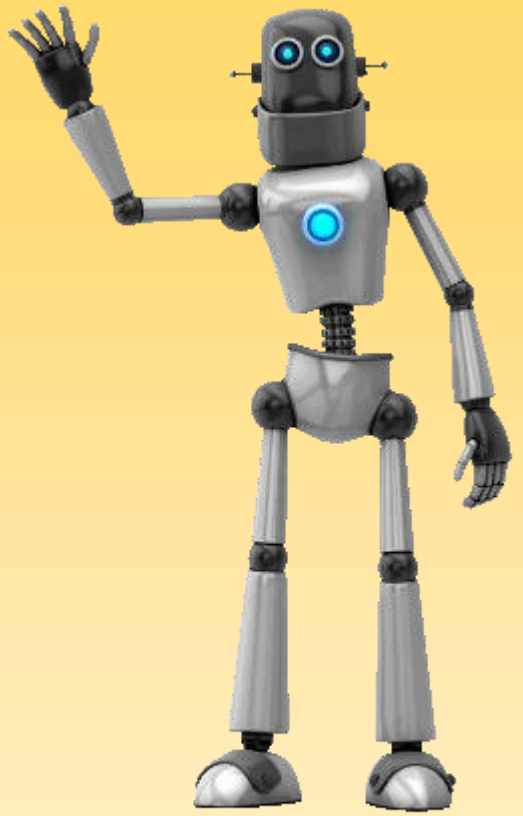
ГАПОУ СО «Самарский государственный колледж»

Методическая разработка урока



Методическая разработка открытого урока
ОУП.04 Иностранный язык

Тема: «Известные ученые и их открытия за рубежом 21 века»

44.02.02 Преподавание в начальных классах
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Introduction

Studying the scientific research and discoveries made by our ancestors allows us to better understand our history, the paths of human development as a whole, and to assess our capabilities in the present and scientific potential for the future.

Изучение научных исследований и открытий, сделанных нашими предками, и их последователями ,позволяет нам лучше понять нашу историю, а также оценить наши возможности в настоящем и научный потенциал на будущее.

- A steel knee joint was invented,

but the prosthesis itself was made of wood.

- The hinged artificial leg was called the Anglesey.

Its inventor was James Potts.

In 1843, an amputation method was introduced that preserved the leg as much as possible, allowing patients to wear

a prosthesis of just their feet rather than the

entire limb.

