Tracks to Technology

Trace how new ideas and industries helped the U.S. economy grow.

5.22.B "identify how scientific discoveries, technological innovations, and the rapid growth of technology industries have advanced the economic development of the United States, including the transcontinental railroad and the space program; and"

NAME ______________________ DATE ____________

1 READ AND MARK

Read it twice

YOUR JOB Underline each scientific discovery, technology, or industry in the passage. Circle nearby words that explain how it changed jobs, business, markets, or trade.

Technology Builds an Economy

1 In 1869, workers completed the transcontinental railroad, linking rail lines across the United States. Trains carried people, mail, farm crops, and manufactured goods much faster than wagons could. Businesses could sell products in distant places, and farmers could reach more buyers. Railroad companies also hired workers and bought steel, wood, and coal. These connected jobs and markets helped the national economy grow.

2 Scientific discoveries about electricity led inventors to create useful tools, such as electric lights and motors. Factories used electric power to run machines, often producing goods faster. As industries that made electrical equipment grew, they needed engineers, factory workers, and salespeople. New jobs gave people wages to spend, while businesses made and sold more products. Technology industries therefore added work and trade to the economy.

3 Beginning in 1958, the U.S. space program brought scientists, engineers, and companies together to explore space. To build rockets, spacecraft, and communication systems, companies developed improved materials, electronics, and computer technology. Government contracts paid many businesses and workers. Some space-program research later supported products and services used on Earth, including satellite communication and weather forecasts. These advances created jobs, helped businesses make decisions, and opened new technology markets.

2 ANSWER WITH EVIDENCE

Use the passage

1. How did the transcontinental railroad help farmers and businesses sell to more people?

2. How did the growth of electrical equipment industries increase economic activity beyond running factory machines?

3. Name one type of technology companies developed for space exploration. Then explain how government contracts affected businesses and workers.

4. What cause-and-effect pattern connects the railroad, electrical industries, and space program examples?

3 YOUR TURN

Your own words

Choose one technology not named in the passage. Write 3 sentences that name it and explain two ways it can support economic development in the United States, such as through jobs, sales, services, or lower costs.

Tracks to Technology

PART 1 · READ AND MARK

Underline each scientific discovery, technology, or industry in the passage. Circle nearby words that explain how it changed jobs, business, markets, or trade. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	How did the transcontinental railroad help farmers and businesses sell to more people?	**It moved crops and products faster to distant places, so farmers and businesses could reach more buyers.**
2	How did the growth of electrical equipment industries increase economic activity beyond running factory machines?	**The industries needed engineers, factory workers, and salespeople. Those workers earned wages, and businesses made and sold more products.**
3	Name one type of technology companies developed for space exploration. Then explain how government contracts affected businesses and workers.	**Companies developed improved materials, electronics, or computer technology. Government contracts paid many businesses and workers.**
4	What cause-and-effect pattern connects the railroad, electrical industries, and space program examples?	**New technology or scientific advances created faster transportation, new products, or new services. They also created jobs and expanded markets, helping the economy grow.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

Solar panels turn sunlight into electricity. Companies need workers to design, install, and repair them. The panels can lower electricity costs for homes and businesses, leaving money for other goods and services.

Accept answers that accurately connect a discovery, innovation, or growing technology industry to economic effects such as jobs, trade, new markets, sales, services, or lower costs. For the open response, accept reasonable technologies and two clear, plausible economic effects.