FIRSTLINE SCHOOLS
EDUCATION FOR LIFE

DISTANCE LEARNING FOR FIRSTLINE STUDENTS

PACKET #2

Start Date: Monday, March 30, 2020

GRADE:

K 1 2 3 4 5 6 7 8

CONTENT INCLUDED:

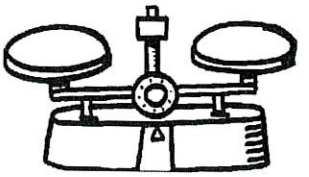
ELA MATH SCIENCE SOCIAL STUDIES

4th Grade Math			
Directions: Complete the Problem Set and Exit Ticket for the lessons below.			
Day	Workbook	Lesson Number	Learning Goal
Monday 3/30	Module 7	Lesson 1	Create conversion tables for length, weight, and capacity units using measurement tools, and use the tables to solve problems.
Tuesday 3/31		Lesson 2	Create conversion tables for length, weight, and capacity units using measurement tools, and use the tables to solve problems.
Wed. 4/1		Lesson 3	Create conversion tables for units of time, and use the tables to solve problems
Thurs. 4/2		Lesson 4	Solve multiplicative comparison word problems using measurement conversion tables.
Friday 4/3		Lesson 5	Share and critique peer strategies.
Monday 4/6		Lesson 6	Solve problems involving mixed units of capacity.
Tuesday 4/7		Lesson 7	Solve problems involving mixed units of length.
Wed. 4/8		Lesson 8	Solve problems involving mixed units of weight.

Name _____ Date _____

Use RDW to solve Problems 1–3.

1. Evan put a 2-pound weight on one side of the scale. How many 1-ounce weights will he need to put on the other side of the scale to make them equal?



2. Julius put a 3-pound weight on one side of the scale. Abel put 35 1-ounce weights on the other side. How many more 1-ounce weights does Abel need to balance the scale?

3. Mrs. Upton's baby weighs 5 pounds and 4 ounces. How many total ounces does the baby weigh?

4. Complete the following conversion tables, and write the rule under each table.

a.

Pounds	Ounces
1	
3	
7	
10	
17	

The rule for converting pounds to ounces is _____.

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b.

Feet	Inches
1	
2	
5	
10	
15	

The rule for converting feet to inches is

_____.

c.

Yards	Feet
1	
2	
4	
10	
14	

The rule for converting yards to feet is

_____.

5. Solve.

a. 3 feet 1 inch = _____ inches

b. 11 feet 10 inches = _____ inches

c. 5 yards 1 foot = _____ feet

d. 12 yards 2 feet = _____ feet

e. 27 pounds 10 ounces = _____ ounces

f. 18 yards 9 feet = _____ feet

g. 14 pounds 5 ounces = _____ ounces

h. 5 yards 2 feet = _____ inches

6. Answer *true* or *false* for the following statements. If the statement is false, change the right side of the comparison to make it true.

a. 2 kilograms > 2,600 grams _____

b. 12 feet < 140 inches _____

c. 10 kilometers = 10,000 meters _____

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Name _____ Date _____

1. Solve.

   a. 8 feet = _____ inches

   b. 4 yards 2 feet = _____ feet

   c. 14 pounds 7 ounces = _____ ounces

2. Answer *true* or *false* for the following statements. If the statement is false, change the right side of the comparison to make it true.

   a. 3 pounds > 60 ounces _____

   b. 12 yards < 40 feet _____

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Name _____ Date _____

1. Complete the tables.

a.

Yards	Feet
1	
2	
3	
5	
10	

b.

Feet	Inches
1	
2	
5	
10	
15	

c.

Yards	Inches
1	
3	
6	
10	
12	

2. Solve.

a. 2 yards 2 inches = _____ inches

b. 9 yards 10 inches = _____ inches

c. 4 yards 2 feet = _____ feet

d. 13 yards 1 foot = _____ feet

e. 17 feet 2 inches = _____ inches

f. 11 yards 1 foot = _____ feet

g. 15 yards 2 feet = _____ feet

h. 5 yards 2 feet = _____ inches

3. Ally has a piece of string that is 6 yards 2 feet long. How many inches of string does she have?

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4. Complete the table.

Pounds	Ounces
1	
2	
4	
10	
12	

5. Renee's baby sister weighs 7 pounds 2 ounces. How many ounces does her sister weigh?

6. Answer *true* or *false* for the following statements. If the statement is false, change the right side of the comparison to make it true.

   a. 4 kilograms < 4,100 grams _____

   b. 10 yards < 360 inches _____

   c. 10 liters = 100,000 milliliters _____

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Name _____ Date _____

Use RDW to solve Problems 1–3.

1. Susie has 3 quarts of milk. How many pints does she have?

2. Kristin has 3 gallons 2 quarts of water. Alana needs the same amount of water but only has 8 quarts. How many more quarts of water does Alana need?

3. Leonard bought 4 liters of orange juice. How many milliliters of juice does he have?

4. Complete the following conversion tables and write the rule under each table.

a.

Gallons	Quarts
1	
3	
5	
10	
13	

The rule for converting gallons to quarts is _____.

b.

Quarts	Pints
1	
2	
6	
10	
16	

The rule for converting quarts to pints is _____.

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5. Solve.

a. 8 gallons 2 quarts = _____ quarts

b. 15 gallons 2 quarts = _____ quarts

c. 8 quarts 2 pints = _____ pints

d. 12 quarts 3 pints = _____ cups

e. 26 gallons 3 quarts = _____ pints

f. 32 gallons 2 quarts = _____ cups

6. Answer true or false for the following statements. If your answer is false, make the statement true.

a. 1 gallon > 4 quarts _____

b. 5 liters = 5,000 milliliters _____

c. 15 pints < 1 gallon 1 cup _____

7. Russell has 5 liters of a certain medicine. If it takes 2 milliliters to make 1 dose, how many doses can he make?

8. Each month, the Moore family drinks 16 gallons of milk and the Siler family goes through 44 quarts of milk. Which family drinks more milk each month?

9. Keith's lemonade stand served lemonade in glasses with a capacity of 1 cup. If he had 9 gallons of lemonade, how many cups could he sell?

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Name _____ Date _____

1. Complete the table.

Quarts	Cups
1	
2	
4	

2. Bonnie's doctor recommended that she drink 2 cups of milk per day. If she buys 3 quarts of milk, will it be enough milk to last 1 week? Explain how you know.

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Name _____ Date _____

Use the RDW process to solve Problems 1–3.

1. Dawn needs to pour 3 gallons of water into her fish tank. She only has a 1-cup measuring cup. How many cups of water should she put in the tank?

2. Julia has 4 gallons 2 quarts of water. Ally needs the same amount of water but only has 12 quarts. How much more water does Ally need?

3. Sean drank 2 liters of water today, which was 280 milliliters more than he drank yesterday. How much water did he drink yesterday?

4. Complete the tables.

a.

Gallons	Quarts
1	
2	
4	
12	
15	

b.

Quarts	Pints
1	
2	
6	
10	
16	

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5. Solve.

a. 6 gallons 3 quarts = _____ quarts

b. 12 gallons 2 quarts = _____ quarts

c. 5 quarts 1 pint = _____ pints

d. 13 quarts 3 pints = _____ cups

e. 17 gallons 2 quarts = _____ pints

f. 27 gallons 3 quarts = _____ cups

6. Explain how you solved Problem 5(f).

7. Answer true or false for the following statements. If your answer is false, make the statement true by correcting the right side of the comparison.

a. 2 quarts > 10 pints _____

b. 6 liters = 6,000 milliliters _____

c. 16 cups < 4 quarts 1 cup _____

8. Joey needs to buy 3 quarts of chocolate milk. The store only sells it in pint containers. How many pints of chocolate milk should he buy? Explain how you know.

9. Granny Smith made punch. She used 2 pints of ginger ale, 3 pints of fruit punch, and 1 pint of orange juice. She served the punch in glasses that had a capacity of 1 cup. How many cups can she fill?

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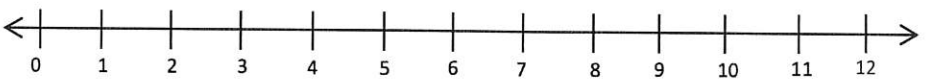
Name _____ Date _____

Use RDW to solve Problems 1–2.

1. Courtney needs to leave the house by 8:00 a.m. If she wakes up at 6:00 a.m., how many minutes does she have to get ready? Use the number line to show your work.



2. Giuliana's goal was to run a marathon in under 6 hours. What was her goal in minutes?

3. Complete the following conversion tables and write the rule under each table.

a.

Hours	Minutes
1	
3	
6	
10	
15	

The rule for converting hours to minutes and minutes to seconds is

_____.

b.

Days	Hours
1	
2	
5	
7	
10	

The rule for converting days to hours is

_____.

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4. Solve.

a. 9 hours 30 minutes = _____ minutes

b. 7 minutes 45 seconds = _____ seconds

c. 9 days 20 hours = _____ hours

d. 22 minutes 27 seconds = _____ seconds

e. 13 days 19 hours = _____ hours

f. 23 hours 5 minutes = _____ minutes

5. Explain how you solved Problem 4(f).

6. How many seconds are in 14 minutes 43 seconds?

7. How many hours are there in 4 weeks 3 days?

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Name _____ Date _____

The astronauts from Apollo 17 completed 3 spacewalks while on the moon for a total duration of 22 hours 4 minutes. How many minutes did the astronauts walk in space?

