower blows air through valves into the cylinder. As it comes in, the air pushes out the used gases from the previous explosion. The valves shut and the piston moves up, compressing the air and raising its temperature to about 1000°F (537.8°C).

At that moment oil is injected by a powerful pump. The oil explodes and the hot gases push the piston down. As it comes up again, air is blown in and the used gases are pushed out once more. Diesel engines use a cheaper kind of fuel and give more power for each gallon of fuel burned than gasoline engines. Besides, they last much longer.



In new trains and ships diesel engines run large generators which make electricity. The electricity runs motors which are connected to the wheels of the train or to the ship's screws.

Do you know these words?

| | | |
|----------------|----------------|---------------------------------------|
| blower | [ˈbləʊə] | воздуходувка, вентилятор |
| advantage | [ədˈvɑ:ntɪdʒ] | преимущество |
| compressed air | [kəmˈprest eə] | сжатый воздух |
| previous | [ˈpri:vjəs] | предыдущий |
| diesel engine | [ˈdi:zl] | дизельный двигатель |
| cheap | [tʃi:p] | дешёвый |
| generator | [ˈdʒenəreɪtə] | генератор |
| to inject | [ɪnˈdʒekt] | впускать, впрыскивать |
| pump | [pʌmp] | насос |
| screw | [skru:] | винт |
| immediately | [ɪˈmɪdʒətli] | сразу же, немедленно |
| gallon | [ˈgælən] | галлон (4,54 литра, амер. 3,78 литра) |
| to connect | [kəˈnekt] | присоединять |

1. Answer these questions:

1. What engine is simpler: a gasoline engine or a diesel one?
2. What engine is bigger in size?
3. What kind of fuel is used in a diesel engine?
4. What is blown into the cylinder in a diesel engine?
5. What is the oil injected into?
6. Why does the oil explode immediately?
7. Does a diesel engine have spark plugs?
8. How many strokes does a diesel engine have?
9. What kind of fuel is cheaper: oil or petrol?
10. What engine lasts longer?

2. Find the English equivalents for the following word combinations:

1. вдувать воздух в цилиндр
2. становится очень горячим
3. впрыскивать топливо
4. сразу же взрываться
5. давать больше энергии
6. мощный вентилятор
7. предшествующий взрыв
8. повышать температуру
9. мощный насос
10. выталкивать отработанные газы
11. более дешёвый вид топлива
12. быть более долговечным
13. присоединять к колёсам поездов
14. корабельные винты

3. Fill in the blanks using the comparative degree of the given adjectives and adverbs.

1. Diesel engines are usually ... than petrol ones. (*large*)
2. Two-stroke engine gives ... power than a four-stroke one. (*much*)
3. This kind of fuel is ... than that one. (*cheap*)
4. Diesel engines last much ... than gasoline ones. (*long*)
5. When things are heated, they become (*big*)
6. After the steam has pushed the piston, it is ... and has... energy. (*cool, little*)

4. Complete the Active grammar box with am, is, are and past participle of the given verbs.

| Active grammar: Present Simple Passive | |
|-----------------------------------------------|----------------------------------------------|
| Form: <i>am/is/are + past participle</i> | |
| I | I ___ _____ to a birthday party. (to invite) |
| he | He ___ always _____ at school. (to help) |
| she | She ___ _____ milk every morning. (to give) |
| it | It ___ often _____ at home. (to forget) |
| we | We ___ often _____ questions. (to ask) |
| you | You ___ _____ downstairs. (to wait for) |
| they | They ___ _____ some books. (to offer) |

5. Complete the sentences choosing the proper form of the verb 'to be'.

1. The used gases is/are pushed out once more.
2. At that moment oil is/are injected by a powerful pump.
3. Air is/are blown into the cylinder.
4. Motors is/are connected to the wheels of the train.
5. Air is/are compressed by the piston till it becomes very hot.
6. The temperature is/are raised to about 1000°F.
7. A cheaper kind of fuel is/are used by diesel engines.
8. Motors is/are run by electricity.

6. The verbs end with [t], [d], [id]. Underline the odd word out.

1. a. wanted b. needed c. waited d. washed
2. a. lived b. worked c. moved d. rained
3. a. liked b. finished c. ended d. wished
4. a. believed b. loved c. saved d. hated
5. a. named b. burned c. used d. moved
6. a. compressed b. pushed c. checked d. injected
7. a. tested b. recharged c. filled d. greased
8. a. heated b. connected c. changed d. invented

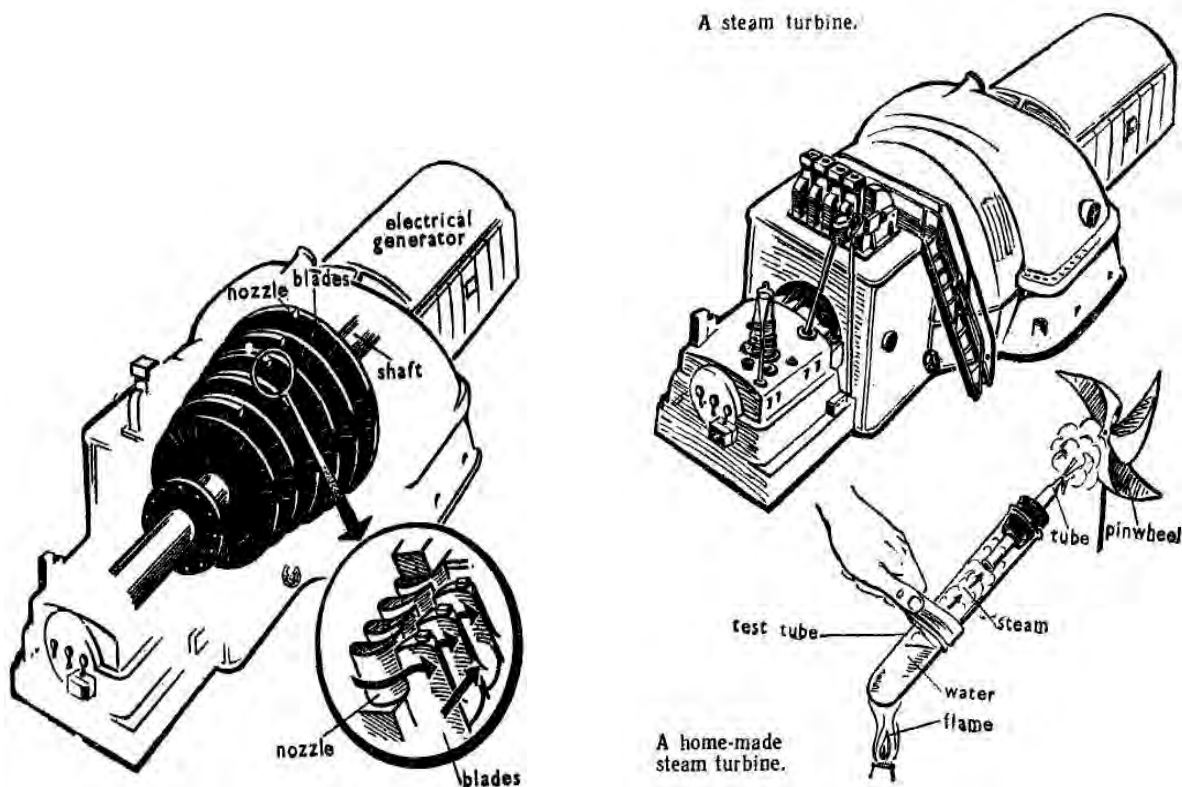
Read and translate the text:

Text 5. A Steam Turbine

A steam turbine is like a windmill or a pinwheel. But its metal blades revolve much faster. It is hot steam under great pressure that makes the blades revolve very fast.

To see how the steam turbine works you can make a model of a steam turbine as shown in the picture.

As pistons go back and forth in steam, gasoline, or diesel engines, they must come to a stop before they go the other way. That is why something revolving steadily in one direction makes a better engine. In a steam turbine, the rotor, a shaft with many curved blades, revolves steadily at high speed without stopping.

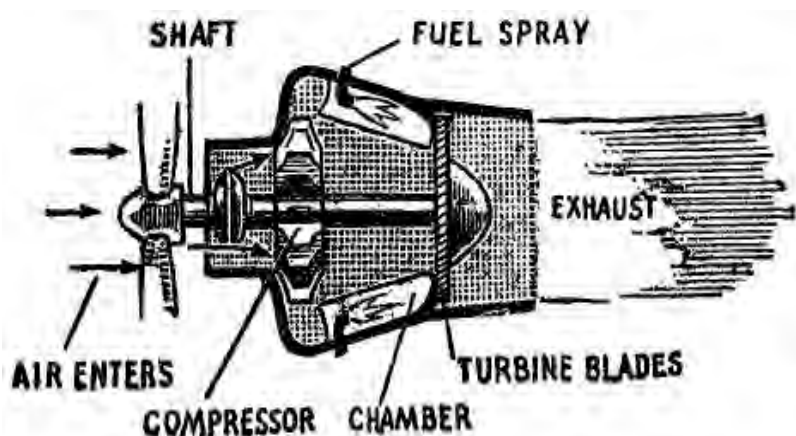


A revolving wheel makes an excellent engine. Windmills and water wheels are the oldest revolving engines. But such wheels turn slowly and produce little power. The rotor of a steam turbine may revolve 3.600 times a minute.