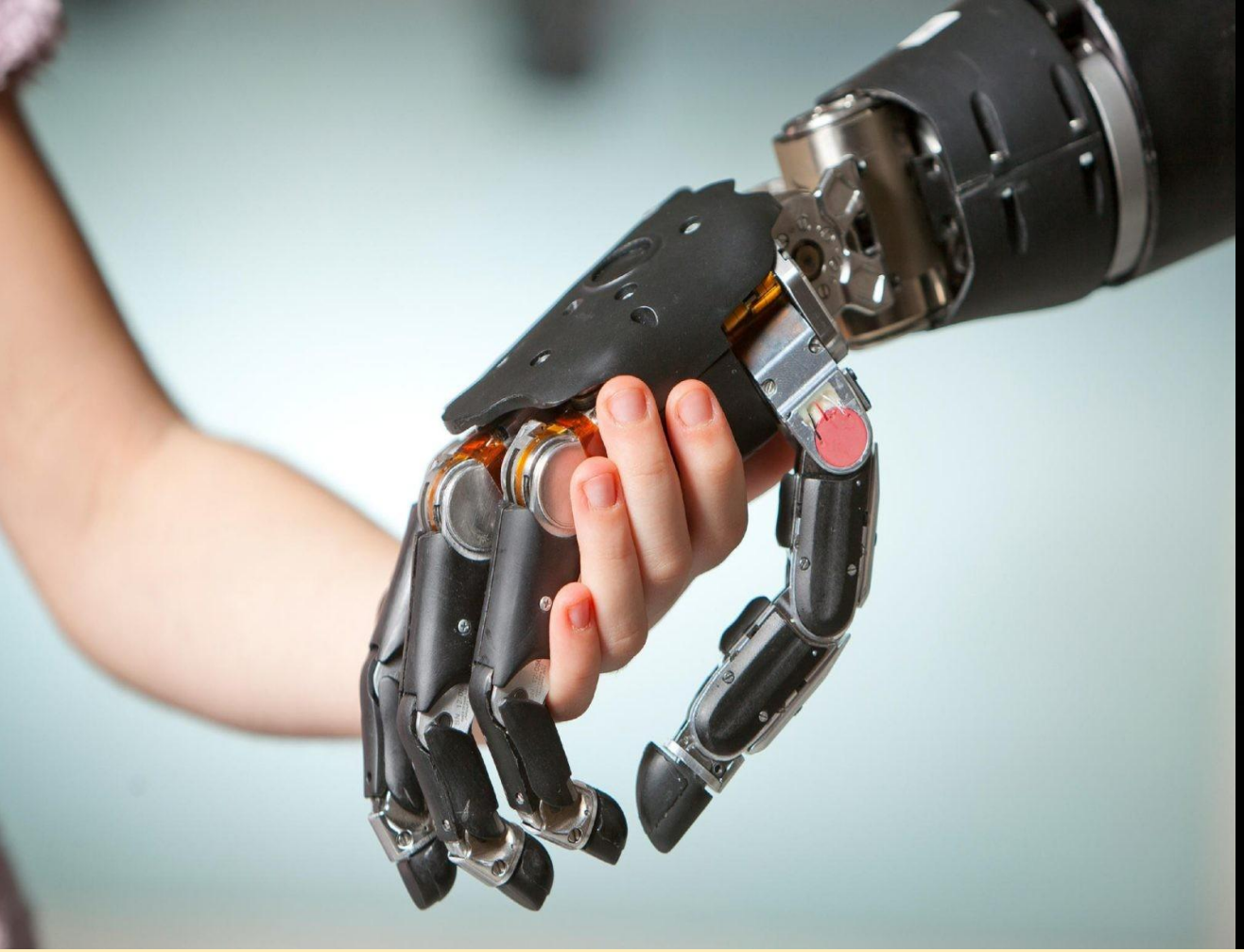
- In 1846, the Anglesey leg,

known in the United States as the "Selfie leg,

became more functional, as it incorporated

a spring in the front, allowing for more

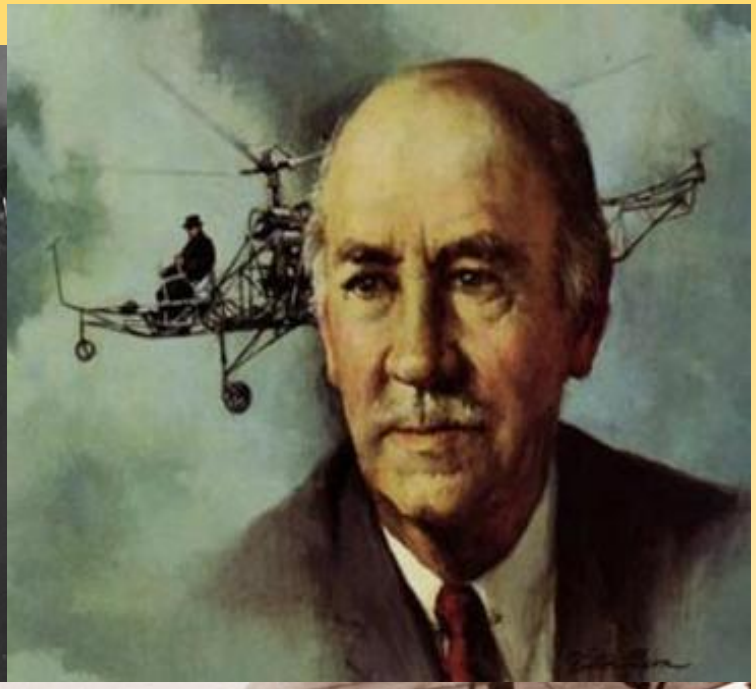
natural movement.



- Artificial organs and prosthetics
- The first operation to replace a biological heart with an artificial one was successfully performed in 2001 Internal organs had been replaced before, but with the turn of the millennium, complex implantation became a reality. Electronics are shrinking but accommodating more functions, nanotechnology is developing, and systems and their individual components communicate via the internet.

Igor Ivanovich Sikorskiy (1890 – 1972)

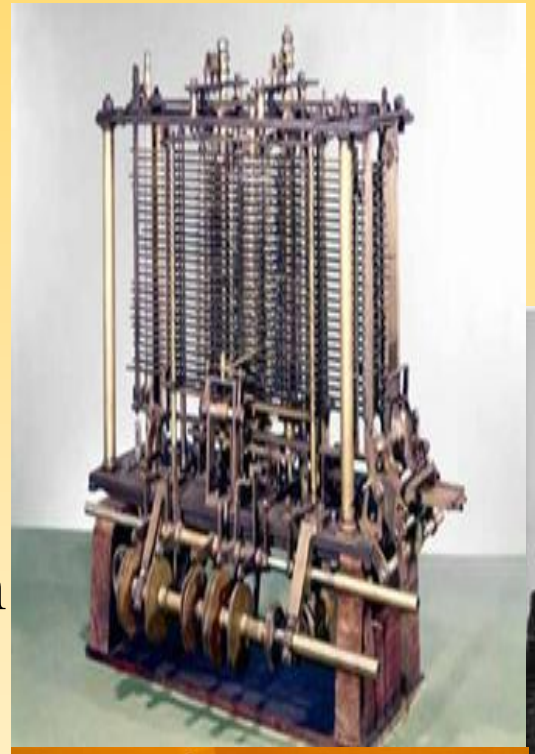
- He built his first planes in 1910, when he was a student at the Kiev Polytechnical Institute.
- In spring, 1913, the first 4 – engines plane – giant “Russian Vityaz” appeared/ Then came “Ilya Murometz”.
- In 1918, he went to the USA. In 1923 he and his friends organized a company producing planes.
- In 1938, Sikorskiy began building helicopters.
- In December 1941, the first working helicopter “XR -4” appeared.