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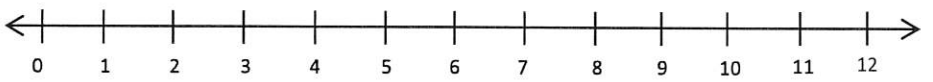
Name _____ Date _____

Use RDW to solve Problems 1–2.

1. Jeffrey practiced his drums from 4:00 p.m. until 7:00 p.m. How many minutes did he practice? Use the number line to show your work.



2. Isla used her computer for 5 hours over the weekend. How many minutes did she spend on the computer?

3. Complete the following conversion tables and write the rule under each table.

a.

Hours	Minutes
1	
2	
5	
9	
12	

The rule for converting hours to minutes is _____.

b.

Days	Hours
1	
3	
6	
8	
20	

The rule for converting days to hours is _____.

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4. Solve.

   a. 10 hours 30 minutes = _____ minutes

   b. 6 minutes 15 seconds = _____ seconds

   c. 4 days 20 hours = _____ hours

   d. 3 minutes 45 seconds = _____ seconds

   e. 23 days 21 hours = _____ hours

   f. 17 hours 5 minutes = _____ minutes

5. Explain how you solved Problem 4(f).

6. It took a space shuttle 8 minutes 36 seconds to launch and reach outer space. How many seconds did it take?

7. Apollo 16's mission lasted just over 1 week 4 days. How many hours are there in 1 week 4 days?

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Name _____ Date _____

Use RDW to solve the following problems.

1. Beth is allowed 2 hours of TV time each week. Her sister is allowed 2 times as much. How many minutes of TV can Beth's sister watch?

2. Clay weighs 9 times as much as his baby sister. Clay weighs 63 pounds. How much does his baby sister weigh in ounces?

3. Helen has 4 yards of rope. Daniel has 4 times as much rope as Helen. How many more feet of rope does Daniel have compared to Helen?

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4. A dishwasher uses 11 liters of water for each cycle. A washing machine uses 5 times as much water as a dishwasher uses for each load. Combined, how many milliliters of water are used for 1 cycle of each machine?

5. Joyce bought 2 pounds of apples. She bought 3 times as many pounds of potatoes as pounds of apples. The melons she bought were 10 ounces lighter than the total weight of the potatoes. How many ounces did the melons weigh?

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Name _____ Date _____

Use RDW to solve the following problem.

Brian has a melon that weighs 3 pounds. He cut it into six equal pieces. How many ounces did each piece weigh?

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Name _____ Date _____

Use RDW to solve the following problems.

1. Sandy took the train to New York City. The trip took 3 hours. Jackie took the bus, which took twice as long. How many minutes did Jackie's trip take?

2. Coleton's puppy weighed 3 pounds 8 ounces at birth. The vet weighed the puppy again at 6 months, and the puppy weighed 7 pounds. How many ounces did the puppy gain?

3. Jessie bought a 2-liter bottle of juice. Her sister drank 650 milliliters. How many milliliters were left in the bottle?

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4. Hudson has a chain that is 1 yard in length. Myah's chain is 3 times as long. How many feet of chain do they have in all?

5. A box weighs 8 ounces. A shipment of boxes weighs 7 pounds. How many boxes are in the shipment?

6. Tracy's rain barrel has a capacity of 27 quarts of water. Beth's rain barrel has a capacity of twice the amount of water as Tracy's rain barrel. Trevor's rain barrel can hold 9 quarts of water less than Beth's barrel.

   a. What is the capacity of Trevor's rain barrel?

   b. If Tracy, Beth, and Trevor's rain barrels were filled to capacity, and they poured all of the water into a 30-gallon bucket, would there be enough room? Explain.

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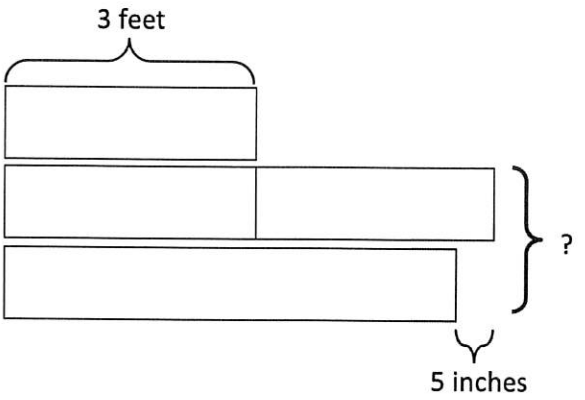
Name _____ Date _____

1. a. Label the rest of the tape diagram below. Solve for the unknown.



b. Write a problem of your own that could be solved using the diagram above.

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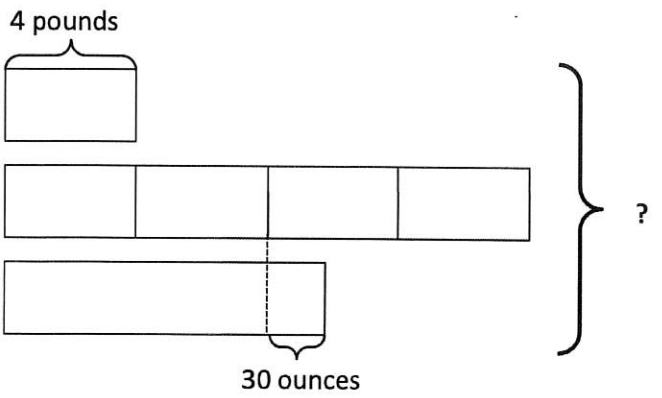
2. Create a problem of your own using the diagram below, and solve for the unknown.



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Name _____ Date _____

Caitlin ran 1,680 feet on Monday and 2,340 feet on Tuesday. How many yards did she run in those two days?

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Name _____ Date _____

Draw a tape diagram to solve the following problems.

1. Timmy drank 2 quarts of water yesterday. He drank twice as much water today as he drank yesterday. How many cups of water did Timmy drink in the two days?

2. Lisa recorded a 2-hour television show. When she watched it, she skipped the commercials. It took her 84 minutes to watch the show. How many minutes did she save by skipping the commercials?

3. Jason bought 2 pounds of cashews. Sarah ate 9 ounces. David ate 2 ounces more than Sarah. How many ounces were left in Jason's bag of cashews?

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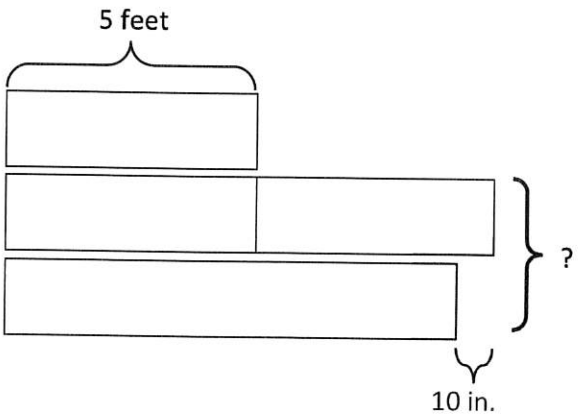
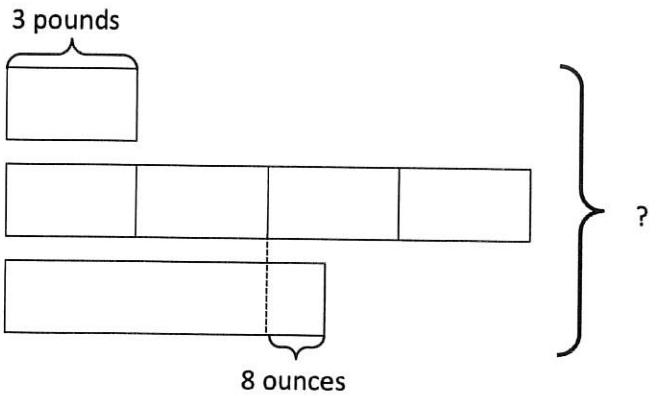
4. a. Label the rest of the tape diagram below. Solve for the unknown.



b. Write a problem of your own that could be solved using the diagram above.

5. Create a problem of your own using the diagram below, and solve for the unknown.



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Name _____ Date _____

1. Determine the following sums and differences. Show your work.

a. 3 qt + 1 qt = _____ gal

b. 2 gal 1 qt + 3 qt = _____ gal

c. 1 gal – 1 qt = _____ qt

d. 5 gal – 1 qt = _____ gal _____ qt

e. 2 c + 2 c = _____ qt

f. 1 qt 1 pt + 3 pt = _____ qt

g. 2 qt – 3 pt = _____ pt

h. 5 qt – 3 c _____ qt _____ c

2. Find the following sums and differences. Show your work.

a. 6 gal 3 qt + 3 qt = _____ gal _____ qt

b. 10 gal 3 qt + 3 gal 3 qt = _____ gal _____ qt

c. 9 gal 1 pt – 2 pt = _____ gal _____ pt

d. 7 gal 1 pt – 2 gal 7 pt = _____ gal _____ pt

e. 16 qt 2 c + 4 c = _____ qt _____ c

f. 6 gal 5 pt + 3 gal 3 pt = _____ gal _____ pt

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3. The capacity of a pitcher is 3 quarts. Right now, it contains 1 quart 3 cups of liquid. How much more liquid can the pitcher hold?

4. Dorothy follows the recipe in the table to make her grandma's cherry lemonade.

   a. How much lemonade does the recipe make?