Steam turbines are mainly used to run huge generators that make electricity.

A Gas Turbine

A gas turbine is a newer kind, in which the fuel (oil or gas) is burned in a chamber just in front of the turbine blades. The hot high-pressure gases from the burning fuel revolve the blades just as steam does in steam turbines. Gas turbines are smaller than steam turbines. They run at higher temperatures and at faster speeds.



Do you know these words?

| | | |
|-------------------|-------------|-------------------|
| blade | [ˈbleɪd] | лопасть |
| to produce | [prəˈdju:s] | производить |
| chamber | [ˈtʃeɪmbə] | камера |
| shaft | [ʃɑ:ft] | вал, ось |
| to come to a stop | | останавливаться |
| turbine | [ˈtɜ:bɪn] | турбина |
| windmill | [ˈwɪndmɪl] | ветряная мельница |
| pinwheel | [ˈpɪnwi:l] | вертушка |

1. Answer these questions:

1. What does a steam turbine resemble?
2. What makes the blades in a steam turbine revolve?
3. What is the rotor?
4. How does the rotor revolve?
5. What are the oldest revolving engines? Do they produce much power?
6. Where are steam turbines used?
7. How fast can the rotor of a steam turbine revolve?
8. What is a newer kind of turbines?

9. Where is the fuel burnt in a gas turbine?
10. What is the difference between a steam turbine and a gas one?

2. Find the English equivalents for the following word combinations:

1. паровая турбина
2. вращаться гораздо быстрее
3. под огромным давлением
4. заставляя лопасти вращаться
5. идти в другом направлении
6. равномерно вращаться
7. изогнутые лопасти
8. отличный двигатель
9. старейшие вращающиеся двигатели
10. приводить в движение огромные генераторы
11. горячие газы под высоким давлением
12. более высокие скорости
13. прямо перед лопастями турбины

3. Use the verbs in the Passive Voice, translate the sentences into Russian.

1. Steam turbines to run huge generators that make electricity. (*to use*)
2. The fuel in a chamber just in front of the turbine blades. (*to burn*)
3. In a gas turbine the blades by the hot high-pressure gases. (*to revolve*)
4. In a diesel engine a cheaper kind of fuel (*to use*)
5. The air into the cylinder by a powerful blower. (*to blow*)
6. The air charge when the piston moves up. (*to compress*)
7. The mixture of gases by a spark. (*to explode*)
8. Petrol vapour and air in the carburetor. (*to mix*)
9. The used gases by the piston through the exhaust valve. (*to push out*)

4. Complete the Active grammar box.

Active grammar: Superlatives

Short adjectives (one syllable) = (the) + adjective + _____

Long adjectives (two or more syllables) = (the) + _____ + adjective

Two-syllable adjectives ending in *-y* = (the) + adjective without *-y* + *iest*

Irregular adjectives:

Good - _____ *bad* - _____

Before superlatives we use *the* or a possessive adjective.

the oldest building

my best friend

After superlatives we normally use *in* before the names of places and groups of people. In most cases we use *of*.

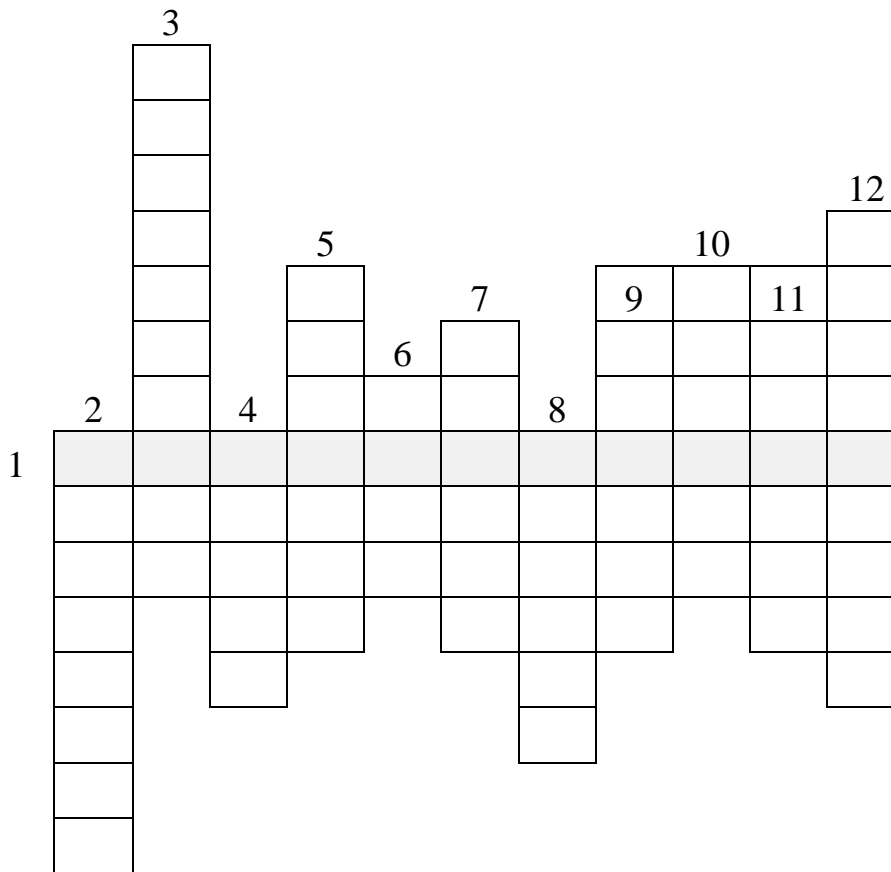
5. Write sentences using the superlative form of the adjectives.

Model: This/boring film/ever see.

This is the most boring film I've ever seen.

1. It was/exciting birthday/ever have.
2. It was probably/hard thing/ever do.
3. I think David is/good teacher/in the world.
4. Windmills and water wheels are/old revolving engines.
5. This is/good car/ever drive.
6. Everest/high mountain/the world.
7. This/wet day/the year so far.
8. This/difficult exam/ever take.
9. What/good department store/New York?
10. My sister is/intelligent person/our family.

6. Guess the crossword puzzle.



1. A device where petrol vapour and air are mixed before they go into the cylinder.
2. A part of the engine where the piston moves back and forward.
3. A revolving shaft to which the piston is connected.
4. A shaft with many curved blades revolving steadily at high speed without stopping.
5. A kind of engine revolving steadily in one direction.
6. A substance used in engines as a source of energy.
7. One motion of the piston (a part of an engine cycle).
8. A machine for changing heat into motion.
9. A kind of fuel used in a gasoline engine.
10. A part of an engine which moves back and forth in the cylinder.
11. A device used for blowing air through valves into the cylinder.
12. A device used as a source of electricity.

Chapter 2: Cars and Driving

Read and translate the text:

Text 6. Electronic Driving – a Model for the Future?

More and more people in the world want cars. A car can make you feel important and free. It also makes it possible for you to live in the country without being isolated. Can you imagine that in 20 years' time you probably won't own your car? That is what a team of transport researchers in the UK have said. You won't even have to drive your car, it will drive itself, controlled by a computer.

Why these changes?

Cars now cost society far too much in fuel, pollution and in dead and injured people. Changes have to come or the car will disappear from the market.

What will be changed?

1. Cars will have an automatic "cruise control" that keeps your car at a safe distance from the car in front when you are driving in a lane of cars. And your car will need neither brakes nor an accelerator.
2. Cars will be linked to each other electronically, so they form some sort of "road trains". An electronic tow-line will connect your car with a car in front and the car behind. The first car in a convoy will use only one tenth of the fuel and so pollution will be 90 per cent lower. That will really improve the environment.
3. Cars will have a "lateral distance controller" which will move the car from lane to lane. When you want to overtake another car your radar will check that the outer lane is free. If it is safe to move out, you will be moved there automatically.
4. Drivers will always have a clear view of the road. An electronic image of the road ahead will appear on the windscreen even in bad weather.
5. Cars driven by computers are safer than those driven by humans. So there could be more vehicles on the roads but we won't need so many new roads to take the increased traffic.

6. People will change cars as they change clothes. A single person driving to his job can do with a small car, while the same man on holiday with his family will need something roomier. That will be possible by making cars with the same basic chassis and suspension but with upper parts that can easily be exchanged.
7. Cars will have a hybrid engine – a petrol or diesel engine for long distances and an electric motor for short distances. That combination will cut the amount of exhaust fumes radically and help the environment.

