

Tools Against Terrain

How settlers used technology to meet western conditions

USII.1.a “explaining how technology allowed settlers to adapt to the physical features and climate of the West;”

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline each technology in the passage. Circle each physical feature or climate condition, then draw an arrow from a technology to the challenge it helped settlers handle.

Changing Life in the West

- ① During the late 1800s, many settlers moved onto the Great Plains, where rainfall was often too low for steady farming. Farmers dug wells, but lifting water by hand was slow. Windmills used the region's strong winds to pump water from underground. The water filled tanks for people, animals, and crops. Some families built sod houses from thick prairie grass and soil because trees for lumber were scarce. These choices helped settlers use materials and conditions already present on the plains.
- ② Travel across the Rocky Mountains was difficult because steep slopes, deep passes, and winter snow slowed wagons. Railroad companies used blasting powder and drilling tools to cut routes through rock. Workers built bridges across ravines and laid tracks over mountain passes. In snowy places, wooden snow sheds protected some tracks from deep drifts and avalanches. Railroads carried settlers, tools, and supplies farther west more quickly than wagons could. The technology did not remove the mountains, but it made crossing them more possible.
- ③ In the dry Southwest, settlers could not depend on rain alone. They dug ditches, called canals, to carry river water to fields. Gates in the canals directed water toward crops when it was needed. Irrigation supported farms in places with long dry periods, but it also changed rivers and required communities to share limited water. Barbed wire helped some ranchers fence large, open areas, yet it restricted movement across land that had once been open. Technology helped settlers adapt, while also affecting the land and people already living there.

2 ANSWER WITH EVIDENCE Use the passage

1 What farming problem on the Great Plains did windmills help settlers solve, and how did they help?

2 Name two technologies that helped railroads cross the Rocky Mountains. What physical challenges did they address?

3 How did canals and gates help settlers farm in the dry Southwest?

4 How did barbed wire help some ranchers adapt to open land, and what was one effect of using it?

3 YOUR TURN Your own words

Invent a western settlement with one physical feature or climate condition from the passage. Write three sentences that name the challenge, describe one technology settlers could use, and explain how it would help or affect the settlement.

PART 1 • READ AND MARK

Underline each technology in the passage. Circle each physical feature or climate condition, then draw an arrow from a technology to the challenge it helped settlers handle. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	What farming problem on the Great Plains did windmills help settlers solve, and how did they help?	Rainfall was often too low, and lifting water by hand was slow. Windmills used strong winds to pump underground water into tanks for people, animals, and crops.
2	Name two technologies that helped railroads cross the Rocky Mountains. What physical challenges did they address?	Blasting powder and drilling tools cut routes through rock, and bridges crossed ravines. Snow sheds also protected tracks from snow drifts and avalanches.
3	How did canals and gates help settlers farm in the dry Southwest?	Canals carried river water to fields, and gates directed water toward crops when needed during long dry periods.
4	How did barbed wire help some ranchers adapt to open land, and what was one effect of using it?	Barbed wire let ranchers fence large open areas. It also restricted movement across land that had once been open.

PART 3 • YOUR TURN (SAMPLE ANSWER)

At Sage Creek, rain is scarce and the wind blows often. Settlers could use a windmill to pump well water into a tank for crops and animals. This would help farming, although families would need to use the limited water carefully.

Accept any accurate connection between a condition named in the passage and a technology described there. The response should explain how the technology helps settlers adapt and may include an accurate effect on land, water, or movement.