Cherry Lemonade	
Ingredient	**Amount**
Lemon Juice	5 pints
Sugar Syrup	2 cups
Water	1 gallon 1 quart
Cherry Juice	3 quarts

   b. How many more cups of water could Dorothy add to the recipe to make an exact number of gallons of lemonade?

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Name _____ Date _____

1. Find the following sums and differences. Show your work.

   a. 7 gal 2 qt + 3 gal 3 qt = _____ gal _____ qt

   b. 9 gal 1 qt – 5 gal 3 qt = _____ gal _____ qt

2. Jason poured 1 gallon 1 quart of water into an empty 2-gallon bucket. How much more water can be added to reach the bucket's 2-gallon capacity?

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Name _____ Date _____

1. Determine the following sums and differences. Show your work.

a. 5 qt + 3 qt = _____ gal

b. 1 gal 2 qt + 2 qt = _____ gal

c. 1 gal – 3 qt = _____ qt

d. 3 gal – 2 qt = _____ gal _____ qt

e. 1 c + 3 c = _____ qt

f. 2 qt 3 c + 5 c = _____ qt

g. 1 qt – 1 pt = _____ pt

h. 6 qt – 5 pt = _____ qt _____ pt

2. Find the following sums and differences. Show your work.

a. 4 gal 2 qt + 3 qt = _____ gal _____ qt

b. 12 gal 2 qt + 5 gal 3 qt = _____ gal _____ qt

c. 7 gal 2 pt – 3 pt = _____ gal _____ pt

d. 11 gal 3 pt – 4 gal 6 pt = _____ gal _____ pt

e. 12 qt 5 c + 6 c = _____ qt _____ c

f. 8 gal 6 pt + 5 gal 4 pt = _____ gal _____ pt

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3. The capacity of a bucket is 5 gallons. Right now, it contains 3 gallons 2 quarts of liquid. How much more liquid can the bucket hold?

4. Grace and Joyce follow the recipe in the table to make a homemade bubble solution.

   a. How much solution does the recipe make?

Homemade Bubble Solution	
Ingredient	**Amount**
Water	2 gallons 3 pints
Dish Soap	2 quarts 1 cup
Corn Syrup	2 cups

   b. How many more cups of solution would they need to fill a 4-gallon container?

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Name _____ Date _____

1. Determine the following sums and differences. Show your work.

a. 1 ft + 2 ft = _____ yd

b. 3 yd 1 ft + 2 ft = _____ yd

c. 1 yd – 1 ft = _____ ft

d. 8 yd – 1 ft = _____ yd _____ ft

e. 3 in + 9 in = _____ ft

f. 6 in + 9 in = _____ ft _____ in

g. 1 ft – 8 in = _____ in

h. 5 ft – 8 in = _____ ft _____ in

2. Find the following sums and differences. Show your work.

a. 5 yd 2 ft + 2 ft = _____ yd _____ ft

b. 7 yd 2 ft + 2 yd 2 ft = _____ yd _____ ft

c. 4 yd 1 ft – 2 ft = _____ yd _____ ft

d. 6 yd 1 ft – 2 yd 2 ft = _____ yd _____ ft

e. 6 ft 9 in + 4 in = _____ ft _____ in

f. 4 ft 4 in + 3 ft 11 in = _____ ft _____ in

g. 34 ft 4 in – 8 in = _____ ft _____ in

h. 7 ft 1 in – 5 ft 10 in = _____ ft _____ in

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3. Matthew is 6 feet 2 inches tall. His little cousin Emma is 3 feet 6 inches tall. How much taller is Matthew than Emma?

4. In gym class, Jared climbed 10 feet 4 inches up a rope. Then, he continued to climb up another 3 feet 9 inches. How high did Jared climb?

5. A quadrilateral has a perimeter of 18 feet 2 inches. The sum of three of the sides is 12 feet 4 inches.

   a. What is the length of the fourth side?

   b. An equilateral triangle has a side length equal to the fourth side of the quadrilateral. What is the perimeter of the triangle?

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Name _____ Date _____

Determine the following sums and differences. Show your work.

1. 4 yd 1 ft + 2 ft _____ yd

2. 6 yd – 1 ft = _____ yd _____ ft

3. 4 yd 1 ft + 3 yd 2 ft = _____ yd

4. 8 yd 1 ft – 3 yd 2 ft = _____ yd _____ ft

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Name _____ Date _____

1. Determine the following sums and differences. Show your work.

a. 2 yd 2 ft + 1 ft = _____ yd

b. 2 yd – 1 ft = _____ yd _____ ft

b. 2 ft + 2 ft = _____ yd _____ ft

d. 5 yd – 1 ft = _____ yd _____ ft

e. 7 in + 5 in = _____ ft

f. 7 in + 7 in = _____ ft _____ in

g. 1 ft – 2 in = _____ in

h. 2 ft – 6 in = _____ ft _____ in

2. Find the following sums and differences. Show your work.

a. 4 yd 2 ft + 2 ft = _____ yd _____ ft

b. 6 yd 2 ft + 1 yd 1 ft = _____ yd _____ ft

c. 5 yd 1 ft – 2 ft = _____ yd _____ ft

d. 7 yd 1 ft – 5 yd 2 ft = _____ yd _____ ft

e. 7 ft 8 in + 5 in = _____ ft _____ in

f. 6 ft 5 in + 5 ft 9 in = _____ ft _____ in

g. 32 ft 3 in – 7 in = _____ ft _____ in

h. 8 ft 2 in – 3 ft 11 in = _____ ft _____ in

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3. Laurie bought 9 feet 5 inches of blue ribbon. She also bought 6 feet 4 inches of green ribbon. How much ribbon did she buy altogether?

4. The length of the room is 11 feet 6 inches. The width of the room is 2 feet 9 inches shorter than the length. What is the width of the room?

5. Tim's bedroom is 12 feet 6 inches wide. The perimeter of the rectangular-shaped bedroom is 50 feet.

   a. What is the length of Tim's bedroom?

   b. How much longer is the length of Tim's room than the width?

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Name _____ Date _____

1. Determine the following sums and differences. Show your work.

a. 7 oz + 9 oz = _____ lb

b. 1 lb 5 oz + 11 oz = _____ lb

c. 1 lb – 13 oz = _____ oz

d. 12 lb – 4 oz = _____ lb _____ oz

e. 3 lb 9 oz + 9 oz = _____ lb _____ oz

f. 30 lb 9 oz + 9 lb 9 oz _____ lb _____ oz

g. 25 lb 2 oz – 14 oz = _____ lb _____ oz

h. 125 lb 2 oz – 12 lb 3 oz = _____ lb _____ oz

2. The total weight of Sarah and Amanda's full backpacks is 27 pounds. Sarah's backpack weighs 15 pounds 9 ounces. How much does Amanda's backpack weigh?

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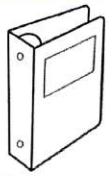
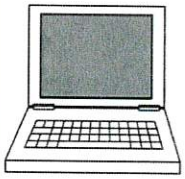
3. In Emma's supply box, a pencil weighs 3 ounces. Her scissors weigh 3 ounces more than the pencil, and a bottle of glue weighs three times as much as the scissors. How much does the bottle of glue weigh in pounds and ounces?

4. Use the information in the chart about Jodi's school supplies to answer the following questions:

   a. On Mondays, Jodi packs only her laptop and supply case into her backpack. How much does her full backpack weigh?

 Textbook 3 lb 8 oz	 Supply Case 1 lb	 Binder 2 lb 5 oz
 Laptop 5 lb 12 oz	 Notebook 11 oz	 Backpack (empty) 2 lb 14 oz

   b. On Tuesdays, Jodi brings her laptop, supply case, two notebooks, and two textbooks in her backpack. On Fridays, Jodi only packs her binder and supply case. How much less does Jodi's full backpack weigh on Friday than it does on Tuesday?

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Name _____ Date _____

Determine the following sums and differences. Show your work.

1. 4 lb 6 oz + 10 oz = _____ lb _____ oz

2. 12 lb 4 oz + 3 lb 14 oz = _____ lb _____ oz

3. 5 lb 4 oz – 12 oz = _____ lb _____ oz

4. 20 lb 5 oz – 13 lb 7 oz = _____ lb _____ oz

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Name _____ Date _____

1. Determine the following sums and differences. Show your work.

a. 11 oz + 5 oz = _____ lb

b. 1 lb 7 oz + 9 oz = _____ lb

c. 1 lb – 11 oz = _____ oz

d. 12 lb – 8 oz = _____ lb _____ oz

e. 5 lb 8 oz + 9 oz = _____ lb _____ oz

f. 21 lb 8 oz + 6 lb 9 oz = _____ lb _____ oz

g. 23 lb 1 oz – 15 oz = _____ lb _____ oz

h. 89 lb 2 oz – 16 lb 4 oz = _____ lb _____ oz

2. When David took his dog, Rocky, to the vet in December, Rocky weighed 29 pounds 9 ounces. When he took Rocky back to the vet in March, Rocky weighed 34 pounds 4 ounces. How much weight did Rocky gain?

3. Bianca had 6 identical jars of bubble bath. She put them all in a bag that weighed 2 ounces. The total weight of the bag filled with the six jars was 1 pound 4 ounces. How much did each jar weigh?