Do you know these words?

| | | |
|-----------------|--------------------|------------------------------|
| researcher | [rɪ'sə:tʃə] | <i>исследователь</i> |
| society | [sə'saɪ ətɪ] | <i>общество</i> |
| pollution | [pə'lju:ʃn] | <i>загрязнение</i> |
| injure | [ɪndʒə] | <i>ранить</i> |
| disappear | [,dɪsə'pɪə] | <i>исчезать</i> |
| cruise control | [ˈkru:z kən'trəʊl] | <i>круиз-контроль</i> |
| neither ... nor | [ˈnaɪðə 'no:] | <i>ни ... ни</i> |
| accelerator | [ək'seləreɪtə] | <i>педаль газа</i> |
| tow-line | [ˈtəʊlaɪn] | <i>буксировочный трос</i> |
| connect | [kə'nekt] | <i>соединять</i> |
| convoy | [ˈkɒnvoɪ] | <i>транспортная колонна</i> |
| amount | [ə'maʊnt] | <i>количество</i> |
| tenth | [tenθ] | <i>десятый</i> |
| improve | [ɪm'pru:v] | <i>улучшать</i> |
| environment | [ɪn'vaɪrənmənt] | <i>окружающая среда</i> |
| lateral | [ˈlætərəl] | <i>боковой</i> |
| lane | [leɪn] | <i>полоса на дороге</i> |
| overtake | [əʊvə'teɪk] | <i>обгонять</i> |
| outer lane | [ˈaʊtə leɪn] | <i>соседняя полоса</i> |
| image | [ɪmɪdʒ] | <i>изображение</i> |
| ahead | [ə'hed] | <i>впереди</i> |
| windscreen | [ˈwɪndskri:n] | <i>лобовое стекло</i> |
| human | [ˈhju:mən] | <i>человек</i> |
| vehicle | [ˈvi:ɪkl] | <i>транспортное средство</i> |
| chassis | [ˈtʃæsi] | <i>рама, ходовая часть</i> |
| suspension | [səs'penʃn] | <i>подвеска</i> |

| | | |
|---------------|-------------------|----------------------|
| exchange | [iks´ tʃeɪndʒ] | менять |
| hybrid | [ˈhaɪbrɪd] | гибридный, смешанный |
| exhaust fumes | [ɪg´zo:st fju:mz] | выхлопные газы |
| radically | [ˈrædɪklɪ] | радикально |

1. Fill in the table using the missing degrees of comparison of adjectives. Choose five words from the table and make 5 sentences using them.

| Active grammar: Degrees of Comparison of Adjectives | | | |
|------------------------------------------------------------|----------------------|--------------------|--------------------|
| | Positive | Comparative | Superlative |
| 1. | ... | lower | ... |
| 2. | ... | ... | the most important |
| 3. | safe | ... | ... |
| 4. | ... | roomier | ... |
| 5. | expensive | ... | ... |
| 6. | ... | ... | the best |
| 7. | ... | closer | ... |
| 8. | environment-friendly | ... | ... |

2. Find in the text the English equivalents for the following word combinations:

1. удерживать автомобиль на безопасном расстоянии
2. быть связанными друг с другом с помощью электроники
3. электронный буксировочный трос
4. улучшить состояние окружающей среды
5. регулятор боковой дистанции
6. чёткий вид дороги
7. более интенсивное движение
8. смешанный тип двигателя
9. уменьшить количество выхлопных газов

3. Complete the sentences using proper words or phrases from the text.

1. An automatic device which keeps your car at a safe distance from the car in front is called
2. To connect your car with a car in front and the car behind you can use an electronic
3. To be able to move from lane to lane cars will have a
4. ... will help to get a clear view of the road even in bad weather.
5. A combination of a petrol or diesel engine and an electric motor makes a ... which can be used for long and short distances.

4. Match the words with their definitions:

- | | |
|----------------|--------------------------------------------------------------------------------------------------------------------------|
| 1. accelerator | a. a vehicle with four wheels and an engine, that can carry a small number of passengers |
| 2. computer | b. a person studying a subject in order to discover new facts or test new ideas |
| 3. car | c. an electronic machine that stores information and uses programs to help you find, organize, or change the information |
| 4. windscreen | d. the process of making air, water, or soil dangerously dirty and not suitable for people to use |
| 5. chassis | e. a part of a car that makes it go more slowly or stop |
| 6. suspension | f. the part of a car that you press with your foot to make it go faster |
| 7. pollution | g. the air, water, and land on Earth, which can be harmed by man's activities |
| 8. researcher | h. a large window at the front of a car |
| 9. brake | i. the vehicles moving along a road or street |
| 10.environment | j. the frame on which the body, engine and wheels of a vehicle are built |
| 11.traffic | k. a part attached to the wheels of a vehicle that makes it more comfortable on roads that are not smooth |

5. Look at the text and choose one or more of the alternatives below.

1. Cars in the future will be
 - a. *more expensive*
 - b. *safer*
 - c. *more environment-friendly*
2. A cruise-control device will regulate
 - a. *the distance to the cars in front and behind*
 - b. *the distance to the cars in other lanes*
 - c. *the fuel consumption*
3. The weather conditions for a motorist in 20 years' time will be
 - a. *less important than today*
 - b. *just as important*
 - c. *more important*
4. In the future drivers will
 - a. *have to be better trained*
 - b. *only use new motorways*
 - c. *be able to drive closer to each other without causing accidents*
5. In the future most people will
 - a. *own their cars*
 - b. *change their car to suit their needs*
 - c. *only use cars in their jobs*
6. 20-30 years from now cars could have
 - a. *no brakes and suspension*
 - b. *an engine run on both petrol and electricity*
 - c. *one chassis and different upper parts*

6. Discussion in groups

1. What will it be like being a driver in the future?
2. What will it be like being a car mechanic in twenty year's time?
3. Are there any changes compared to now?
4. What skills would you need?
5. How interesting would the job be?

7. Project work

Choose one or more of these project ideas:

Project 1* Design your own car for the motor show in Geneva

- on your own
- Make a sketch of your car.
 - Add a list, in English, of words for the different parts of the car which you can see in your sketch.
- with a partner
- Ask your partner to describe your car and give it a mark out of ten.
 - Also ask him/her to use the words from your list in the description.
- in group
- Present your car, the sketch and the description, to the rest of the group.

You could start like this: This is a ..., model XX. It is made of ...
The most interesting detail is the new windscreen, which is ...

Project 2* Imagine that there will be a large transport show in Geneva

- with a partner
- Decide what sort of transport you think people in Europe should use for the next fifty years.
 - Perhaps you think everyone should use bicycles or pedal cars, or private mini-helicopters, or small hovercraft** – anything is possible.
 - Use your ideas and write an article for a magazine for the transport show. Or make drawings with short descriptions.
- in group
- Present your project to the rest of the group.

***Project 3* Search the Net for new car models or futuristic cars**

Search word: *futuristic cars*

- Use the information to make a poster or multimedia presentation.
- Present what you have found to the rest of the group.

* Geneva [dʒəˈni:və] - г. Женева

** hovercraft [ˈhɒvəkra:ft] – транспортное средство на воздушной подушке

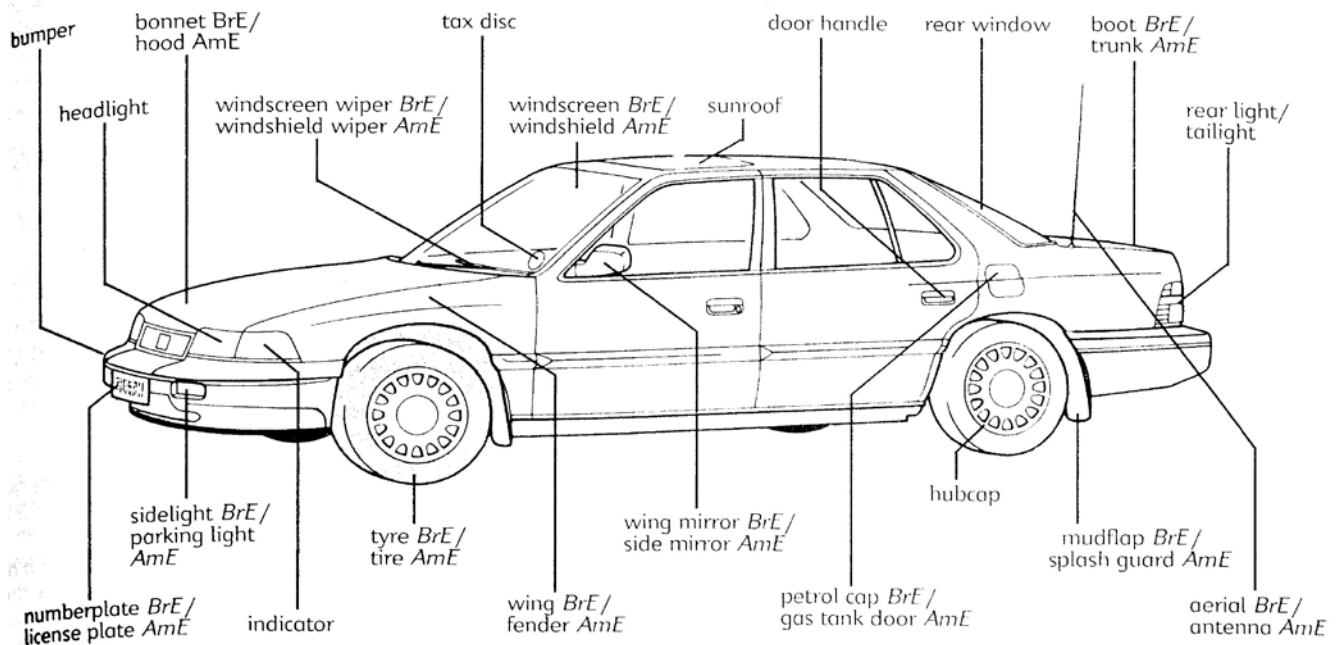
8. Read about driving in the USA in the following text:

U.S. Driving

In the US the popular idea of Mr or Ms Successful is a person who is a self-made man or woman with power, money, a beautiful home and that special car parked in front of the house! It is not necessarily a big car but it has to be expensive. The car is part of the dream. But why is the car so important? Well, in the US you take the car to work, take your car to shop at the out-of-town mall and take the kids to school or to their after-school sport clubs, and use it to drive to the ball game and to visit friends – even if they live only a few blocks away. In fact, if your friends live on the other side of town you have to use your car because there aren't any sidewalks and probably no buses either.

So everybody in the US drives everywhere and the car has become a big part of their lives. Most American cars have an automatic gearshift which makes slow driving in heavy traffic easier and they also have air conditioning to make them more comfortable to travel in.

Vocabulary: Parts of a Car



Do you know these words:

| | | |
|--------------------------------------------------------------|-------------------------------------------------|------------------|
| bumper | [ˈbʌmpə] | бампер |
| headlight | [ˈhedlaɪt] | фара |
| bonnet <i>BrE</i> / hood <i>AmE</i> | [ˈbɒnɪt] / [hʊd] | капот |
| windscreen wiper <i>BrE</i> / windshield wiper <i>AmE</i> | [ˈwɪn(d)skri:n ˈwaɪpə] [ˈwɪn(d)ʃi:ld ˈwaɪpə] | стеклоочиститель |
| tax disc | [tæks dɪsk] | акцизный диск |
| windscreen <i>BrE</i> / windshield <i>AmE</i> | [ˈwɪn(d)skri:n] [ˈwɪn(d)ʃi:ld] | переднее стекло |
| sunroof | [ˈsʌnru:f] | люк |
| door handle | [ˈdo: hændl] | дверная ручка |
| rear window | [rɪə ˈwɪndəʊ] | заднее стекло |
| boot <i>BrE</i> / trunk <i>AmE</i> | [bu:t] / [trʌŋk] | багажник |
| rear light <i>BrE</i> / tail light <i>AmE</i> | [rɪə laɪt] [teɪl laɪt] | задний фонарь |
| numberplate <i>BrE</i> / licence plate <i>AmE</i> | [ˈnʌmbəpleɪt] [laɪsɪns pleɪt] | номерной знак |

| | | |
|-------------------------------------------|--------------------------|--------------------------------------------|
| sidelight <i>BrE/</i> | [ˈsaɪdlaɪt] | <i>боковой фонарь</i> |
| parking light <i>AmE</i> | [ˈpɑːkɪŋ laɪt] | |
| tyre <i>BrE</i> / tire <i>AmE</i> | [ˈtaɪə] | <i>шина</i> |
| wing <i>BrE/</i> fender <i>AmE</i> | [wɪŋ] / [ˈfendə] | <i>крыло автомобиля</i> |
| wing mirror <i>BrE/</i> | [wɪŋ ˈmɪrə] | <i>боковое зеркало</i> |
| side mirror <i>AmE</i> | [saɪd ˈmɪrə] | |
| petrol cap <i>BrE/</i> | [ˈpetrəl kæp] | <i>крышка бензобака</i> |
| gas tank door <i>AmE</i> | [ˈgæstæŋk ˈdoː] | |
| hubcap | [ˈhʌbkæp] | <i>колпачок, крышка ступицы колеса</i> |
| mudflap <i>BrE/</i> | [ˈmʌdflæp] | <i>грязевой щиток</i> |
| splash guard <i>AmE</i> | [splæʃ ˈgɑːd] | |
| aerial <i>BrE</i> / antenna <i>AmE</i> | [ˈeəriəl] / [ænˈtenə] | <i>антенна</i> |

1. Match the words from the left column with their definitions given in the right column:

- | | |
|---------------------|--------------------------------------------------------------------------------------------------------|
| 1. headlight | a. a round metal cover for the centre of a wheel on a vehicle |
| 2. mudflap | b. wire or rod used to transmit or receive radiowaves |
| 3. bonnet | c. cover over the engine of a car |
| 4. windscreen wiper | d. the side part of a car that covers the wheels |
| 5. windscreen | e. a thick rubber ring placed round the wheel of a car |
| 6. aerial | f. plate bearing a number of a registered car |
| 7. sunroof | g. the large window at the front of a car |
| 8. boot | h. a long thin piece of metal with a rubber edge that moves across a windscreen to remove dirt |
| 9. numberplate | i. a small round piece of paper on a car windscreen in Britain that shows the driver has paid road tax |
| 10. sidelight | j. one or two small lights next to each of the main |

lights at the front of a car, they warn of the car's presence

- | | |
|--------------|----------------------------------------------------------------------------------------------------------|
| 11. wing | k. bar attached to a motor vehicle to reduce damage in collisions |
| 12. tyre | l. a part of the roof of a car that you can open to let in air and light |
| 13. bumper | m. powerful lamp carried on front of a motor vehicle |
| 14. tax disc | n. a piece of rubber that hangs behind the wheel of a vehicle to prevent mud from getting on the vehicle |
| 15. hubcap | o. a place for luggage usually at the back side of a car |

2. Match the words from the columns to make word combinations:

- | | |
|---------------|-----------|
| 1. windscreen | a. guard |
| 2. splash | b. handle |
| 3. licence | c. disc |
| 4. tax | d. cap |
| 5. petrol | e. light |
| 6. door | f. plate |
| 7. parking | g. wiper |

3. Match the British and American words having the same meaning:

British English



1. rear light
2. windscreen
3. sidelight
4. petrol cap

American English



- a. windshield
- b. hood
- c. tail light
- d. fender

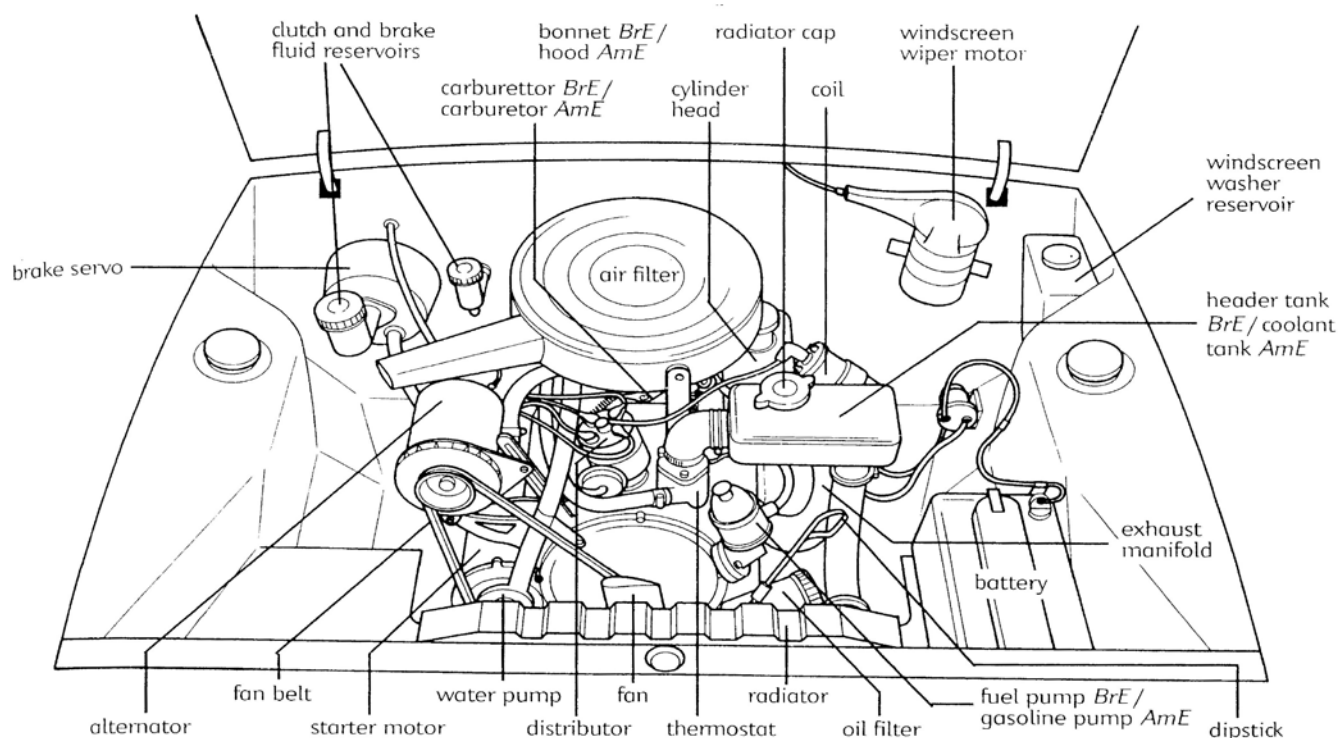
- | | |
|-----------------|------------------|
| 5. bonnet | e. parking light |
| 6. aerial | f. trunk |
| 7. boot | g. antenna |
| 8. wing | h. gas tank door |
| 9. mudflap | i. licence plate |
| 10. numberplate | j. splash guard |

