

МИНИСТЕРСТВО ОБРАЗОВАНИЯ И НАУКИ РЕСПУБЛИКИ
БАШКОРТОСТАН
ГОСУДАРСТВЕННОЕ БЮДЖЕТНОЕ ПРОФЕССИОНАЛЬНОЕ
ОБРАЗОВАТЕЛЬНОЕ УЧРЕЖДЕНИЕ
УФИМСКИЙ АВТОТРАНСПОРТНЫЙ КОЛЛЕДЖ

МЕТОДИЧЕСКАЯ РАЗРАБОТКА УРОКА
«Engine is one of the main components of the automobile»
ОБЩЕОБРАЗОВАТЕЛЬНОЙ УЧЕБНОЙ ДИСЦИПЛИНЫ
ОГСЭ.03 Иностранный ЯЗЫК

для специальности среднего профессионального образования

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Ход урока

I.Организационный момент:

1.1.Приветствие, подведение обучающихся к теме.

Преподаватель приветствует обучающихся.

T: Good afternoon, my dear students! Sit down, please. I'm very glad to see you.

T: Who is on duty today? Who is absent today? What date is it today? What day of the week is it today? (ответы студентов)

Let's open your copybooks and write the date. I'll write it on the blackboard.
Today is the....

T: Look at these pictures and try to guess the topic of our lesson. What is it? What is the heart of the car? What is a source of power? (ответы студентов)

Yes, you are right. The Topic of our lesson is «Engine is one of the main components of the automobile».

1.2. Постановка цели и задач перед аудиторией.

T: At our lesson we're going to remember professional terms connected to the topic «Engine», to discuss a principle of operation of the four-stroke petrol engine, to know some information about the diesel engine.

The aim of our lesson: to learn some facts about two types of engines which are commonly used at present.

II Повторение изученной темы.

2.1 Речевая разминка.

T: You know that the main part of engine is cylinder. The cylinder consists of some parts.

1. Let's listen, read and repeat after me some words connected to the topic. They can be useful for you at the lesson.(работа над словами на аудиовизуальной основе).

Glossary

Engine

<i>English</i>	<i>Russian</i>
Admission	Впуск
Bore	Диаметр
Camshaft	Распределительный вал
Chamber	Камера сгорания
Charge	Заряд
Cheap	Дешевый
Combustion	Сгорание
Compression	Сжатие
Connecting rod	Шатун
Crankshaft	Коленчатый вал
Cylinder	Цилиндр
Displacement	Объем
Engine	Двигатель
Exhaust	Выпуск
Exhaust pipe	Выпускной коллектор
Exhaust valve (manifold)	Выпускной клапан
Expansion	Расширение
Expulsion	Выброс
Fuel	Топливо
Head of the cylinder	Головка цилиндра
Ignition	Зажигание
Inlet pipe (manifold)	Впускной коллектор
Inlet valve	Впускной клапан
Liquid	Жидкий
Nozzle	Форсунка
Piston	Поршень
Placement	Расположение
Power stroke	Рабочий ход
Revolution	Оборот
Sparking plug	Свеча зажигания
Stroke of the piston	Ход поршня
To invent	Изобретать
To perform	Выполнять
To propel	Вращать
Torque	Крутящий момент
Water jacket	Рубашка охлаждения

2.2. Повторение изученного лексического материала на аудиовизуальной основе. Викторина.

Quiz «CYLINDER'S PARTS»

T: You should answer the questions, guess parts of cylinder. Read, guess and write them.

Например: It connects the piston to the crank on the crankshaft. What is it?

Let's check up. Look at this picture, read the name of the cylinder's part and translate it.

III. Основной этап. Изучение нового материала.

3.1. Первичное восприятие и усвоение нового учебного материала.

T: At present the internal combustion engine plays an important role in everyday life of a transport system and in many fields of economy. In our occasion we are interested in the vehicle engine. The engine is the heart of the car. The engine is a source of power. As you know the two most common types of engines for cars are the petrol engine and diesel engine.

Your groupmate has done a presentation about engine, the history of engine.

1. Presentation «Engine».

T: Thank you, for your presentation. Well done.

T: There are two main types of petrol engine- 4- stroke and 2- stroke. All cars use 4- stroke engines. Find the text «Four - Stroke Engine».

3.2. Речевая зарядка. Активизация лексики по теме (совершенствование произносительных навыков)

T: Find the highlighted words in the text which can be useful for you while reading the text. Listen and repeat after me and translate them.

3.3. Practice in reading.

T: Now read the text and discuss.