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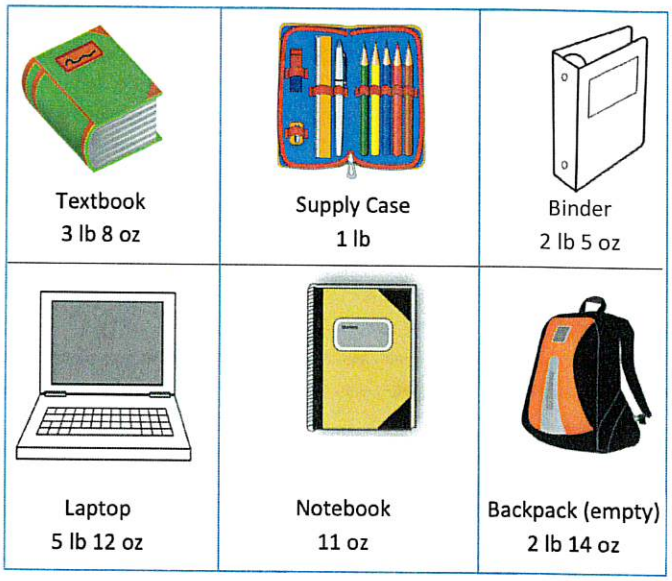
4. Use the information in the chart about Melissa's school supplies to answer the following questions:



   a. On Wednesdays, Melissa packs only two notebooks and a binder into her backpack. How much does her full backpack weigh on Wednesdays?

   b. On Thursdays, Melissa puts her laptop, supply case, two textbooks, and a notebook in her backpack. How much does her full backpack weigh on Thursdays?

   c. How much more does the backpack weigh with 3 textbooks and a notebook than it does with just 1 textbook and the supply case?

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Name _____ Date _____

1. Determine the following sums and differences. Show your work.

a. 23 min + 37 min = _____ hr

b. 1 hr 11 min + 49 min = _____ hr

c. 1 hr – 12 min = _____ min

d. 4 hr – 12 min = _____ hr _____ min

e. 22 sec + 38 sec = _____ min

f. 3 min – 45 sec = _____ min _____ sec

2. Find the following sums and differences. Show your work.

a. 3 hr 45 min + 25 min = _____ hr _____ min

b. 2 hr 45 min + 6 hr 25 min = _____ hr _____ min

c. 3 hr 7 min – 42 min = _____ hr _____ min

d. 5 hr 7 min – 2 hr 13 min = _____ hr _____ min

e. 5 min 40 sec + 27 sec = _____ min _____ sec

f. 22 min 48 sec – 5 min 58 sec = ____ min ____ sec

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3. At the cup-stacking competition, the first place finishing time was 1 minute 52 seconds. That was 31 seconds faster than the second place finisher. What was the second place time?

4. Jackeline and Raychel have 5 hours to watch three movies that last 1 hour 22 minutes, 2 hours 12 minutes, and 1 hour 57 minutes, respectively.

   a. Do the girls have enough time to watch all three movies? Explain why or why not.

   b. If Jackeline and Raychel decide to watch only the two longest movies and take a 30-minute break in between, how much of their 5 hours will they have left over?

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Name _____ Date _____

Find the following sums and differences. Show your work.

1. 2 hr 25 min + 25 min = _____ hr _____ min

2. 4 hr 45 min + 2 hr 35 min = _____ hr _____ min

3. 11 hr 6 min – 32 min = _____ hr _____ min

4. 8 hr 9 min – 6 hr 42 min = _____ hr_____ min

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Name _____ Date _____

1. Determine the following sums and differences. Show your work.

   a. 41 min + 19 min = _____ hr

   b. 2 hr 21 min + 39 min = _____ hr

   c. 1 hr – 33 min = _____ min

   d. 3 hr – 33 min = _____ hr _____ min

   e. 31 sec + 29 sec = _____ min

   f. 5 min – 15 sec = _____ min _____ sec

2. Find the following sums and differences. Show your work.

   a. 5 hr 30 min + 35 min = _____ hr _____ min

   b. 3 hr 15 min + 5 hr 55 min = _____ hr_____ min

   c. 4 hr 4 min – 38 min = _____ hr _____ min

   d. 7 hr 3 min – 4 hr 25 min = _____ hr _____ min

   e. 3 min 20 sec + 49 sec = _____ min _____ sec

   f. 22 min 37 sec – 5 min 58 sec = ____ min ____ sec

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3. It took 5 minutes 34 seconds for Melissa's oven to preheat to 350 degrees. That was 27 seconds slower than it took Ryan's oven to preheat to the same temperature. How long did it take Ryan's oven to preheat?

4. Joanna read three books. Her goal was to finish all three books in a total of 7 hours. She completed them, respectively, in 2 hours 37 minutes, 3 hours 9 minutes, and 1 hour 51 minutes.

   a. Did Joanna meet her goal? Write a statement to explain why or why not.

   b. Joanna completed the two shortest books in one evening. How long did she spend reading that evening? How long, with her goal in mind, did that leave her to read the third book?

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Name _____ Date _____

Use RDW to solve the following problems.

1. Paula's time swimming in the Ironman Triathlon was 1 hour 25 minutes. Her time biking was 5 hours longer than her swimming time. She ran for 4 hours 50 minutes. How long did it take her to complete all three parts of the race?

2. Nolan put 7 gallons 3 quarts of gas into his car on Monday and twice as much on Saturday. What was the total amount of gas put into the car on both days?

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3. One pumpkin weighs 7 pounds 12 ounces. A second pumpkin weighs 10 pounds 4 ounces. A third pumpkin weighs 2 pounds 9 ounces more than the second pumpkin. What is the total weight of all three pumpkins?

4. Mr. Lane is 6 feet 4 inches tall. His daughter, Mary, is 3 feet 8 inches shorter than her father. His son is 9 inches taller than Mary. How many inches taller is Mr. Lane than his son?

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Name _____ Date _____

Use RDW to solve the following problem.

Hadley spent 1 hour and 20 minutes completing her math homework, 45 minutes completing her social studies homework, and 30 minutes studying her spelling words. How much time did Hadley spend on homework and studying?

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Name _____ Date _____

Use RDW to solve the following problems.

1. On Saturday, Jeff used 2 quarts 1 cup of water from a full gallon to replace some water that leaked from his fish tank. On Sunday, he used 3 pints of water from the same gallon. How much water was left in the gallon after Sunday?

2. To make punch, Julia poured 1 quart 3 cups of ginger ale into a bowl and then added twice as much fruit juice. How much punch did she make in all?

3. Patti went swimming for 1 hour 15 minutes on Monday. On Tuesday, she swam twice as long as she swam on Monday. On Wednesday, she swam 50 minutes less than the time she swam on Tuesday. How much time did she spend swimming during that three-day period?

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4. Myah is 4 feet 2 inches tall. Her sister, Ally, is 10 inches taller. Their little brother is half as tall as Ally. How tall is their little brother in feet and inches?

5. Rick and Laurie have three dogs. Diesel weighs 89 pounds 12 ounces. Ebony weighs 33 pounds 14 ounces less than Diesel. Luna is the smallest at 10 pounds 2 ounces. What is the combined weight of the three dogs in pounds and ounces?

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4th Grade

Week of 3/16	Day 1	Day 2	Review
Objective	SWBAT define light energy and explain how it travels	SWBAT create a model to explain how we are able to see something	SWBAT Review Concepts from this week
Assignment Read the pages assigned and answer any questions associated	Day 1 Information	Day 2 Information	Review any feedback from your teacher and important vocabulary terms
To Be Graded	Day 1 Assignment	Day 2 Assignment	N/A
Week of 3/23	**Day 3**	**Day 4**	**Quiz**
Objective	SWBAT explain how shadows are formed	SWBAT explain why objects appear as different colors.	SWBAT show knowledge of content learned by taking a quiz
Assignment Read the pages assigned and answer any questions associated	p. 128-131	p. 101	Take the quiz p. 1-5 of student packet 2
To Be Graded	Day 3 Assignment	Day 4 Assignment	Quiz

Updated 3/18/2020

Week of 3/31	Day 5	Day 6	Review
Objective	SWBAT review what fossils tell us about the Earth's history	SWBAT review slow changes to Earth's surface	SWBAT Review Concepts from this week
Assignment Read the pages assigned and answer any questions associated	*What Can Fossil Tell Us About Earth's History?* Pages 61-64	*What Are Slow Surface Changes?* Pages 57-60	Review any feedback from your teacher and important vocabulary terms
To Be Graded	Pages 63-64	Workbook Pages 59-60	N/A
Week of 4/6	**Day 7**	**Day 8**	**Spring Break**
Objective	SWBAT review renewable resources and give examples of them	SWBAT review nonrenewable resources and give examples of them	**No Instruction Spring Break 4/9-4/13**
Assignment Read the pages assigned and answer any questions associated	*What Are Renewable Resources?* Pages 65-68	*What Are Nonrenewable Resources?* Pages 69-72	
To Be Graded	Pages 67-68	Pages 71-72	

Updated 3/18/2020

4th Distance Learning Quiz

Name: _____

March 27, 2020

CONTENT KNOWLEDGE

1. You see a flower in a field. What is the path of light that makes it possible for you to see the flower?

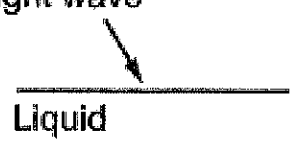
- **A.** Sun to eye to flower
- **B.** Eye to flower to sun
- **C.** Eye to flower to eye
- **D.** Sun to flower to eye

2. Reflection happens when light strikes and then _____ a surface.

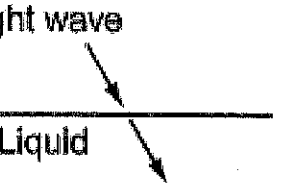
- **A.** breaks
- **B.** bounces off
- **C.** is absorbed by
- **D.** travels through

3. Which diagram shows light reflecting off of a surface?

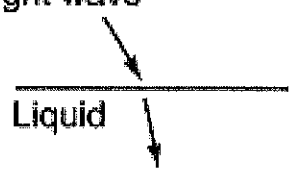
A. Light wave



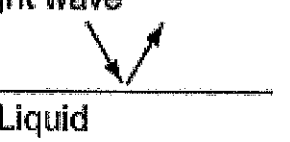
B. Light wave



C. Light wave



D. Light wave



Use the information and your knowledge of science to answer the question

Some car side mirrors have a small extra mirror. This extra mirror is circular and curved like a dome. The picture shows what the driver sees in one of these side mirrors.