4. Translate the words from the word bank. Complete the sentences using these words.

| | | | |
|------------|---------|-------------|-----------------|
| horsepower | battery | speed limit | |
| gasoline | seat | spare parts | filling station |
| headlights | lift | to fix up | |

1. You have forgotten to switch off the _____.
2. Could you help me _____ my car?
3. What is the _____ of the engine?
4. Ten dollars' worth of _____, please.
5. Take the front _____.
6. The _____ is dead.
7. Get in, I'll give you a _____.
8. Do you have any _____?
9. Where's the nearest _____?
10. You may be fined for exceeding the _____.

Vocabulary: What's inside?



| | | |
|--------------------------------------|-------------------------------------|-------------------------------------------------------------|
| brake servo | [breɪk ˈsə:vəʊ] | <i>тормоз с усилителем</i> |
| clutch and brake fluid reservoirs | [klʌtʃ ənd breɪk ˈflu:ɪd ˈrezəvwa:] | <i>питательный бачок сцепления и тормозной гидросистемы</i> |
| carburetor BrE/ carburetter AmE | [ka:bə ˈreɪtə] | <i>карбюратор</i> |
| cylinder head | [ˈsɪlɪndə hed] | <i>головка цилиндра</i> |
| radiator cap | [ˈreɪdɪeɪtə kæp] | <i>крышка радиатора</i> |
| coil | [kɔɪl] | <i>катушка</i> |
| windscreen wiper motor | [ˈwɪn(d)skri:n ˈwaɪpə ˈməʊtə] | <i>электродвигатель стеклоочистителя</i> |
| windscreen washer reservoir | [ˈwɪn(d)skri:n ˈwɒʃə ˈrezəvwa:] | <i>бачок омывателя ветрового стекла</i> |
| header tank BrE/ coolant tank AmE | [ˈhedə tæŋk] [ˈku:lənt tæŋk] | <i>расширитель для масла в трансформаторе</i> |
| alternator | [ˈɒltəneɪtə] | <i>генератор переменного тока</i> |

| | | |
|--------------------------|-----------------------|-------------------------------------------------------|
| fan belt | [fæn belt] | <i>ремень вентилятора</i> |
| starter motor | [ˈsta:tə ˈməʊtə] | <i>стартерный электродвигатель, стартёр</i> |
| water pump | [ˈwɔ:tə pʌmp] | <i>водяной насос</i> |
| distributor | [dɪˈstrɪbjʊtə] | <i>распределитель зажигания</i> |
| fan | [fæn] | <i>вентилятор</i> |
| thermostat | [ˈθə:məʊstæt] | <i>термостат</i> |
| radiator | [ˈreɪdɪeɪtə] | <i>радиатор</i> |
| oil filter | [oɪl ˈfɪltə] | <i>маслоочиститель, масляный фильтр</i> |
| fuel pump <i>BrE/</i> | [ˈfju:əl pʌmp] | <i>топливный насос</i> |
| gasoline pump <i>AmE</i> | [ˈgæsəli:n pʌmp] | |
| dipstick | [ˈdɪpstɪk] | <i>щуп, жезловый маслоуказатель</i> |
| battery | [ˈbætəri] | <i>аккумулятор, батарея</i> |
| exhaust manifold | [ɪgˈzɔ:st ˈmænɪfəʊld] | <i>выпускной коллектор, выпускной трубопровод</i> |

Read and translate the text:

Text 7. Inside the Car

Let's have a look at the car. We are inside the car. There is a seat for the driver in the front and five seats for passengers in the back. All round the car are windows to see out, except in the front. This is the windscreen and there are also things to sweep rain off it. We call them windscreen wipers.

When we drive the car we steer with the steering wheel. If there are obstacles in the way we stop the car with the brake – we brake the car. When the way is clear to go again we accelerate to help us move off. The car has a gear-box and five gears. There is also a gear lever. We change gears by pushing the gear lever from one gear to the next. To help us do this we have a foot-pedal. We call it the clutch. We put the clutch in to make it drive again. When we want to stop the car we

put on the hand-brake. To start the engine we switch on the ignition and press the starter. And lastly to change direction we signal with the indicators. With our hands we steer the steering wheel, change gear with the gear lever, and put on the hand-brake. With our feet we accelerate by using the accelerator, stop by using the foot-brake and change gear by using the clutch.

Now let us look round the car. Front and rear come the bumpers to protect the bodywork. In the four corners are the wheels. The bonnet covers the engine. There is also the compartment to contain your luggage, the tools for the car, and the spare wheel. We call this compartment the boot. But why do we need a spare wheel? When a tyre goes flat all the air come out of it because it has a puncture. So we lift a car on a jack, change the wheel and drive on.

The main part of the engine consists of the cylinder and the valves. Air and petrol go into the engine by means of the carburetor. The petrol reaches the carburetor from the petrol tank through the action of the petrol pump. The mixture is ignited by an electric spark from one of the plugs. The electricity is stored in the battery and the battery is charged by the dynamo. The engine is often cooled by water from the radiator and lubricated by oil. The exhaust gases from the engine go away through a pipe. To control the operation of the engine we have a speedometer and an oil pressure gauge, a thermometer and an ammeter to see if the dynamo charges the battery or not. These are the basic instruments.

1. Match the words with their definitions:

- | | |
|---------------------|-------------------------------------------------------------------------------------------|
| 1. gear | a. the large window at the front of a car |
| 2. clutch | b. a wheel that you turn to control the direction of a car |
| 3. windscreen | c. the machinery in a vehicle that you use to go comfortably at different speeds |
| 4. bumper | d. a metal rod that you move in order to control the gears of a vehicle |
| 5. windscreen wiper | e. the pedal that you press with your foot when driving a vehicle in order to change gear |
| 6. gearbox | f. the system of gears in a vehicle |

- | | |
|-------------------|------------------------------------------------------------------------------------------------|
| 7. gear lever | g. a long thin piece of metal with a rubber edge that moves across a windscreen to remove rain |
| 8. bodywork | h. the metal frame of a vehicle, not including the engine, wheels, etc. |
| 9. steering wheel | i. a bar fixed on the front and back of a car to protect it if it hits anything |

2. Point out the odd word in each group.

1. radiator, motor, cylinder, alternator, distributor
2. filter, starter, header, reservoir, cylinder
3. coolant, cap, clutch, coil, cylinder
4. gasoline, brake, fan, battery, tank
5. cap, pump, belt, tank, head, hood

3. Which letter makes two words from the lesson?

Example: ca pump (cap, pump)

- | | | |
|---------------------|------------|-------------------|
| 1. exhaus_hermostat | 3. serv_il | 5. hoo_istributor |
| 2. washe_eservoir | 4. bel_ank | 6. moto_adiator |

4. Match the words with their definitions:

- | | |
|---------------|--------------------------------------------------------------------------------------------------------------|
| 1. radiator | b. an instrument used for keeping a machine at a particular temperature |
| 2. coil | c. an object that produces an alternating current, especially in a car |
| 3. fan | d. a stick for measuring the amount of liquid in a container, especially the amount of oil in a car's engine |
| 4. alternator | e. the part of a car which stops the engine from getting too hot |
| 5. dipstick | f. a continuous series of circular rings into which something such as wire or rope has been wound or twisted |
| 6. thermostat | g. a machine with turning blades that is used to make the air cooler |

5. Mark the sentences true (T) or false (F).

1. The function of the boot is to protect the bodywork.
2. The boot is the compartment containing luggage.
3. We can change gears with the steering wheel.
4. The clutch is a foot-pedal.
5. There are windscreen wipers all round the car.
6. There is a seat for the driver in the back and the seats for passengers in the front.
7. We need a spare wheel when a tyre has a puncture.
8. Carburetor is used for mixing petrol with air.