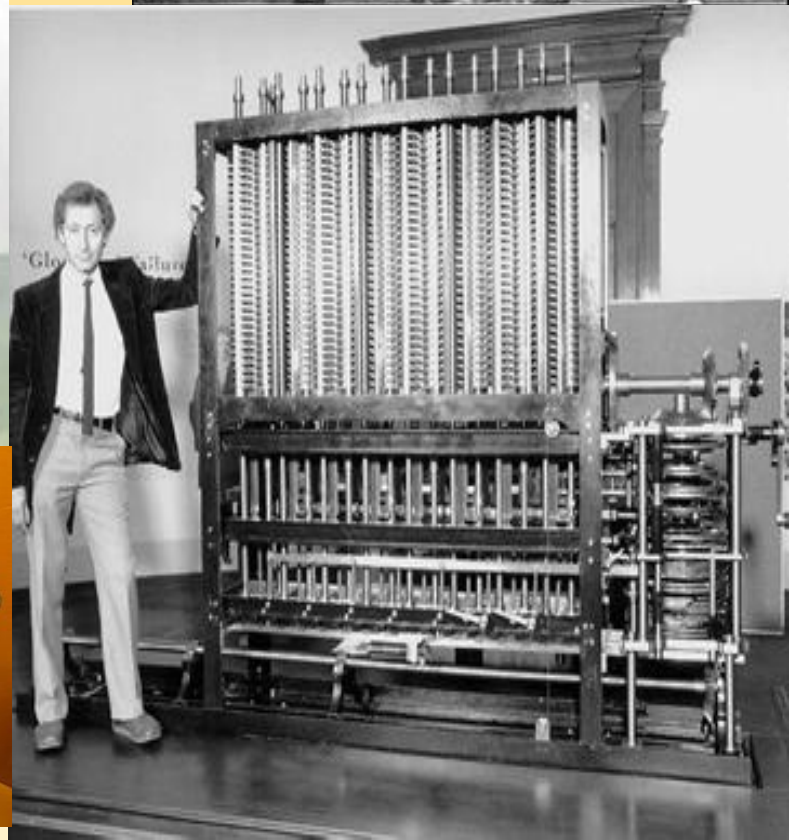


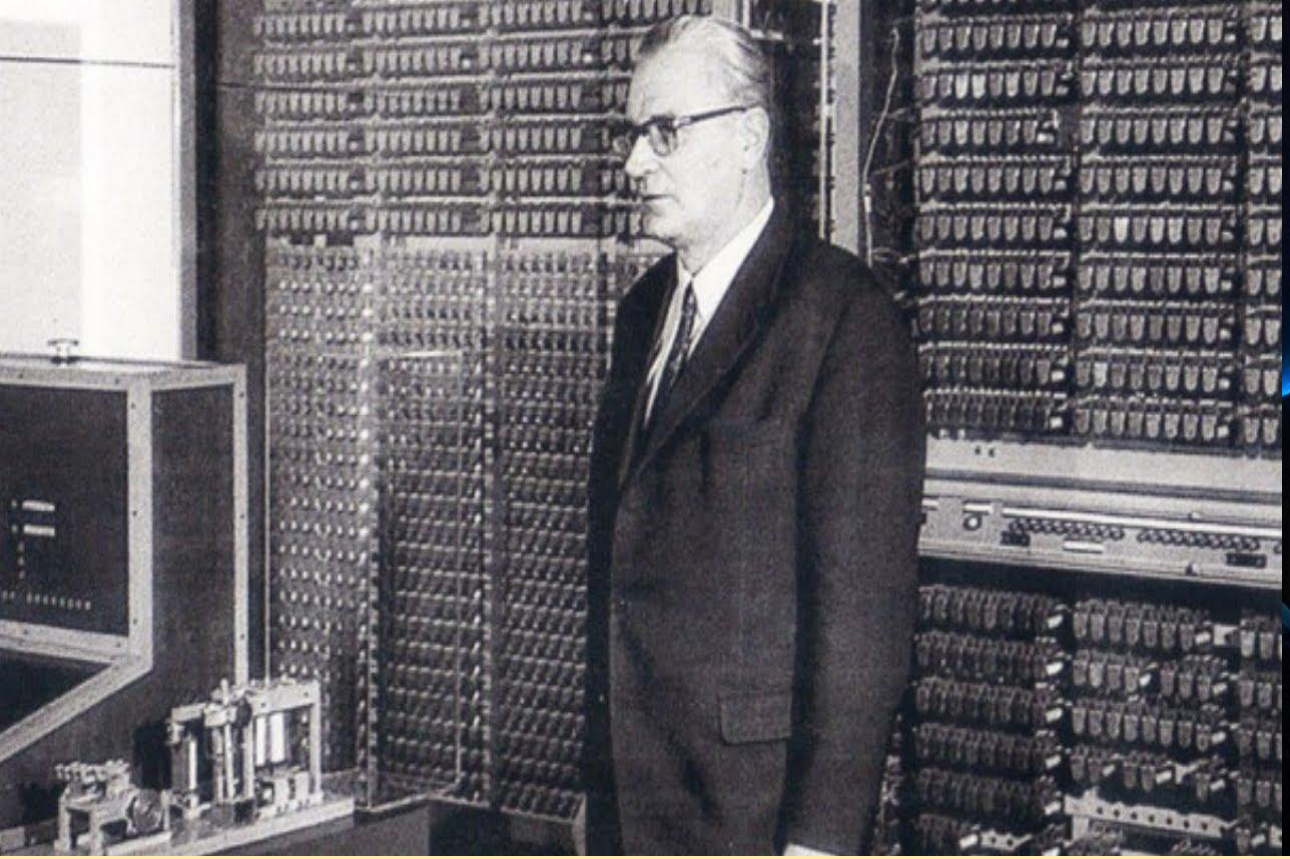
Electric Cars and Driverless CarsMost of the Earth's environmental and political problems are caused by competition for resources and their rational use. Electric vehicles are a way away from oil and gas dependence and a transition to renewable energy.Driverless cars are only the most discussed product of the development of robotics and machine intelligence. The technologies they rely on are used in industrial, household, and social robotics. Driverless trains, airplanes, aerial and underwater vehicles, industrial robots (assembly and warehouse), home appliances, and more are currently being produced. The most famous electric vehicles are being created by The Boring Company, owned by Elon Musk. His Tesla cars are already available in Russia.