Source: ssimone/Shutterstock, Inc.

4. Which statements **best** explain how the small curved mirror helps a driver see objects near the car?

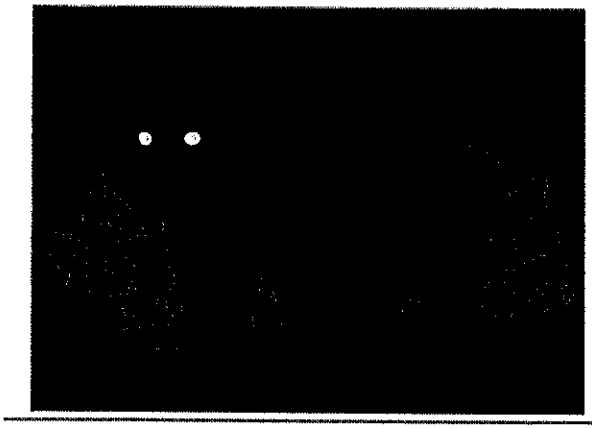
Select the **two** correct answers.

A. Light from beside the car reflects into the driver's eyes.
B. Light from many directions reflects into the driver's eyes.
C. Light from the car's other mirrors reflects into the driver's eyes.
D. The driver can see only a few objects near the car.
E. The driver can see objects in many places near the car.

Use the information and your knowledge of science to answer the questions

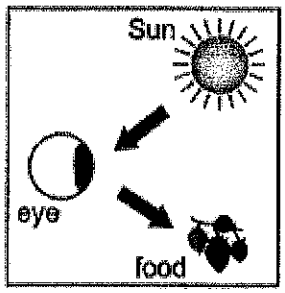
Black bears use their vision and other senses to help them find food. Black bears are mostly active at night, and because of this can see very well at night. This is because there is a thin layer of shiny material on the insides of their eyes. This helps their eyes capture more light and makes their eyes appear to glow at night. This is shown in Figure 1.

Figure 1. Black Bear at Night

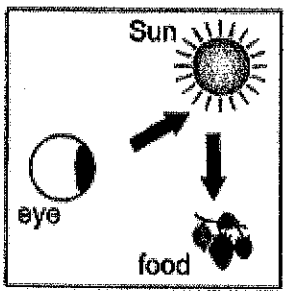


5. Which model shows the path of light that allows a bear to see its food during the day?

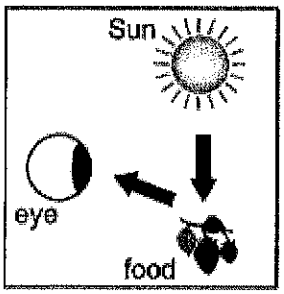
A.



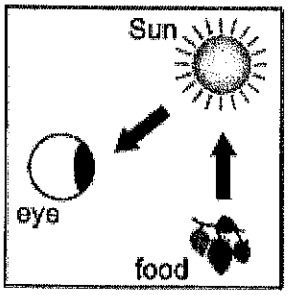
B.



C.



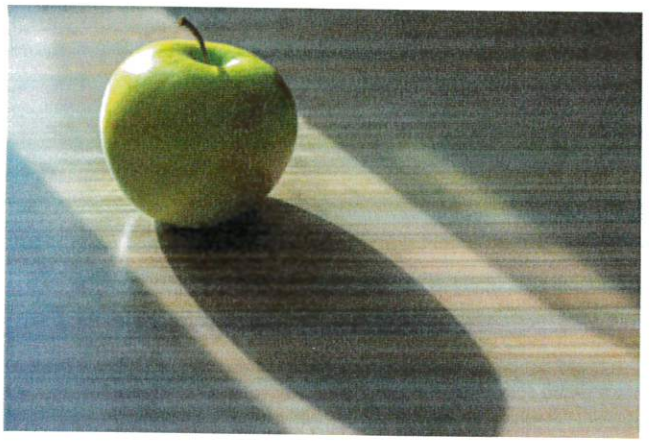
D.



6. A bear is hunting during a night when the Moon is full. A large cloud moves in front of the Moon and blocks the Moon's light. Explain whether the bear can see better before the cloud covers the Moon or after the light is blocked. Support your answer with evidence about how a bear is able to see and how a change in the amount of light affects the bear's vision.

Use the information and your knowledge of science to answer the questions.

A green apple is sitting on a table. Imagine you are in a room with the apple, viewing it from the same angle shown in the photograph.



7. Light is entering through a window. **Draw a model** to describe the events next that allow you to see the apple.

8. The apple is casting a shadow on the table. Why can you still see the surface of the table even when it is in the apple's shadow?

A. The table is still directly lit by other light sources in the room.
B. The apple is not blocking any of the light that reaches the table.
C. Light from around the room is reflected and some still reaches the table.
D. The table is very high on the reflectiveness scale.

What Are Slow Surface Changes?

Moving water can make rocks tumble and bump against each other. The rocks bump over and over again. The rocks wear down. Sharp edges become smooth, and the rocks get smaller. This is an example of weathering.

Weathering is the slow wearing away of rock into smaller pieces. Moving water, ice, plant roots, and chemicals are causes of weathering.

Most rocks have tiny cracks in them. In places where it gets cold, water can get in the cracks and freeze. Ice makes the cracks bigger. Periods of freezing and melting can cause rocks to break.

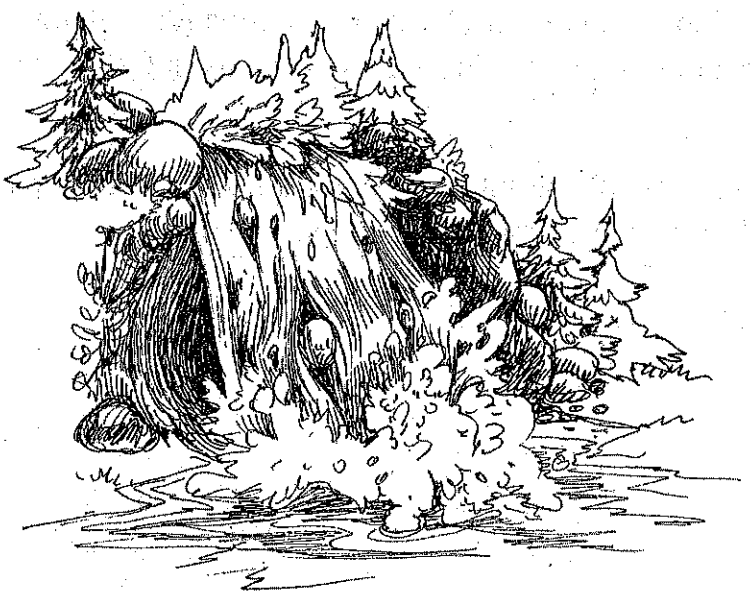
The same kind of thing happens when plant roots grow into cracks in a rock. The growing roots push open the cracks. After some time the rock breaks.

Erosion

You know that weathering is the slow wearing away of rock into smaller pieces. Erosion carries away the small pieces of rock. Erosion is the movement of rock material from one place to another.

Water is the main cause of erosion. When water flows over soil, it picks up tiny pieces of the soil. When the water moves downhill, it carries the tiny pieces with it.

Erosion of rock takes a very long time. First, the water of a fast-moving river cuts a dip into the rock. Then, the running water carries away more and more material. Over a great many years, a deep canyon forms.



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Wind is another cause of erosion. In some places, there are few plants. Plants are needed to hold soil in place. Without plants, the wind easily picks up dry soil.

Erosion is also caused by glaciers. A glacier is a large sheet of slow-moving ice. As it moves, a glacier can dig out huge areas of rock and soil. A glacier can dig out a valley or a canyon.

Deposition

Erosion moves bits of sand, soil, and rock. Where do these bits go? Remember that these bits are called sediment. The dropping of sediment after it is moved is called deposition. There are three main causes of deposition—wind, glaciers, and moving water.

The wind picks up and carries dry sand. When the wind stops, the sand drops. Sand dunes are made by wind and deposition. As glaciers move, they carry rocks and soil. A melting glacier drops the rocks and soil.

Oceans and rivers also cause deposition. Ocean waves wear away some beaches. New beaches are made through deposition. Rivers slow down as they flow into a lake or ocean. Sediment settles when the moving water slows. The sediment can build up at the mouth of the river. This makes a landform called a delta.

Mountain Building

Mountains form in different ways. Some mountains form as parts of Earth's crust move. This happens slowly, over millions of years. Volcanoes can form mountains much quicker, over thousands of years.

Sometimes huge parts of Earth's crust crash together. The crust gets pushed up and folded. The Himalayas are folded mountains. Some mountains form along a fault. Parts of Earth's crust move upward along the fault. The Sierra Nevadas in California and Nevada are fault-block mountains.