6. Form word combinations with the word 'battery', translate them.

built-in

rechargeable

solar

dead

battery

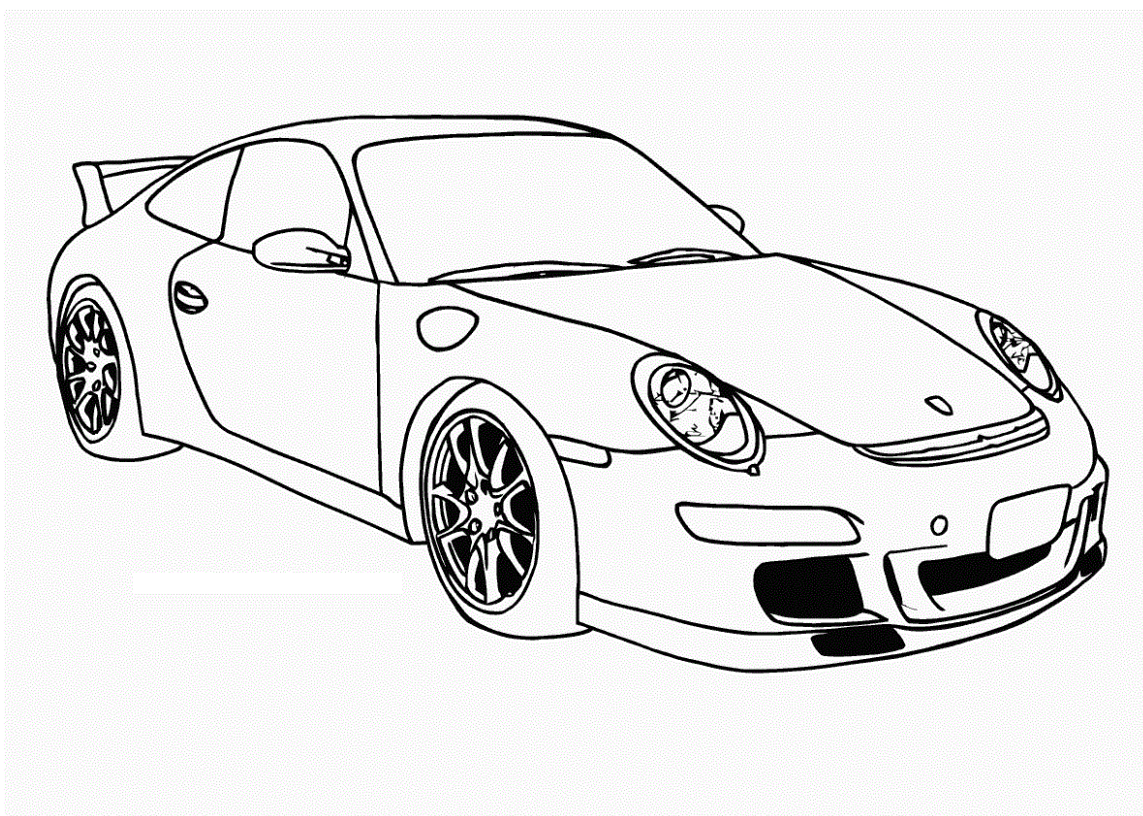
discharged

baby

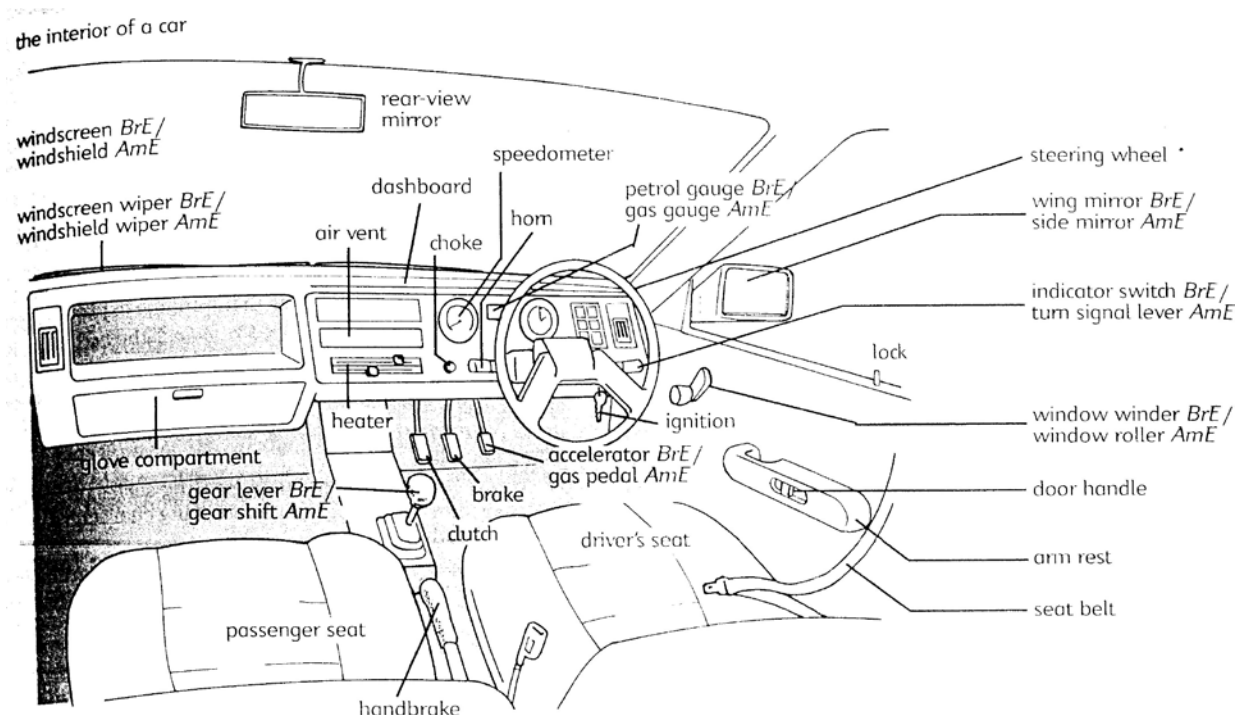
flat

7. Which of these things can you see in the picture?

steering wheel clutch gearbox spare wheel
windows windscreen petrol cap accelerator
boot dashboard side mirror door handle
fender tax disc headlight



Vocabulary: The Interior of a Car



| | | |
|------------------------------------|--------------------------------|----------------------|
| rear-view mirror | [ˈriəvju:ˈmɪrə] | зеркало заднего вида |
| air vent | [eəˈvent] | воздуховод |
| dashboard | [ˈdæʃbo:d] | приборная доска |
| choke | [tʃəuk] | дроссельная заслонка |
| speedometer | [spiˈdomɪtə] | спидометр |
| horn | [ho:n] | звуковой сигнал |
| heater | [ˈhi:tə] | отопительный прибор |
| clutch | [klʌtʃ] | педадь сцепления |
| brake | [breɪk] | педадь тормоза |
| accelerator BrE / gas pedal AmE | [əkˈseləreɪtə] / [ˈgæspedl] | педадь газа |
| ignition | [ɪgˈnɪʃn] | зажигание |
| handbrake | [ˈhændbreɪk] | ручной тормоз |
| passenger seat | [ˈpæsɪndʒə si:t] | пассажирское сиденье |
| driver's seat | [ˈdraɪvəz si:t] | сиденье водителя |

| | | |
|---------------------------------------------------------------------|-------------------------------------------|---------------------------------------------------|
| glove compartment | [glʌv kəm'pɑ:tmənt] | ящик для мелких вещей, «бардачок» |
| gear lever <i>BrE</i> / gear shift <i>AmE</i> | [gɪə'levə] / [gɪə'ʃɪft] | рычаг управления коробкой передач |
| lock | [lɒk] | замок |
| seat belt | ['si:tbel] | ремень безопасности |
| arm rest | ['ɑ:mrest] | подлокотник |
| door handle | ['do: hændl] | дверная ручка |
| window winder <i>BrE</i> / window roller <i>AmE</i> | ['wɪndəu'waɪndə] ['wɪndəu'rəulə] | стеклоподъёмник |
| indicator switch <i>BrE</i> / turn signal lever <i>AmE</i> | [ɪndɪ'keɪtə swɪtʃ] [tə:n 'sɪgnl 'levə] | рычаг переключения указателей поворота |
| wing mirror <i>BrE</i> / side mirror <i>AmE</i> | [wɪŋ 'mɪrə] / [saɪd 'mɪrə] | боковое зеркало |
| steering wheel | ['stiəriŋ wi:l] | рулевое колесо |
| petrol gauge <i>BrE</i> / gas gauge <i>AmE</i> | ['petrəlgeɪdʒ] ['gæsgeɪdʒ] | указатель уровня топлива в баке, бензиномер |