Charles Babbage.

The early history of the computer can be traced to Charles Babbage (1837), an English inventor who designed an "analytical machine" that theoretically could do some of the things a modern computer does. However, it was never built. Had it been, it would have covered an area equal to a football field and required the power of five steam engines.

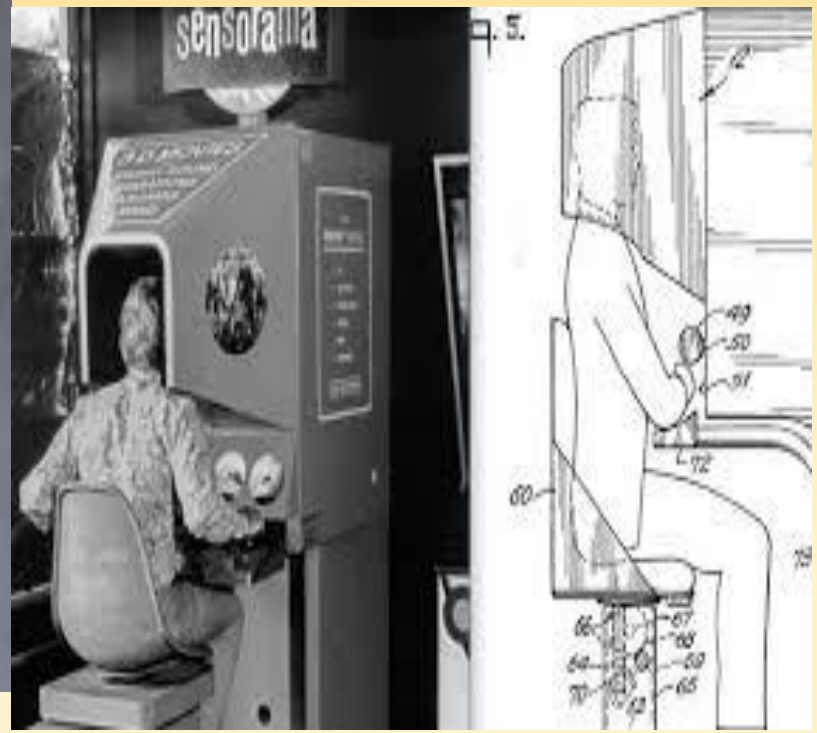






- Computer
- In our country, a computing system appeared in 1948. The device was designed under the supervision of Sergei Lebedev, Doctor of Engineering Sciences.
- The first Small Electronic Calculating Machine (MESM) in the USSR and continental Europe occupied an area of approximately 60 square meters. When running, it generated excessive heat due to the large number of cables and lamps. To allow fresh air to cool the components, engineers even had to remove part of the roof. Modern computers have become much more compact and capacious, making them suitable for continuous use in various areas of life.

- The origins of virtual reality (VR) lie in the 19th century with the invention of the stereoscope (1838), which used two images to create the illusion of 3D. Further developments were associated with Morton Heilig's Sensorama (1957), a multisensory simulator that simulated smells, sounds, and tactile sensations. In 1968, Ivan Sutherland created the Sword of Damocles, the first head-mounted display that tracked the user's head movements. The term "virtual reality" was popularized in 1987 by Jaron Lanier, whose company developed the first commercial VR devices, such as gloves and glasses.



- *Virtual and Augmented RealityTransferring the tangible world to an artificially created one using VR technology isn't just about entertainment and engaging experiences. Virtual reality today helps simulate processes that can't be reproduced in reality. It's also used for training—pilots, engineers, astronauts, and operators of complex equipment first practice in virtual environments.Augmented reality also solves other important problems. It's used to create specialized equipment, such as glasses for working in difficult conditions. Furthermore, it opens up broad prospects for vision treatment and ocular prosthetics.*

- Artificial Intelligence and Neural NetworksArtificial intelligence is a technology that does not develop independently of the technologies listed above. It complements and supplements them, becoming one of the connecting elements of modern technological evolution.This reduces unpredictable events and increases the potential for successful solutions. Neural networks, one of the most significant innovations of the 21st century, are models inspired by the human brain and have fundamentally changed our approach to solving a wide variety of problems. These learning algorithms, capable of learning from large volumes of data, have transformed numerous sectors—from medicine to the arts—and have become the foundation for technologies such as artificial intelligence (AI).