Mountains may form without folding or faulting. Pressure simply pushes up Earth's crust. The Adirondack Mountains in New York formed this way.

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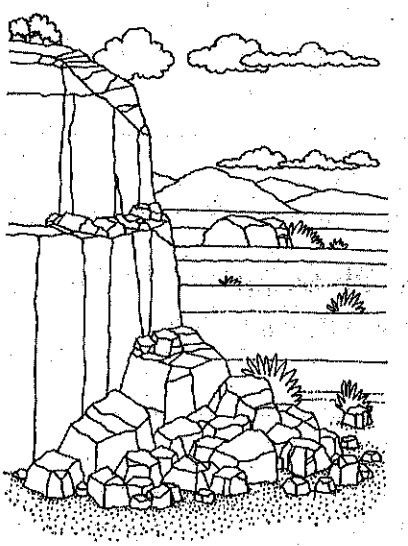
Name _____ Date _____

What Are Slow Surface Changes?

Use the diagram below to answer the question.

Date	Sand Deposit Depth at Cliff Base
1970	2.5 cm (1 in.)
1975	5.0 cm (2 in.)
1980	10.0 cm (4 in.)
1985	12.5 cm (5 in.)
1990	15.0 cm (6 in.)
1995	20.0 cm (8 in.)
2000	25.0 cm (10 in.)



1. What is happening to the cliff?

_____

_____

Fill in the blanks.

2. Water is the main cause of _____.

3. Wind, glaciers, and moving water are the main causes of

_____.

4. When huge sections of Earth's crust collide, the crust gets pushed up and forms

_____.

5. Some mountains form when sections of Earth's crust move upward along a

_____.

6. Mountains may also form when _____ pushes up Earth's crust without folding or faulting.

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Name _____ Date _____

7. Main Idea What three processes slowly change Earth's surface?

_____

_____

8. Vocabulary How do *erosion* and *weathering* differ?

_____

_____

9. Reading Skill: Sequence Explain how weathering, erosion, and deposition cause changes to Earth's surface.

_____

_____

_____

10. Critical Thinking: Apply Give an example of erosion or deposition that you have observed.

_____

_____

11. Inquiry Skill: Infer You notice deep grooves on a hillside building site. Soil and gravel have been washed across the road. What can you infer has happened?

_____

_____

_____

12. Test Prep Ocean waves change beaches through

A chemical weathering.

B volcanic eruptions.

C erosion and deposition.

D movement of Earth's crust.

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What Can Fossils Tell Us About Earth's History?

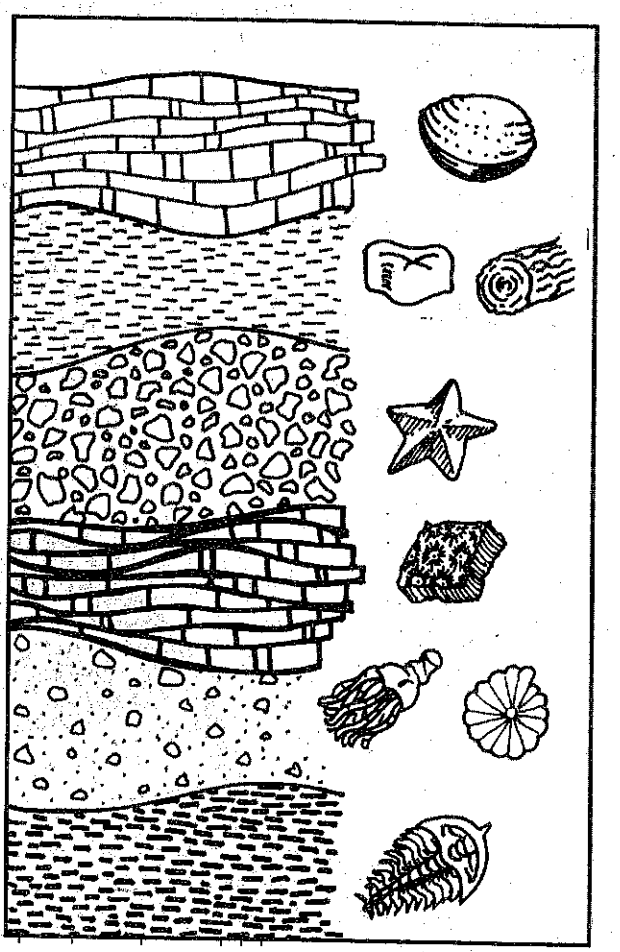
Understanding Rock Layers

Some scientists learn about Earth's past by studying Earth's rocks. Such scientists are called geologists. By studying the different layers in rocks, called strata, geologists can figure out the order of events in Earth's history.

The layers of rock exposed in a cliff or road cut are not all the same age. The oldest layers are usually the ones on the bottom. The youngest layers are usually the ones on top. Some of these rock layers may contain fossils. A fossil is the remains of a plant or animal from long ago. Fossils can tell scientists a lot about the age of rocks. They also reveal a lot about how living things and the climate have changed over time.

Studying Fossils

Scientists who study fossils are called paleontologists. Paleontologists mainly find fossils in sedimentary rocks. Living things usually decay or are eaten when they die. But sometimes they are buried quickly by sediment. The sediment helps preserve them. The hard parts of animals, like teeth or bones, are more likely to become fossils. But sometimes whole organisms are preserved. Animal footprints can be preserved, too. Animal footprint fossils are called trace fossils. A trace fossil provides evidence of an animal's movement. However, it doesn't contain any part of the actual animal.



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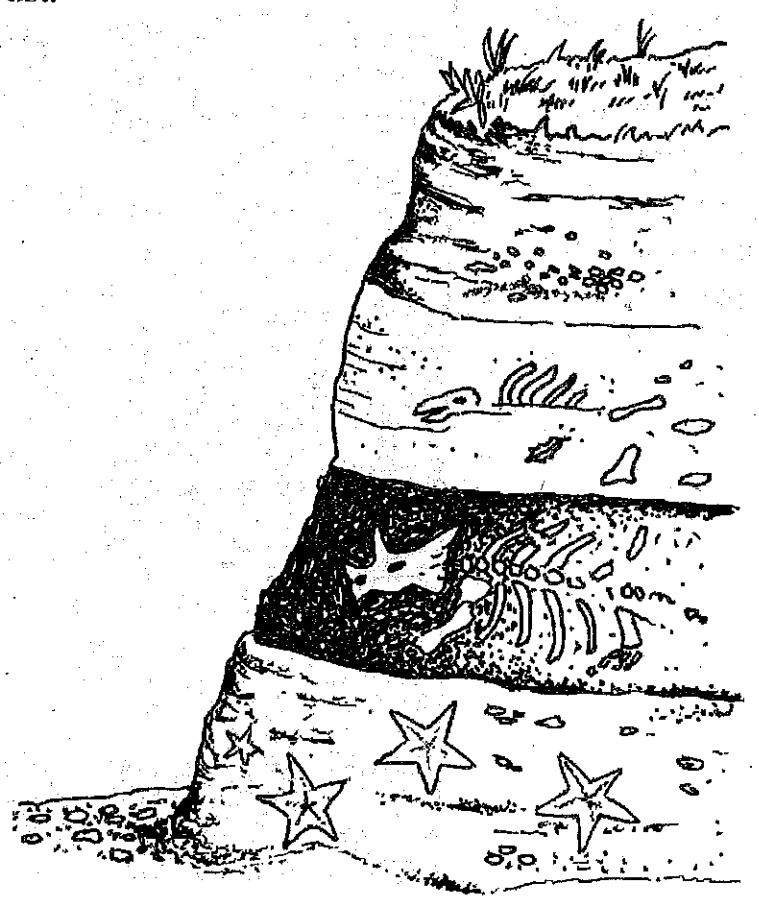
Remember that sedimentary rock is made up of layers and layers of deposited sediment. The fossils found on the bottom layers of a sedimentary rock are very different from the ones in the top layers. That is because the preserved organisms in the bottom layers lived a long time ago. As a result, a sedimentary rock with fossils is like a history book.

What Fossils Tell Us

Fossils can help scientists figure out how old a rock is. They also tell us about the history of living things. The types of fossils found in each layer change as you get higher up a rock. This is because different types of plants and animals lived during different time periods. The oldest layers sometimes contain fish and other sea life. The next layers may also contain fossils of amphibians, reptiles and small mammals. The youngest layers may include larger mammals, birds, and even humans. The layers give a picture of how living things have changed over time. Fossils reveal our geologic history.

We can also learn about Earth's different environments through fossils. For example, a rock in a dry area might contain the fossils of animals or plants that live in the sea. These fossils tell you that the area used to be covered by water. If a fossil of a cool climate plant is found in a warm climate, the fossil tells you that the area used to be cool. The position of the fossil layers in rocks can also reveal evidence of earthquakes, volcanoes, and movement in Earth's crust.



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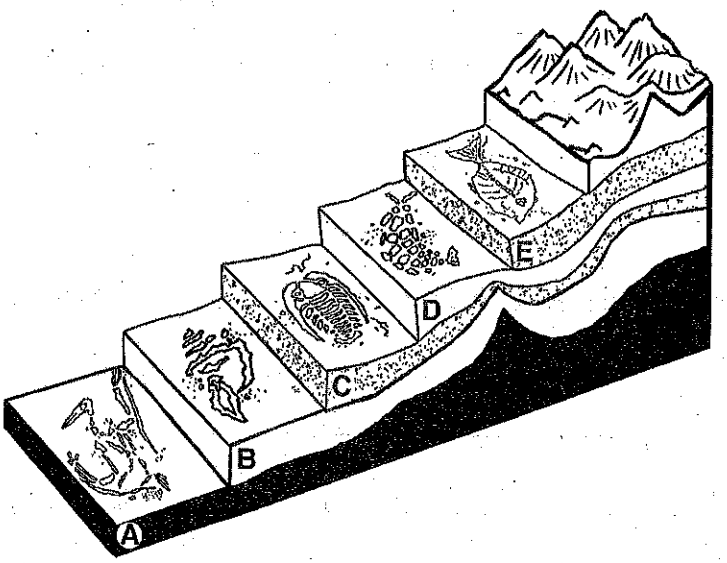
Name _____ Date _____

What Can Fossils Tell Us About Earth's History?