1. Match the words with their definitions:

- | | |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| 1. glove compartment | a. the part in front of the driver in a car that has the controls on it |
| 2. speedometer | b. a piece of equipment in a vehicle that controls the amount of air going into the engine, and that is used to help the engine start |
| 3. seat belt | c. an instrument in a vehicle that shows how fast it is going |
| 4. horn | d. the thing in a vehicle that you use to make a loud sound as a signal or warning |

- | | |
|---------------|-----------------------------------------------------------------------------------------------------------------|
| 5. heater | e. a machine for making air or water hotter |
| 6. dashboard | f. a small cupboard in a car in front of the passenger seat, where things such as maps can be kept |
| 7. indicator | g. a metal rod that you move in order to control the gears of a vehicle |
| 8. choke | h. a belt attached to the seat of a car or plane which you fasten around yourself for protection in an accident |
| 9. gear lever | i. one of the lights on a car that flash to show which way the car is turning |

2. Complete the sentences using these words:

| | | |
|-------------------|-----------|-------------|
| glove compartment | brake | speedometer |
| horn | dashboard | gear lever |

1. Mattie pressed the automatic device on her _____ and the garage door went upwards.
2. The _____ went upwards as she drove faster.
3. The driver leaned out of the window, shouted on the lad, sounded his _____ twice, then drove on.
4. Miguel opened the _____ _____, pulling out a plastic bag.
5. He let Lilly steer and work the _____ _____ and promised to teach her how to drive.
6. Vasili glanced over his shoulder, his foot already on the _____ and his hand moving down towards the gear lever.

3. Point out the odd word in each group.

1. brake, ignition, accelerator, clutch
2. headlight, indicator, sidelight, wing
3. bumper, fender, wiper, driver, winder
4. accelerate, steer, brake, ignite, battery

4. Read and translate the text:

Text. Finding a Fault in a Car

If your car doesn't start, you should check three things first: the battery, the fuel level and the spark plugs. It is easy to repair these faults. If the battery is flat, you should recharge it. If this doesn't work, you should replace it. If the petrol tank is empty, fill it up. If the spark plugs are dirty, clean them, and if the gap in a spark plug is too narrow or too wide, adjust it to the correct width. If your car still doesn't start, the petrol pump may be broken or the fuel pipe may be blocked. If there is a loud CLICK when you turn the key, the starter motor may be jammed. If it is you can try to release it by pushing the car forwards and backwards. If the car still doesn't start, the starter motor should be repaired or replaced.

5. Match the words from the columns and make sentences according to the model.

Model: the petrol pump / broken / to repair. - The petrol pump is broken. You should repair it.

- | | | |
|----------------------|------------------------|----------------|
| 1. the battery | A. empty | a. to replace |
| 2. the petrol tank | B. jammed | b. to adjust |
| 3. the spark plugs | C. too narrow/too wide | c. to recharge |
| 4. the gap | D. ✓ broken | d. ✓ to repair |
| 5. the starter motor | E. dirty | e. to clean |
| 6. ✓ the petrol pump | F. dead | f. to fill up |

6. Practice the dialogue working in pairs.

Dialogue: Tracing a Fault

Nick: Peter, I know you are a good driver. I would like you to have a look at my car.

Peter: What's wrong with your car?

N: I don't know.

P: Let me have a look. When did you have your plugs checked?

N: Three days ago. I thought I had run out of fuel but the tank is half full.

P: The carburetor is in order but the engine is misfiring. I guess the battery has run down. It needs recharging.

N: Too bad.

P: Don't get upset about it. It won't take you long to have your battery recharged.

N: Do you really think so?

P: I'm sure of it. I advise you to have the engine greased.

N: I'll follow your advice. Thank you, Peter.

P: Don't mention it, Nick. I'm very sorry I couldn't help you.

N: Well, you helped me to find the fault. Thanks a lot. Good-bye.

P: See you later.

7. Find the verbs having the prefix "mis-" in the sentences and try to guess their meaning. Mind that this verbal prefix means "badly", "wrongly", "unfavorably".

1. He has a lot of troubles with his car; one of them is that the engine is misfiring.
2. I misunderstood you in the beginning, but then you explained everything in detail and finally I got what you meant.
3. The car dealer misled us by telling that this car was very reliable.
4. The problem is that you misplaced the plugs.
5. The cause of this wear and tear is that you misused lubricants.

8. Make sentences using the given words as in the model. Match your sentences with the ones given below.

Model: My car – to repair → *I want to have my car repaired.*

- | | |
|------------------------------|------------------------------------|
| a. the wheel – to change | f. the tires – to blow |
| b. the tank – to fill | g. the frame – to test |
| c. the spark plug – to clean | h. the car – to wash |
| d. the engine – to grease | i. the steering system – to fix up |
| e. the plugs – to check | j. the battery – to recharge |

1. I have run out of gas.
2. Is there a car wash?
3. My battery is dead.
4. Where's the nearest filling station?
5. Can you send a mechanic?
6. I had an accident along the way.
7. Are there any service stations along the road?
8. The ignition doesn't work.
9. Where can I find a mechanic?
10. I have a flat tire.
11. My car ran into a tree.
12. Can you help me?

9. Find the English equivalents for the following word combinations.

1. произвести смазку двигателя
2. аккумулятор разрядился
3. найти неполадку
4. двигатель не запускается
5. быть в порядке
6. у меня закончилось топливо
7. требуется подзарядка

10. Match the synonyms.

- | | | |
|-------------------|----|--------------|
| 1. to be in order | a. | to be dead |
| 2. to run down | b. | to lubricate |
| 3. to grease | c. | to use up |
| 4. to trace | d. | to find |
| 5. to run out of | e. | to be OK |

11. Match the words having the same meaning in British and American English, translate them into Russian

British English



1. petrol
2. boot
3. puncture
4. lorry
5. luggage
6. pavement
7. bonnet
8. taxi
9. tyre
10. windscreen

American English



- a. truck
- b. a blow out / a flat tire / a leak
- c. gas / gasoline
- d. cab
- e. sidewalk
- f. baggage
- g. trunk
- h. hood
- i. windshield
- j. tire

12. Match the 6 phrasal verbs with their meanings using the sentences given below. Translate the sentences.

- | | |
|------------------|-----------------------------------------------------|
| 1. to run out of | f. to test |
| 2. to run down | g. to use up the last of something and have no more |
| 3. to try out | h. to fill one's tank with gasoline |
| 4. to slow down | i. to adjust the engine |
| 5. to gas up | j. to run out of power |
| 6. to tune up | k. to cause to reduce speed |

1. We've ran out of gas.
2. Hey, why such a long face? – My car ran down.
3. You should always try out a car before you buy it.
4. If you see a policeman, you'd better slow down.
5. When the gas level is falling off, drive up to a station, and gas up.
6. It took much time to tune the engine up.

Chapter 3. Agricultural Machines

Read and translate the text:

Text 8. The Agricultural Tractor



The importance of agricultural tractors today is great. They provide a source of power which replaces the power of man for many heavy tasks carried out on the land. A tractor can do the work without a rest. Provided attention is given to its lubrication and it is supplied with fuels it will work indefinitely. Today's agricultural tractor is a complex vehicle used to propel and power a large variety of implements for agricultural production. Implements are attached to and operated by tractors in one of the following ways:

1. Towed implements
2. Mounted implements
3. PTO-driven implements.

The present day tractor is a most useful machine and it finds its use in the wide variety of farm jobs such as plowing, cultivating, fertilizing and harvesting. It is required to do many other farm tasks. Traction power, belt power, power take-off drives, mounted tools and power steering all serve to extend the usefulness and efficiency of the modern tractor.

1. Answer these questions:

1. Is the importance of agricultural tractors great?
2. What is the tractor?
3. What does the tractor provide?
4. How are implements attached to it?
5. Where does the tractor find its use?
6. What serves to extend the usefulness and efficiency of the modern tractor?

2. Define the part of speech of the words in italics:

1. There is a huge *demand* for new cars.
2. The police officer made Neil get out of the car and *demanded* to see his driver's licence.
3. Don't forget to water the *plants*.
4. Before you *plant* the seeds, prepare the soil carefully.
5. The main *harvest* will be in July and August.
6. The group scatters to *harvest* apples.
7. The nation's fuel *supplies* will not last forever.
8. This firm *supplies* us with spare parts.
9. The average Westerner *uses* over 260 lbs of paper every year.
10. There has been a decline in the *use* of the subway system over recent years.
11. The introduction of the *plough* made possible much greater density of population, concentrated in villages.
12. We first *plough* the land, then sow the seed, spray the crop, and take the harvest.