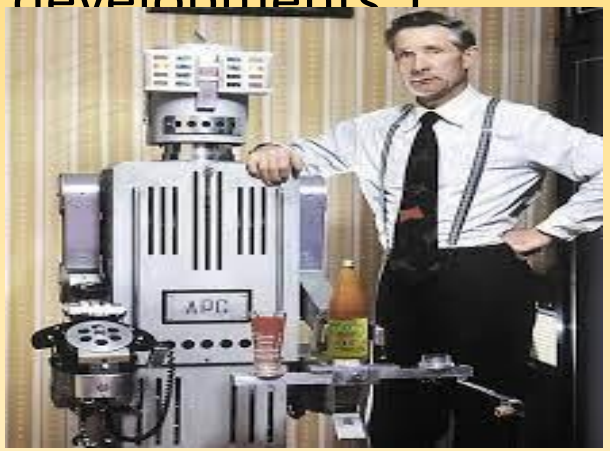
A. Turing proposed that any kind of computation could be represented digitally, and in 1951, the first neural network, SNARC, was created by graduate student Marvin Minsky. By 1950, A. Turing had developed a test to determine the degree of similarity between a machine's actions and human consciousness, later called the Turing test. The term "artificial intelligence' was first used at the Dartmouth Conference in 1956, giving birth to the scientific discipline of "Artificial Intelligence Research."

1952: Audrey (Bell Labs): The first system capable of recognizing spoken numbers from 0 to 9. Its accuracy was low and it only worked with a single speaker.

1962: Shoebox (IBM): Introduced at the World's Fair,

this system could recognize 16 words and perform simple mathematical calculations.

The device was cumbersome, but it laid the foundation for further developments.1



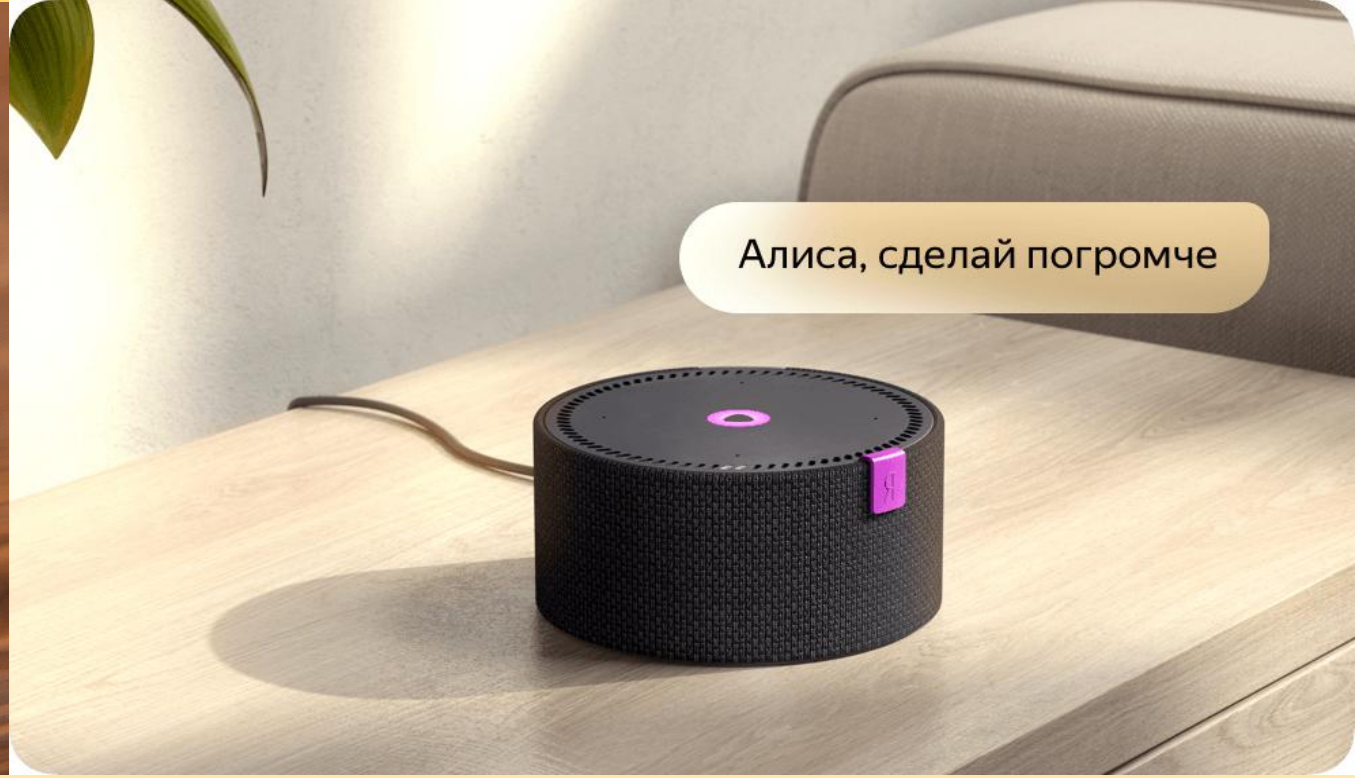
970s: Harpy (Carnegie Mellon University):

The first system capable of recognizing entire phrases.