Use the diagram below to answer questions 1 and 2.



1. Which fossil is the oldest? How can you tell?

_____

2. Which fossil is the youngest? How can you tell?

_____

Fill in the blanks.

3. _____ are the different layers of rock.

4. A rock layer at the bottom of a road cut is _____ than one at the top.

5. Fossils are the _____ of living things.

6. Animal tracks preserved in rock are called _____ fossils.

7. Fossils may form when plants or animals are buried by _____.

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Name _____ Date _____

8. **Main Idea** What do fossils tell us about Earth's past?

_____

_____

9. **Vocabulary** What does it mean when an organism has been been preserved whole?

_____

_____

10. **Reading Skill: Compare and Contrast** How are geologists and paleontologists the same? How are they different?

_____

_____

11. **Critical Thinking: Infer** Suppose that a paleontologist finds a fossil of a crab. The fossil is located in a layer of a rock high on a mountain. What does this tell you about the rock layer?

_____

_____

12. **Inquiry Skill: Use Models** How could you make a model of a fossil?

_____

_____

_____

13. **Test Prep** Which of the following animal's remains would be found in the oldest rock layer?

A Eagle

B Dinosaur

C Kangaroo

D Elephant

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What Are Renewable Resources?

A natural resource is a material found on Earth that can be used by people. Trees, soil, and minerals are a few natural resources. Some natural resources, such as oil, are nonrenewable.

A nonrenewable resource is one that cannot be replaced once it is used up or that takes thousands of years to be replaced.

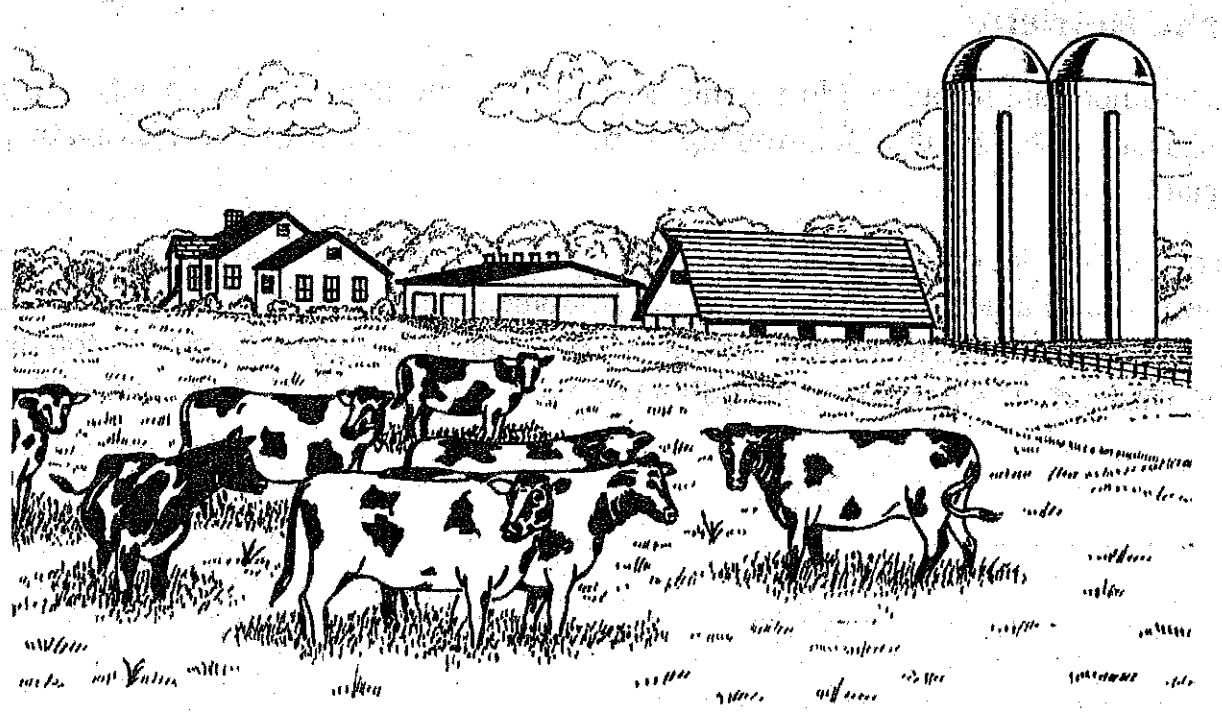
A renewable resource is a natural resource that can be replaced or can renew itself. Air and water are renewable resources that all living things need.

Plants and Animals

Plants and animals are renewable resources. Animals get energy by eating plants or by eating other animals that eat plants.

Plants help clean and renew the air. Plants make their own food. As they do this, they take in a gas called carbon dioxide. They also let go of a gas called oxygen. Animals and plants both need oxygen from the air. Without plants, the animals would use up all the oxygen.

When old plants die, new plants often grow in their place naturally. People who farm help new plants grow. After a food crop is picked, a new crop can be planted.



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Water as a Resource

All living things need water to live. But most of Earth's water is found in oceans. Most plants and animals cannot use this water. It has too much salt in it.

Only a small amount of Earth's water is fresh water. More than half of the fresh water is contained in glaciers and the polar ice caps. The rest is under the ground, in streams and lakes, inside plants and animals, or in the atmosphere. Only the water under the ground and in streams and lakes is available for drinking and washing.

The supply of fresh water is renewed through the water cycle. In this cycle, energy from the sun heats Earth's water. The heat changes the water into a gas called water vapor. The process in which liquid water changes to water vapor is called evaporation. When water evaporates, anything that is mixed with the water is left behind.

When water vapor cools, it forms tiny drops of liquid water. Condensation is the process in which water vapor turns back into liquid water. This happens all of the time, but when there is more condensation than evaporation, a cloud may form.

Clouds are made when drops of water form around small particles in the air. When the drops become too heavy, they fall from the clouds as rain, snow, sleet, or hail.

Water that falls to Earth is called precipitation. Precipitation returns fresh water to Earth. Some of it flows into the ground. The rest of it flows into oceans, lakes, and rivers. The water cycle repeats again and again.

Soil and Nutrients

Soil is an important resource. Most plants need soil to grow. Soil gives the plants support and nutrients. If the soil used for growing crops is well cared for, it can be used again and again.

Some crops use a lot of nutrients as they grow. If a farmer plants the same crop in the same soil every year, it uses up some of the nutrients. Some crops help put nutrients back into the soil. Many farmers change the crops that they grow. One time they will grow a crop that uses up nutrients. The next time they will grow a crop that gives back those nutrients.

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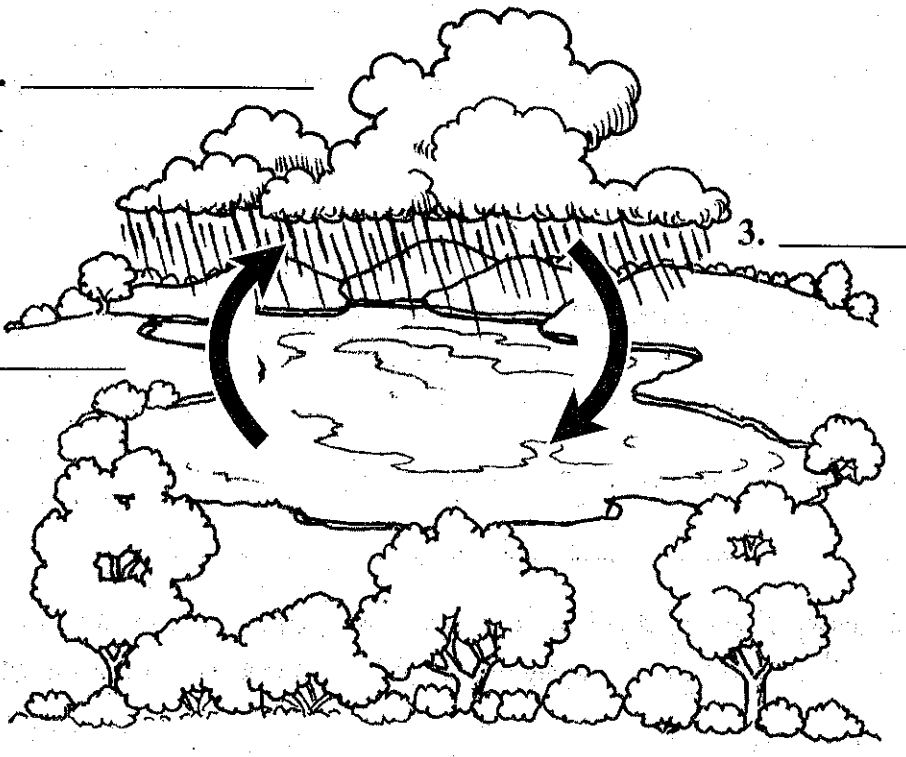
What Are Renewable Resources?

