Name_____

That Phone in Your Pocket

A key concept behind cell-phone technology is the notion that space can conduct electricity. Within twenty years of the initial hypothesis and research, successful experiments led to the first telegraph. This may not seem related to cell phones today, but it was a major breakthrough in long-distance communication.

It was another fifty years before the technology expanded beyond the telegraph. In the 1920s, police cars began installing mobile radios. The government created the Federal Communication Commission (FCC) in 1934. One of their first tasks was to assign certain channels to specific uses, such as emergency and government use.

A mobile radio telephone service was developed in the mid-1940s, but heavy interference caused it to be impractical. During this same time period, the first radio car phones were built. Again, heavy interference doomed the effort to failure. By the end of the 1940s, the FCC authorized several channels to be used as Radio Common Carriers, which made it possible for corporations and private organizations to use mobile phones. These were the first link between mobile phones and telephones, instead of operating radio to radio.

Car phones became true mobile phones separate from radios. The early units were large and bulky and required an operator to make the connection between users. The next major development made use of a single channel operating at a higher frequency, eliminating the need for operators.

As early as 1970, the FCC assigned specific frequencies for cell phones. Within a year, AT&T proposed the first mobile telephone system to the FCC, based on dividing cities into "cells." Not long after, the first mobile handset was designed and demonstrated to the public. Early cell phones were bulky and expensive and not readily available to the public.

The rest, as they say, is history. The cell-phone industry has become an ever-growing empire, with the number of cell phones in use quickly approaching the number of people on the planet.

Text Questions

1. Which technology is most closely related to cell-phone development?
   a. electricity
   b. radio
   c. television
   d. computers

2. What does the word *frequency* mean as it is used in the text?
   a. something that occurs often
   b. the number of times something occurs in a given period of time
   c. a rate of repetition
   d. the number of vibrations or sound waves within a unit of time

3. Which of the following was a problem faced by early cell-phone technology?
   a. crowded channels
   b. interference
   c. size and expense
   d. all of the above

4. Which statement does <u>not</u> describe the benefits of the development of cell phones?
   a. The first telegraph was a major breakthrough in long-distance communication.
   b. The FCC assigned certain channels to specific uses, such as emergency and government use.
   c. The early units were large and bulky and required an operator to make the connection between users.
   d. By the end of the 1940s, the FCC authorized several channels to be used as Radio Common Carriers, which made it possible for corporations and private organizations to use mobile phones.

5. How do you envision cell-phone technology in the future? What features might be added?

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LIVEWORKSHEETS

Name_____

Livestock Reduction

Drastic times call for drastic measures, or so it would appear. At the end of the Great Depression, the government established a stock-reduction program. Over the course of time, over 200,000 sheep, goats, and horses were killed. The government claimed the arid land of the southwest would support only six head per acre. Stock reduction was intended to increase soil conservation and reduce overgrazing.

Unfortunately, these events coincided with years of depression and economic hardship. Those who relied on livestock for their existence, such as some Native Americans, were devastated by the orders.

Each family was permitted to claim a certain number of sheep or goats. In some cases, some stock could be given to other family members who did not yet meet the quota. This spared some animals, but not all, from certain death. The remaining livestock were shot. Not surprisingly, stock reduction also contributed to the near-extinction of Churro sheep.

The stock-reduction plans changed the way people lived. Families who had previously supported themselves by raising stock now had to find other ways of bringing in income. Men were forced to find wage-paying jobs, even if it meant leaving their communities. The Native Americans, in particular, had been sheepherders for generations. They believed the sheep gave strength to the people to survive. Herds represented status in the community.

Shortly after the beginning of the program, the Navajo chairman asked the government to reconsider. His request cited "economic loss of wages and war effort." In response, the government issued special grazing permits to reduce the impact of stock reduction during the war. In theory, this would prevent taking too much stock from people who had no other source of income. The war provided a temporary way out for some, but it took time to rebuild the herds and recover economically after the war.

Text Questions

1. Which of the following was <u>not</u> an impact of the stock-reduction plan on native people in the southwest?
   a. economic loss and hardship
   b. people leaving communities to find work
   c. loss of status in the community
   d. the increase of soil conservation
2. What does the word *coincided* mean as it is used in the text?
   a. was exactly alike in shape and position
   b. occurred at the same time
   c. was equivalent in importance to other events
   d. was related to
3. How does the fourth paragraph contribute to the development of the main idea?
   a. It gives details that explain how this event took place.
   b. It describes how this historical event affected people and the way they live.
   c. It describes the interaction between people and the government.
   d. It explains what caused this event.
4. Which of the following statements is <u>not</u> a provision of the stock-reduction plan?
   a. The arid land would support only a limited number of livestock.
   b. Each family was permitted to claim a certain number of sheep or goats.
   c. They could give some stock to other family members who did not yet meet the quota.
   d. The government issued special grazing permits to reduce the impact of stock reduction during the war.
5. How might this historical event have affected people in other parts of the country?

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LIVEWORKSHEETS

Name_____

Salt of the Earth

Salt is such a common element that we don't often think about its source. Historically, salt has been used for preservation. It preserves food so it doesn't spoil. We season our food with salt.

The many uses for salt have made it a valuable commodity over the centuries. Entire economies have been built on the production and trade of salt. In ancient Rome, salt was used as currency. In some countries, roads were built specifically for the transportation of salt from mines to seaports. At various times in history, exclusive rights and taxes on salt have led to wars and revolutions. China, Africa, and India are countries that have all experienced conflicts over salt. Our own history in America is not immune to the value of salt. The Massachusetts Bay Colony held rights to produce salt for many years. The Erie Canal was built, in part, to transport salt.

Salt plays other cultural roles as well. It is used in religious rites for purification or offerings. Its value is reflected in language. When salt was used as currency during times of slave trade, people might say someone was "not worth his salt." We say a dependable person is "the salt of the earth."

Long ago, people obtained salt by boiling seawater. The water evaporated as steam, leaving behind nearly pure salt. Salt can also be mined from underground deposits as a mineral. Often these deposits were formed by past evaporation and shifts in rock layers over time. Most of the salt produced this way is in the form of rock salt. A third way of producing salt is a little more complex. A dome is erected over a salt deposit. The salt is drilled out of the earth and water is added to the salt to dissolve it. The resulting brine is then boiled causing the water to evaporate, leaving just the salt once again. Much of this salt is what we know as table salt.

Text Questions

1. Which of the following is <u>not</u> a method for mining salt?
   a. trading with other countries to obtain salt
   b. boiling salt water to cause evaporation
   c. mining salt out of underground deposits
   d. drilling salt and adding water to make a brine, then boiling the brine to evaporate the water

2. Which is a synonym for the word *commodity* as it is used in the second paragraph?
   a. money
   b. belonging
   c. merchandise
   d. stock

3. Which statement explains one reason why salt is a valuable commodity?
   a. We season our food with salt.
   b. Salt is used for food preservation.
   c. Roads were built specifically for the transportation of salt from mines to seaports.
   d. Exclusive rights and taxes on salt have led to wars and revolutions at various times in history.

4. What does it mean to say someone is "the salt of the earth"?
   a. That person's language is seasoned with interesting words.
   b. That person knows how to save and preserve important things.
   c. That person is among the lower levels of society.
   d. That person is reliable, trustworthy, and dependable.

5. What are some other ways people use salt? Give examples to support your answer.

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LIVEWORKSHEETS