Its vocabulary reached 1011 words.

1990s: Developments in Speech RecognitionIn 1993,

Apple released the Macintosh with PlainTalk speech recognition technology.



- *Voice assistants.The first voice synthesizers were quite crude, but they still amazed us with the idea that "a computer could talk." Later, computers learned not only to speak well but also to listen, comprehending human speech in various. These speakers can also control smart devices. Just imagine what someone in the late 20th century would have thought if they saw a chandelier turn on automatically with the voice command, "Alice, turn on the light." This innovation has become known as the "Smart Home." Using special apps and voice assistants, you can control any appliance in your home. Turn lights on and off, use a vacuum cleaner and washing machine, and monitor video surveillance in the house and throughout its entire territory.*

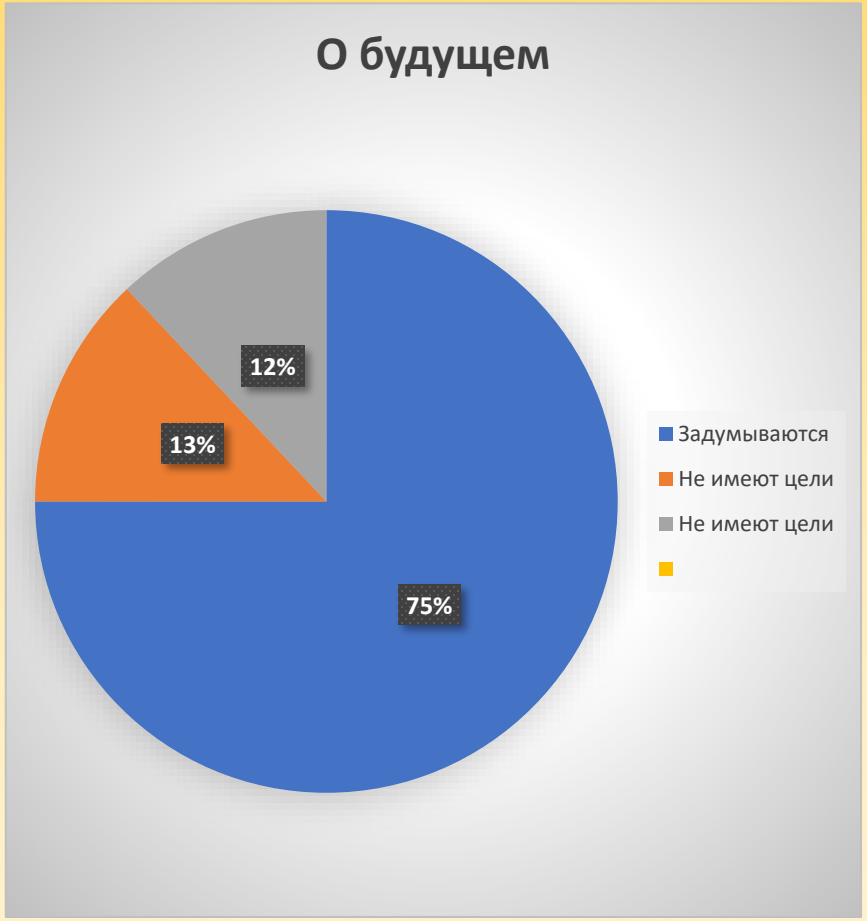
• Alexander Graham Bell (1847 – 1922)

- His father was a world – famous teacher of speech for deaf and the inventor of “ Visible Speech”. Graham worked at improving it.
- In 1876 he invented the telephone.
- In 1915, the first transcontinental telephone was opened

- Mobile Phones and Cellular Communications.I'd like to elaborate on this point, as mobile phones are an integral part of modern society. Technological progress in Russia was quite significant in the early 20th century. Since ancient times, people located at a distance from one another needed to communicate or transmit messages. A wide variety of methods have existed for this purpose throughout history. For a long time, messengers, homing pigeons, and specially trained heralds were used. In 1837, American inventor Samuel Morse invented a transmitting device—the electric telegraph—and developed a code system—the telegraph alphabet, later known as Morse code. This discovery solved many problems and paved the way for modern smartphones, which are available to everyone today.

Опросы

1. О будущем



Обработанные данные свидетельствуют о том, что большая часть опрошенных (75%) задумываются о своем будущем и имеют главную цель в жизни. Это свидетельствует о том, что они целенаправленно осуществляют реализацию своих планов. 13% опрошенных ответили, что пока не имеют цели в жизни, а 12% ещё не задумывались над этим вопросом.