Four-stroke engine

A **four-stroke engine** is a common engine that cycles through four stages. The process works by heating a mixture of fuel and air in a cylinder.

In the first stage, or **intake stroke**, fuel and air enter the cylinder through the **intake valve**. The piston inside the cylinder moves down to make room for the mixture.

Then the valve is closed and the piston moves up again. This is the next stage, or **compression stroke**. The upward-moving piston compresses the fuel and

air. The **head gasket** and valves on the **cylinder head** contain the combustion **pressure** during stage.

The cycle then enters the **power stroke**. In this stage, heat or a spark **ignites** the mixture. The result is a massive force that pushes the piston down again. This force is what powers the engine.

When the fuel is spent, the **exhaust valve** opens to release the remaining gases. This is called the **exhaust stroke**.

Вопросы для проверки

1. What is the name of the first stroke?
2. In which stroke does the piston compress gases?
3. In which stroke does heat ignite the mixture?
4. What does the piston push out in the last stroke?

T: Who has a car? Does your car have a petrol or a diesel engine? (ответы студентов)

T: Your groupmate has done a presentation about «**Diesel engine**». Please, tell us about diesel engine.

S: Presentation «Diesel engine». Have you any questions? Discussing.

T: Thank you. Well done. Your presentation is very interesting and useful.

IV. Закрепление изученного материала.

4.1 Совершенствование лексики по теме.

T: Open your copybooks, do exercises №2 and №3. It will be your team work.
(1вариант - 1team, 2вариант – 2 team)

Exercise 2. Fill in the blanks with the correct words from the word bank.

Compression, exhaust, ignites, intake, cylinder, releases.

The four-stroke engine works by heating fuel and air in a **1** _____.
During the first stroke, the **2** _____ valve lets fuel and air into the cylinder. Then the valve closes during the **3** _____ stroke. A piston moves up to compress the air and fuel. Then the mixture **4** _____ during the power stroke. The final stroke **5** _____ gas. This is the **6** _____ stroke.

T: Look at the screen and check the answers. (Ответы на экране. Студенты проверяют ответы)

Exercise 3. Read the sentence pair. Choose where the words best fit the blanks.

1. Intake valve / intake stroke

A The engine failed because too much air entered the cylinder during the _____.

B The _____ was loose so the mechanic replaced it.

2. Head gasket / four-stroke engine

A The _____ is the most common type of car engine.

B The damaged _____ caused a fuel leak in the cylinder.

3. Power stroke / cylinder head

A The car did not start because the spark failed during the _____.

B Alison added coolant to the _____ to reduce excess heat during ignition.

T: Look at the screen and check the answers. (Студенты проверяют ответы и оценивают)

V. Заключительный этап .

5.1. Домашнее задание.

T: Read the text and fill in the table.

Engines

The two most common types of engines for cars are the petrol engine and diesel engine.

Petrol engines are usually lighter and smaller than diesel engines. This makes them cheaper, and this is why most cars use petrol engines. Petrol engines are also less noisy than diesel engines. They usually go faster. On the other hand, diesel engines use less fuel than petrol engines, and this is why trucks use them. They are also safer than petrol engines, because there is less danger of fire.

There are two main types of petrol engine – 4-stroke and 2-stroke. All cars use 4-stroke engines. But most motorbikes use 2-stroke engines. They are lighter and smaller than 4-stroke engines, and are therefore cheaper.

Internal Combustion Engines

The first internal combustion engine light enough in weight was the gasoline engine, invented by a German named Otto.

At the same time Dr. Rudolph Diesel was working on the diesel engine. The Diesel engine is similar to the gasoline engine in many ways. There are many variations in engine arrangements, but the basic parts of most 4-stroke cycle engines are similar.

In the in-line arrangement the cylinders are lined up in a single row. The V-type engine is called so as the cylinders form 2 rows or "banks", set at an angle to each other to form the letter V.

The diesel engine gets its power from the expansion of burning gases. The diesel engine depends on the heat of compression for ignition of the fuel.

Liquid fuel that contains more heat energy than gasoline is diesel oil.

Diesel oil is slower burning, but it produces more power. Diesel engines also must be heavier than gasoline engines, but they are more efficient when working under heavy loads at low speeds.

The advantages of the diesel over the gasoline engine are as follows:

- a).more economic operation;
- b).higher compression ratio;
- c).reduced maintenance costs;
- d).good pulling power.

characteristic	Petrol engine	Diesel engine
weight		
size		
cost		
speed		
noise		
fuel consumption		
safety		

T. The lesson is over. Good bye.