Where Steel Grows

How resources and transportation shape industrial hubs

7.C.4.3.A "Explain why places become major hubs of industrial activity by analyzing the relationship between the location of natural resources to various manufacturing industries."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Read the passage. Underline each natural resource steelmakers need, circle the ways resources travel, and number the three cities to compare how each became a steel hub.

Three Paths to Steel

1. Steelmakers need iron ore to supply iron, coal to make hot-burning coke, and limestone to help remove unwanted materials. Moving these heavy supplies over long distances costs money. In the late 1800s, Birmingham, Alabama, grew beside deposits of all three. Mines sent iron ore and coal to nearby furnaces, while limestone came from the same region. The furnaces turned iron ore into iron, and steelworks used that iron to make steel. Because the raw materials were close together, Birmingham attracted factories and workers.

2. Gary, Indiana, became another steel center, but its resources were not all underground nearby. Iron ore mined near Lake Superior traveled by ship across the Great Lakes to Gary's harbor on Lake Michigan. Coal arrived by train from coal-producing areas farther east. Steel companies built mills beside the harbor so ships could unload heavy ore close to the furnaces. Rail lines brought in fuel and carried finished steel toward customers, including factories around Chicago. Access to water and rail made distant resources practical for Gary's mills.

3. Pittsburgh, Pennsylvania, also grew around steel. Nearby coal fields supplied coal for coke, and rivers helped move heavy loads. As local iron ore became less important, mills received ore from farther away by boat and rail. Each city solved the same problem in a different way: Birmingham had key materials close together, while Gary and Pittsburgh linked mines to mills through transportation. A steel hub needs more than a mine. It needs a workable path from resources to furnaces and from finished products to buyers.

2 ANSWER WITH EVIDENCE

Use the passage

1. Why did Birmingham's location near three natural resources make it a good place for steel factories?

2. How did Gary's harbor help turn iron ore mined far away into a useful supply for its mills?

3. How could Pittsburgh's mills keep making steel as local iron ore became less important?

4. How did Birmingham and Gary solve the problem of getting heavy raw materials to steel mills in different ways?

3 YOUR TURN

Your own words

Brick factories use clay and heat from fuel. Choose a site for a new brick factory: Claybend has clay deposits and a rail line that brings coal, while Fuelton has coal deposits but must bring clay by truck over 180 miles. In 4 to 5 sentences, explain your choice, how the materials would reach the factory, and why the site could become a brickmaking hub.

ANSWER KEY # Where Steel Grows

GRADE 7 · 7.C.4.3.A

PART 1 · READ AND MARK

Read the passage. Underline each natural resource steelmakers need, circle the ways resources travel, and number the three cities to compare how each became a steel hub. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	Why did Birmingham's location near three natural resources make it a good place for steel factories?	**Iron ore, coal, and limestone were all nearby, so factories could obtain the heavy supplies they needed without moving them long distances.**
2	How did Gary's harbor help turn iron ore mined far away into a useful supply for its mills?	**Ships carried ore across the Great Lakes and unloaded it at Gary's harbor close to the mills.**
3	How could Pittsburgh's mills keep making steel as local iron ore became less important?	**They could use nearby coal for coke and receive iron ore from farther away by boat and rail.**
4	How did Birmingham and Gary solve the problem of getting heavy raw materials to steel mills in different ways?	**Birmingham built near deposits of iron ore, coal, and limestone. Gary used ships and trains to bring iron ore and coal from distant sources to its mills.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

I would build the brick factory in Claybend because clay is mined nearby. Trains can deliver coal to fuel the kilns that bake the bricks. Fuelton has coal, but trucks would have to haul heavy clay 180 miles. Easy access to clay and a rail supply of fuel could attract more brickmakers to Claybend.

For Part 3, accept either site if the response accurately explains how both clay and fuel would reach the factory and makes a reasonable case for why the site could attract brickmaking.