

WORK OF PHYSICISTS

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Physical science studies everything around us and raises the questions connected with objects, their reactions, properties and structures. For example: Why are compact discs multicolored? What is the source of gravitation? How is kinetic energy converted into electricity? Physicists look for explanations of natural phenomena, and as a result it helps us to understand better ‘strange’ things we observe [1]. The world we live is very rapidly becoming more complicated. Newly invented materials that are much stronger than concrete or steel are being used to construct buildings. These materials result from advances that have been made in physical science. Each person, namely physicist, is trying to find solutions how any things happen. Wondering is the beginning of all science. The inventions of new devices, the investigations of different phenomena, the discoveries of unknown substances result from it.

Scientists build on what other scientists in the past have reported. In the 1800s scientists like Ampère and Ohm reported on how electricity travelled through objects. In 1879 Thomas Edison, an American, discovered how to use electricity to produce light. He used the work of Ampère and Ohm to invent the light bulb. Today, scientists are still adding to the knowledge obtained by others.

Observing and Discovering: An Example. The story of how people invented the airplane illustrates how science works. Since ancient times people have been curious about how birds fly. They wondered whether they, too, could learn to fly. Many people tried to fly by building wings that they could flap to stay in the air. Many of their attempts failed.

The Shapes of Wings. In the 1800s several European scientists studied the shapes of birds' wings. They wondered why birds can often glide in the air for a long time without flapping their wings. They discovered that flapping was not what kept birds in the air. The shape of the wing was the key to flying. People used this information to make gliders.

The First Airplane. Two Americans, Wilbur and Orville Wright, used the results of the Europeans. They built several successful gliders. Then they designed a glider with an engine and propellers. They tested their designs carefully. Their work produced an airplane that could take off and fly under its own power. This famous flight took place at Kitty Hawk, North Carolina, on December 17, 1903 [2].

Using Scientists' Discoveries in New Ways. The Wright brothers learned from the work of others. Later scientists learned from the Wrights. The Wright brothers built a machine called a wind tunnel to test their designs. Improvements in the Wright brothers' wind tunnel have made it possible for people to build bigger and faster airplanes. Wind tunnels have also been put to uses that the Wrights did not foresee. People who design bridges often test models of them in wind tunnels before construction begins. These tests may show what effect strong winds will have. They may even help prevent disasters.

References

1. Physical Science [Electronic resource]. – Mode of access: <https://www.britannica.com/science/physical-science>. – Date of access: 13.03.2023.

2. The History of Airplanes and Flight [Electronic resource]. – Mode of access: <https://www.thoughtco.com/airplanes-flight-history-1991789>. – Date of access: 27.03.2023.