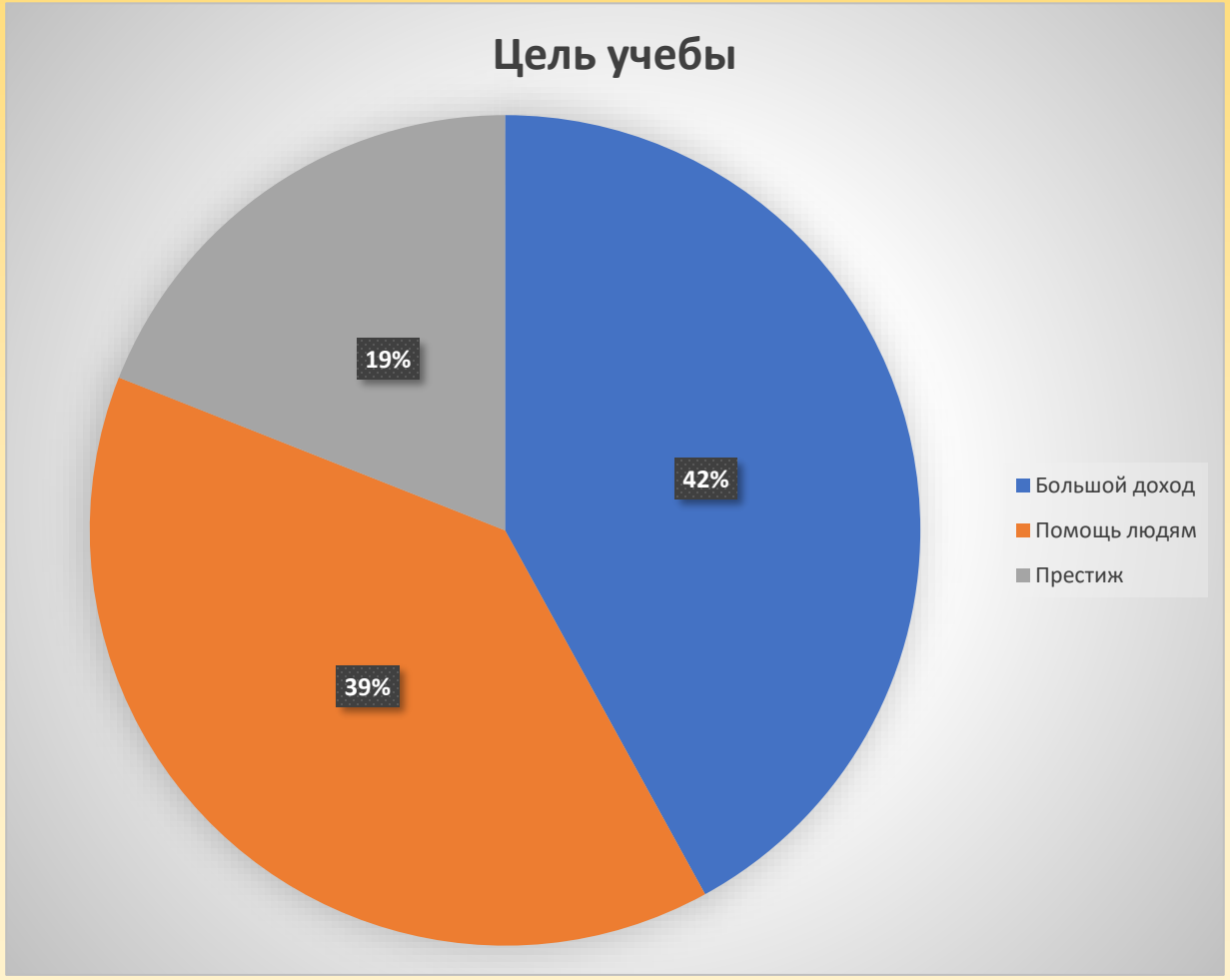
2. Свободное время

- В данном вопросе меня удивило, что 28% опрошенных в свободное время предпочитают сидеть в телефоне. Радует, что наша молодёжь всё-таки ценит и читает книги (18%), также радует, что ученики посещают театры, выставки и музеи, так ответили 15%. 14% опрошенных, предпочитают играть в компьютерные игры. Самыми непопулярными ответами оказались: ходить по магазинам и спать.

3.Отношение к учебе

- 42% опрошенных считают, что учеба позволяет приобрести профессию, большое количество (22%) получают образование для того чтобы утвердится среди близких, ответы «*стать образованным*» и «*подготовится к самостоятельной жизни*» набрали практически одинаковое количество голосов. Лишь 7% учатся ради того, чтобы стать богатым.

4.Цель учебы



- Почти половина ребят (42%) считают, что будущая работа должна приносить много денег. Радует, что почти такое же количество (39%), считают, что человек своей деятельностью должен приносить помощь людям и только 19% решили, что профессия должна быть престижной.

Выводы и рекомендации.

Проанализировав полученные данные, мы пришли к следующим выводам:

- Большая часть учащихся имеет цель в жизни;
- Наибольшую ценность представляют здоровье и семья;
- Деньги не являются приоритетной ценностью, хотя четверть опрошенных главной жизненной ценностью считают жить в достатке. Здесь мы видим некоторое противоречие в ответах;

Таким образом, мы можем сделать вывод, что наша жизнь с приходом различных технологий кардинально меняется. Нынешнее поколение не менее образовано и целеустремленно. Есть существенная разница в том, что молодежи сегодня доступна любая информация, с детства они имеют доступ к любой сфере.

- **B. True or False?**
- 1.Read the statements and write T (True) or F (False). Correct the false statements.
- 2.The first steel knee prosthesis was made entirely of metal.
- 3.The "Anglesey leg" was invented by James Potts.
- 4.A new amputation method in 1843 allowed patients to keep more of their leg.
- 5.The "Selfie leg" was a prosthesis popular in the United States.
- 6.The first successful artificial heart operation happened in the 1990s.