3. Match the nouns with their definitions:

- | | |
|----------------|---------------------------------------------------------------------------------------|
| 1. tractor | a. a piece of farm equipment used to turn over the earth so that seeds can be planted |
| 2. drive | b. the power from an engine that makes the wheels of a vehicle go round |
| 3. variety | c. energy that can be used to make a machine work or to make electricity |
| 4. implement | d. the parts of a car, boat etc that allow you to control its direction |
| 5. lubrication | e. putting a lubricant on something in order to make it move more smoothly |
| 6. plough | f. a tool, especially one used for outdoor physical work |
| 7. power | g. a piece of equipment which is part of a larger machine |
| 8. steering | h. the part of a bus, train, or truck in which the driver sits |

9. unit i. a machine with an engine that is used to take people or things from one place to another, such as a car, bus, or truck
10. vehicle j. a lot of things of the same type that are different from each other in some way
11. cab k. a strong vehicle with large wheels, used for pulling farm machinery

4. Fill in the blanks using the following words:

cultivating, fuel, implements, vehicle, power.

1. Tractors provide a source of _____ for many heavy tasks carried out on the land.
2. If the tractor is properly lubricated and supplied with _____ it will work indefinitely.
3. There are many farm jobs carried out by tractors, they are plowing, _____, fertilizing and harvesting.
4. Modern agricultural tractor is a complex _____.
5. _____ are attached to tractors in different ways.

5. Match the verbs with their meanings:

- | | |
|-----------------|-----------------------------------------------------------------------------------------------------|
| 1. to attach | a. to give something to someone or make it available to them, because they need it or want it |
| 2. to tow | b. to start doing something instead of another person, or start being used instead of another thing |
| 3. to replace | c. to do work |
| 4. to cultivate | d. to fasten or connect one object to another, to fix |
| 5. to carry out | e. to gather crops from the fields |
| 6. to fertilize | f. to turn over the earth using a plough so that seeds can be planted |
| 7. to provide | g. to pull a vehicle along behind another vehicle, using a rope or chain |
| 8. to harvest | h. to prepare and use land for growing crops and plants |
| 9. to plough | i. to put fertilizer on the soil to make plants grow |

6. Complete the sentences using the proper forms of these verbs:

to carry out, to cultivate, to attach, to plough, to replace, to provide.

1. Two of the tyres had to be _____.
2. You should not allow unqualified people to _____ work on your farm.
3. Today we are entering a "post-industrial" or "information era," where computer power is _____ machine power.
4. The money will be used to _____ the school with new computer equipment.
5. It took a couple of minutes to _____ the trailer to the back of the truck.
6. The fields are _____ as soon as the winter crop is removed.
7. The land was too rocky to _____.

Text 9. Tractor Types

There are two types of tractors. They are classified into wheel and track-type tractors. According to utility tractors are classified as general-purpose, all-purpose or row-crop types.

Wheel tractors. The wheel-type tractor is the predominating type of machine for agricultural purposes. Wheel tractors are made with three or four wheels. There are heavy wheel tractors which are capable of pulling five or six furrow ploughs and doing heavy cultivations.

Track-type tractor. These tractors are usually tractors with a large horse-power. They are used for pulling a five or six furrow plough or for heavy cultivation.

General-purpose tractors. This type is made to perform only the usual tractor jobs such as ploughing, harrowing, combining, threshing.

All-purpose tractors. An all-purpose or row-crop type is a tractor designed to perform practically all the field and belt jobs including the planting and intertillage of row crops.

Do you know these words:

| | | |
|---------------|-------------------|---------------------------------------|
| according to | [ə'kɒdɪŋ] | <i>согласно, в соответствии с</i> |
| predominating | [prɪ'dɒmɪneɪtɪŋ] | <i>преобладающий</i> |
| purpose | [ˈpʊr:pəs] | <i>назначение, цель</i> |
| capable | [ˈkeɪpəbl] | <i>способный</i> |
| to pull | [pul] | <i>тащить, тянуть</i> |
| furrow | [ˈfʌrəu] | <i>борозда</i> |
| plough | [plau] | <i>плуг</i> |
| to plough | | <i>пахать</i> |
| cultivation | [ˌkʌltɪ'veɪʃ(ə)n] | <i>обработка, культивация</i> |
| to harrow | [ˈhærəu] | <i>боронить</i> |
| to combine | [kəm'baɪn] | <i>убирать комбайном</i> |
| to thresh | [θreʃ] | <i>молотить, обмолачивать</i> |
| row-crop | [rəu kɒp] | <i>пропашная культура</i> |
| belt job | [belt dʒɒb] | <i>тяговые работы</i> |
| to plant | [pla:nt] | <i>сажать</i> |
| intertillage | [ˌɪntə'tɪlɪdʒ] | <i>пропашка, обработка междурядий</i> |

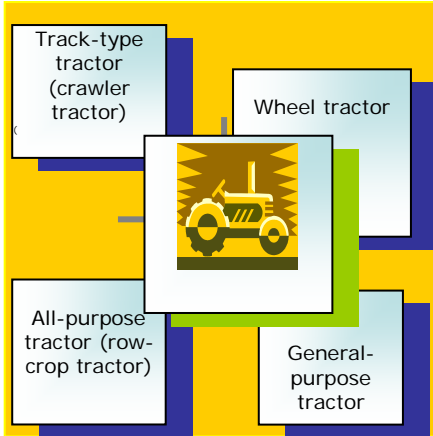
1. Answer these questions:

1. How are tractors classified?
2. What is the wheel-type tractor?
3. What are track-type tractors referred to?
4. What are they used for?
5. What are general-purpose tractors made to perform?
6. What jobs do all-purpose tractors perform?

2. Find the infinitives of the following verbs:

Carried out, gave, powered, did, lubricated, met, planted, was, made, harrowed, used.

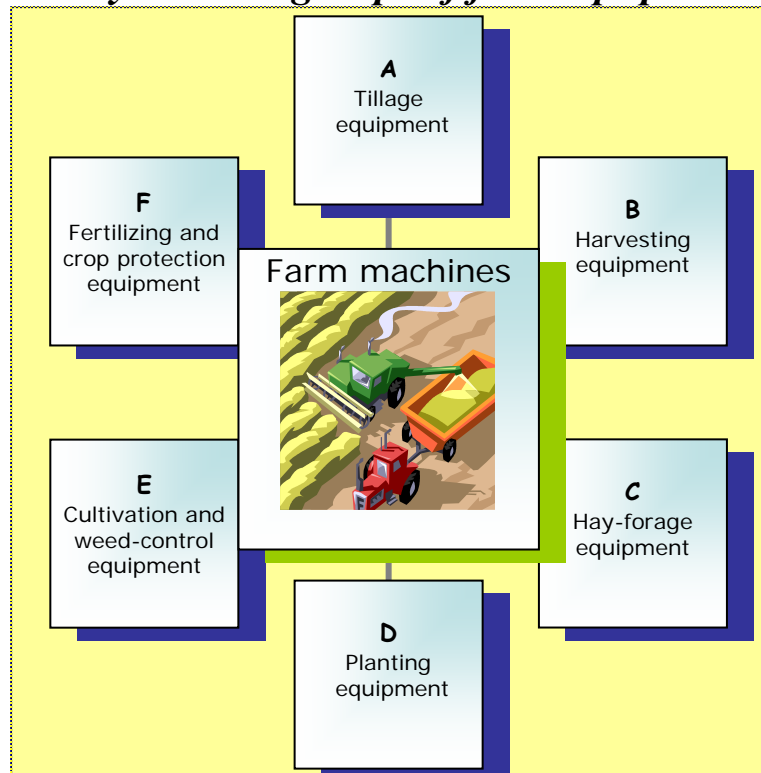
3. Match the sentences with the tractor types:



1. It is the most common type of tractor.
2. It can perform usual tractor jobs such as plowing, harrowing, etc.
3. It can carry out a wider range of field and belt jobs.
4. This tractor is very powerful, it can be used for heavy cultivations.
5. This type has a continuous metal band that goes over its wheels allowing it to move over uneven ground.

4. Match the names of machinery with the groups of farm equipment:

1. potato harvester
2. sprayer
3. manure sprayer
4. forage harvester
5. cultivator
6. drill seeder
7. baler
8. disk plough
9. grain combine
10. harrow
11. mower
12. rakes
13. moldboard plough



Keys

Key (ex.2 p.6)

One, two – What's the plural?

One point for each correct word. A bonus point for every correctly spelled answer.

A: 1) teeth, 2) lives, 3) women, 4) loaves

B: 1) pianos, 2) sheep, 3) boxes, 4) parties

C: 1) men, 2) boys, 3) deer, 4) information

D: 1) watches, 2) children, 3) leaves, 4) feet

E: 1) geese, 2) halves, 3) series, 4) calves

F: 1) wives, 2) roofs, 3) classes, 4) churches

G: 1) news, 2) lorries, 3) knives, 4) shelves

H: 1) glasses, 2) mice, 3) salmon, 4) tattoos

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