

Ideas That Changed Lives

Identify four innovators and connect each person to a contribution.

4.18.A “identify famous inventors and scientists such as Gail Borden, Joseph Glidden, Michael DeBakey, and Millie Hughes-Fulford and their contributions; and”

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline each person's name, circle words that tell the person's contribution, and write 1, 2, 3, or 4 beside each name-and-contribution pair.

Four Problem Solvers

- ① People have used science and inventions to solve problems in homes, farms, hospitals, and beyond Earth. Gail Borden, Joseph Glidden, Michael DeBakey, and Millie Hughes-Fulford each made an important contribution. Their work happened in different places and times, but each person studied a problem, developed an idea, and affected how other people lived or worked.
- ② Gail Borden wanted milk to last longer without spoiling. In 1856, he received a patent for a process that removed some water from milk and added sugar. The result, condensed milk, could be stored and carried more easily. Joseph Glidden received a patent in 1874 for his barbed-wire design. Sharp wire points helped farmers and ranchers build fences around land and animals.
- ③ Dr. Michael DeBakey was a surgeon who helped develop a roller pump for heart surgery. The pump moved blood during an operation when a patient's heart was being repaired. Dr. Millie Hughes-Fulford was a physician and scientist. In 1991, she became the first woman payload specialist in space, working on mission experiments. Her research studied how spaceflight affects human cells, including cells in the immune system.

2 ANSWER WITH EVIDENCE _____ Use the passage

1 How did Gail Borden's and Joseph Glidden's patented ideas help people?

2 What did Michael DeBakey help develop, and what did it do during heart surgery?

3 What did Millie Hughes-Fulford study during her space research?

4 Which two people in the passage made contributions connected to health or medicine? Explain each contribution.

3 YOUR TURN _____ Your own words

Choose two people from the passage. Write exactly two sentences that explain each person's contribution and compare the problems their work helped solve.

PART 1 • READ AND MARK

Underline each person's name, circle words that tell the person's contribution, and write 1, 2, 3, or 4 beside each name-and-contribution pair. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	How did Gail Borden's and Joseph Glidden's patented ideas help people?	Borden's condensed milk process helped milk last longer and be carried more easily. Glidden's barbed wire helped farmers and ranchers build fences.
2	What did Michael DeBakey help develop, and what did it do during heart surgery?	He helped develop a roller pump. It moved blood while a patient's heart was being repaired.
3	What did Millie Hughes-Fulford study during her space research?	She studied how spaceflight affects human cells, including immune-system cells.
4	Which two people in the passage made contributions connected to health or medicine? Explain each contribution.	Michael DeBakey helped develop a roller pump for heart surgery. Millie Hughes-Fulford studied the effects of spaceflight on human cells, including immune-system cells.

PART 3 • YOUR TURN (SAMPLE ANSWER)

Borden's condensed milk process helped people store milk longer, while DeBakey's roller pump helped surgeons repair hearts. Both used ideas to solve problems, but one improved food storage and the other supported medical care.

Accept accurate comparisons of any two people from the passage. Each response should state both contributions and tell how the problems or benefits were alike or different.