

Ideas That Changed Life

Identify discoveries, innovations, and the people connected to them.

6.18.A “identify examples of scientific discoveries, technological innovations, and scientists and inventors that have shaped the world;”

NAME _____

DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline each scientific discovery, circle each technological innovation, and write S beside each scientist or inventor. Your marks will show how people and ideas have shaped the world.

From Microbes to Flight

- ① Long ago, doctors often did not know why illnesses spread. In the 1860s, French scientist Louis Pasteur showed that tiny living things, called microbes, could cause food to spoil and could spread disease. His scientific discovery changed how people thought about health. Pasteur also developed a process called pasteurization, which uses heat to kill many harmful microbes in liquids. This technological innovation helped make milk safer to drink and influenced food safety around the world.
- ② In 1928, Scottish scientist Alexander Fleming noticed that a kind of mold killed bacteria growing in a dish. This observation led to the discovery of penicillin, the first widely used antibiotic. Penicillin helped doctors treat infections that had once been deadly. During World War II, researchers and manufacturers developed ways to produce penicillin in large amounts. That technological innovation made the medicine available to many soldiers and civilians, saving lives in many countries.
- ③ In 1903, inventors Wilbur and Orville Wright built and flew a powered airplane that could be controlled in the air. Their work combined careful testing with earlier scientific knowledge about lift and motion. The airplane was a technological innovation because it gave people a new practical way to travel. Air travel later connected distant places more quickly, moved supplies across continents, and changed business, tourism, and emergency response in important ways.

2 ANSWER WITH EVIDENCE _____ Use the passage

1 What scientific discovery did Louis Pasteur make, and what technological innovation did he develop?

2 Which scientist's observation led to the discovery of penicillin?

3 Why does the passage call the controlled airplane a technological innovation?

4 Who were the inventors of the powered airplane?

3 YOUR TURN _____ Your own words

Write three sentences about a scientific discovery or technological innovation that is not named in the passage. Name the scientist, inventor, or team connected to it, identify it as a discovery or innovation, and explain one way it shaped the world.

PART 1 • READ AND MARK

Underline each scientific discovery, circle each technological innovation, and write S beside each scientist or inventor. Your marks will show how people and ideas have shaped the world. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	What scientific discovery did Louis Pasteur make, and what technological innovation did he develop?	Pasteur showed that microbes could spoil food and spread disease. He developed pasteurization, a heating process that kills many harmful microbes in liquids.
2	Which scientist's observation led to the discovery of penicillin?	Alexander Fleming's observation of mold killing bacteria led to the discovery of penicillin.
3	Why does the passage call the controlled airplane a technological innovation?	It gave people a new practical way to travel and later connected distant places more quickly.
4	Who were the inventors of the powered airplane?	Wilbur and Orville Wright were the inventors of the powered airplane.

PART 3 • YOUR TURN (SAMPLE ANSWER)

In 1895, Wilhelm Conrad Röntgen discovered X-rays. This scientific discovery showed that unseen rays could pass through some materials. X-rays shaped the world by helping doctors view broken bones without surgery.

Accept accurate examples not named in the passage when the student correctly identifies the example as a scientific discovery or technological innovation. The response should name a connected person or team and explain a realistic effect on the world.