- **A. Complete the Timeline.**
- **Fill in the blanks with the correct words from the box.**
- **Sikorsky's Aviation Timeline:**
- **_____: Built his first planes as a student at the _____ Polytechnical Institute.**
- **1913: Built the "Russian Vityaz", then the "_____".**
- **1918: Moved to the _____.**
- **1938: Began building _____.**
- **_____: The first working helicopter "XR-4" appeared.**

- A. Chronological Order.
- Put these events in the correct order (1-6).

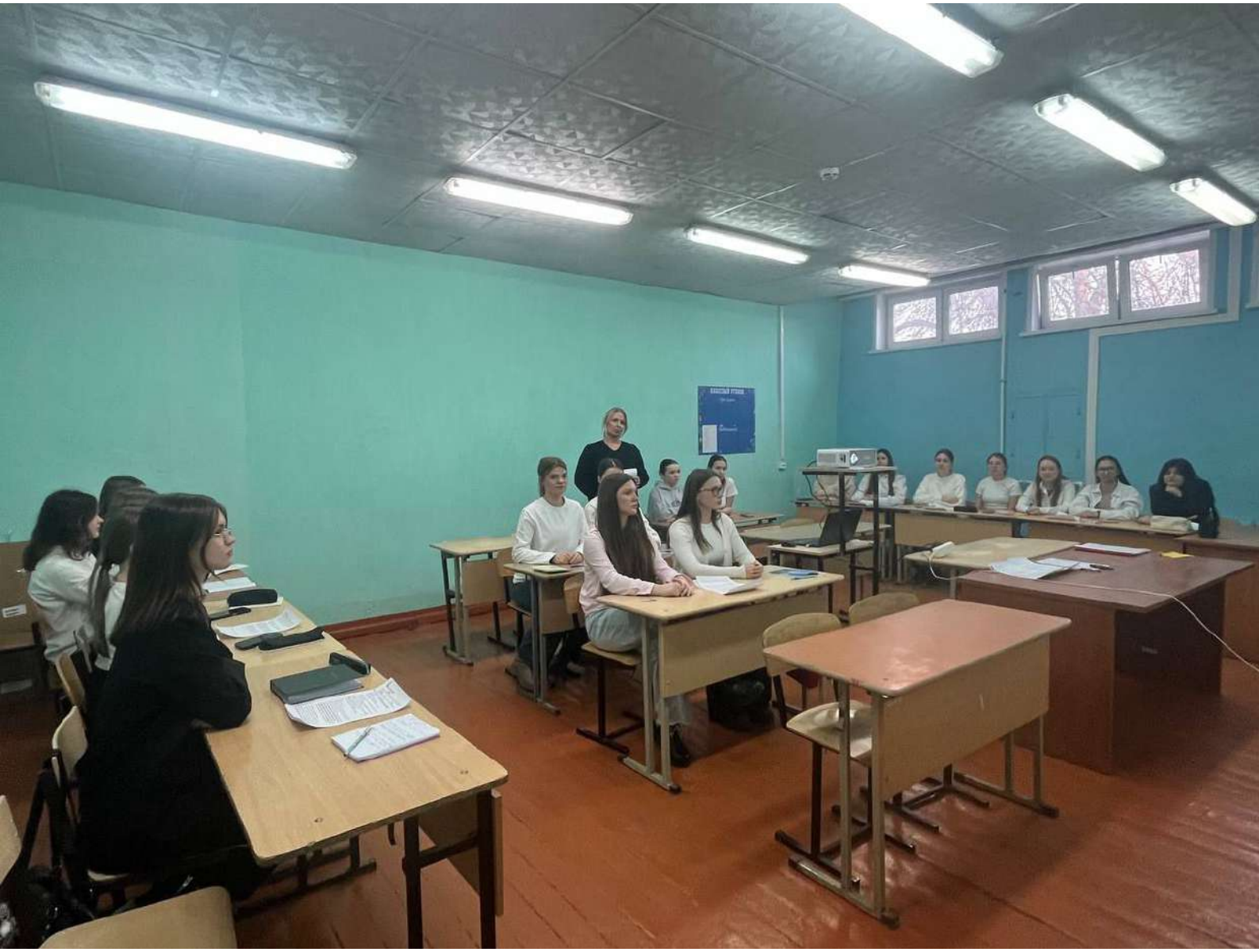
- ( ) The term "Artificial Intelligence" was first used at the Dartmouth Conference.

- ( ) Apple released Macintosh with PlainTalk speech recognition.

- ( ) A. Turing developed a test for machine intelligence.
-
- ( ) The first neural network, SNARC, was created.

- ( ) IBM's "Shoebox" could recognize 16 words.

- ( ) "Audrey" system could recognize spoken numbers.

- **B. Correct the Mistakes.**
- **Each sentence has one factual mistake. Correct it.**
- **Bell called his invention an "improved model of the radio".**
- **The first telephone message was sent to a person in another city.**
- **Samuel Morse invented the telephone telegraph.**
- **For a long time, people used homing eagles to send messages.**

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