Fill in the blanks in the diagram below.



Write answers to the questions on the lines below.

4. How do plants help clean and renew air?

_____

_____

5. What is the water cycle?

_____

_____

6. Why do some farmers rotate their crops?

_____

_____

_____

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Name _____ Date _____

7. Main Idea What is a renewable resource?

_____

_____

8. Vocabulary Use the term *evaporation* in a sentence about the water cycle.

_____

_____

9. Reading Skill: Main Idea and Details Explain why water is a renewable resource.

_____

_____

_____

10. Critical Thinking: Evaluate Someone says that plants are a more important natural resource than water. Do you agree or disagree? Give reasons for your answer.

_____

_____

_____

11. Test Prep One example of a natural resource that is renewable is

A oil.

B coal.

C fresh water.

D gold.

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What Are Nonrenewable Resources?

People use energy every day. A small amount of energy comes from renewable resources. These resources include the sun, wind, moving water, and heat from inside Earth.

However, most of the energy used in the United States comes from nonrenewable resources called fossil fuels. A fossil fuel is made from the remains of ancient plants and animals. Fossil fuels are oil, natural gas, and coal. These fuels began forming on Earth more than 300 million years ago.

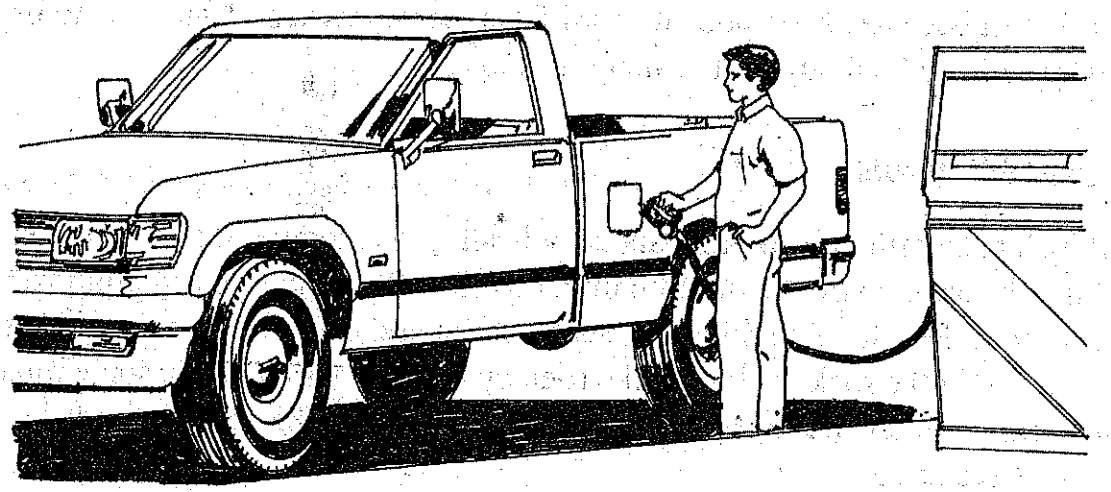
Coal

Coal is the most common fossil fuel on Earth. Coal is formed from ancient swamp plants. The energy stored in coal is used mainly to make electricity. It is also used for heating.

Oil and Natural Gas

Oil and natural gas are also fossil fuels. They are formed much like coal. But instead of swamp plants, they are made from animals and plants that lived in Earth's oceans. Over millions of years, heat and pressure changed the remains of these plants and animals into oil and natural gas.

Oil is used as fuel for cars and trucks. It is also used to make things like plastics, medicines, and cloth. Natural gas is used to heat many homes and businesses. It is also used to run some machines, such as stoves.



Oil is used to make gas, motor oil, and asphalt for roads.

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Fossil Fuels—Pro and Con

As sources of energy, there are some advantages to using fossil fuels. They are fairly easy to get out of the ground. They are easy to move from place to place. They are often cheaper than other forms of energy. There are enough supplies now to meet people's needs for the present time.

There are also very serious problems with using fossil fuels. All fossil fuels are nonrenewable. Scientists have calculated that at the rate oil and natural gas are used today, supplies will very likely run out within 100 years.

Pollution is the adding of harmful materials to the air, water, and soil. Taking fossil fuels out of the ground pollutes water supplies. Taking fossil fuels from under the ocean can cause oil spills. The pollution resulting from the use of fossil fuels can never really be cleaned up.

Renewable energy sources will not run out, and they do not produce pollution. But they can cost a lot. Scientists are working to find ways to make renewable energy sources cheaper and easier to use.

Layers of Soil

Soil is made up of many things, including humus and tiny pieces of rock. The process of making soil takes a long time. In fact, the top inch of soil in some places started forming about 500 years ago.

Soil can be thought of as both a renewable and a nonrenewable resource. Nutrients lost from soil can be replaced. This means soil can be thought of as a renewable resource. But some soil is lost because of erosion. When this happens, it takes a long time to be replaced. That is why soil can be thought of as nonrenewable.

Rocks and Minerals

Living things need minerals to grow and stay healthy. Remember that rock is a solid material that is made up of one or more minerals. Rocks are always changing very slowly in the rock cycle. People mine minerals, such as iron and copper. Over time, these minerals will be replaced in the rock cycle. But the rock cycle is very slow. Plus, some minerals are rare, which means there are not a lot of them. That is why minerals are thought of as nonrenewable resources.

Name _____ Date _____

What Are Nonrenewable Resources?

Write answers to the questions on the lines below.

1. What are fossil fuels?

2. How is coal used?

3. How were oil and natural gas formed?

4. What are some of the benefits of using fossil fuels?

5. What are some drawbacks to using fossil fuels?

6. Why can rich soil be considered a nonrenewable resource?

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Name _____ Date _____

7. **Main Idea** Why are minerals nonrenewable resources?

8. **Vocabulary** Explain the difference between oil and coal.

9. **Reading Skill: Compare and Contrast** Consider what you learned about renewable energy resources, like solar power. Compare solar power and natural gas. Explain the advantages and disadvantages of each.

10. **Critical Thinking: Predict** What might happen when oil and natural gas run out?

11. **Inquiry Skill: Hypothesize** What would happen if an area had increased erosion?

12. **Test Prep** Which is a nonrenewable resource?

A plants
B water
C soil
D sunlight

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4th Grade: 2nd Packet

	April 1	April 2	April 3	April 6	April 7
Assignment	Read: Pros and Cons of the Ind. Revolution		Definitions: • Supply: how much of something is available • Demand: how much of something people want Read	Great Migration Map Read: The Great Migration	Read: Why Move West
To Be Graded	Define and provide examples of the economic terms profit and risk. Describe the relationship between profit and risk Explain how the terms profit and risk relate to the industrial revolution.	Using the terms profit and risk, describe two considerations immigrants made when leaving their home countries in search of employment in America.	How did industrial inventions affect supply of goods, available jobs, and consumer demand? Write a paragraph response. Use the words industrial inventions, supply, demand and jobs in your answer.	1. What was the Great Migration? A. A mass migration of people from the Old World to the New World. B. A mass migration of people from Jamestown to Plymouth. C. A mass migration of Italian-Americans from the North to the South. D. A mass migration of African-Americans from the South to other parts of the country.	1. Pick one of the following groups of immigrants and explain in complete sentences why they migrated (*motivations*) and where they migrated to: a. American Pioneers b. European Immigrants c. Asian Immigrants d. African Americans migrating from the South to the North e. Other (explain) 2. Many immigrants came to America

				2. How did the Great Migration change the culture of American Cities? **4.2.5** A. It led to new forms of Art, Culture, and Expression in cities like Harlem. B. It led to smaller cities in the North and larger cities in the South. C. It increased the African-American population in the South, and ended segregation. D. It did not lead to any new forms of Art, Culture, and Expression; things stayed the same. 3. **Journal Entry:** You are a "great migrator" who travels from New Orleans to a city in the North, Midwest, or West. Write down three sentences describing your experience.	because it was perceived as the land of economic opportunity. What does this mean? A. America was seen as a place that did not allow immigrants. B. America was seen as a place that would be just as bad or worse for immigrants than where they currently lived. C. America was seen as a place where it was difficult to make a living. D. America was seen as a place where jobs were available.
	April 8	**Spring Break**	**Spring Break**	**Spring Break**	**Return (14th)**

Assignment	Quiz yourself! Use the study guide to write your own 15 question test.				
To Be Graded	15 question test				

The Rise of the Machines: Pros and Cons of the Industrial Revolution

WRITTEN BY: John P. Rafferty SHARE:

Library of Congress, Washington, D.C. (LC-DIG-nclc-01581)

The Industrial Revolution, the period in which agrarian and handicraft economies shifted rapidly to industrial and machine-manufacturing-dominated ones, began in the United Kingdom in the 18th century and later spread throughout many other parts of the world. This economic transformation changed not only how work was done and goods were produced, but it also altered how people related both to one another and to the planet at large. This wholesale change in societal organization continues today, and it has produced several effects that have rippled throughout Earth's political, ecological, and cultural spheres. The following list describes some of the great benefits as well as some of the significant shortcomings associated with the Industrial Revolution.

Pro: Goods Became More Affordable and More Accessible

ADVERTISING

Factories and the machines that they housed began to produce items faster and cheaper than could be made by hand. As the supply of various items rose, their cost to the consumer declined (*see* supply and demand). Shoes, clothing, household goods, tools, and other items that enhance people's quality

of life became more common and less expensive. Foreign markets also were created for these goods, and the balance of trade shifted in favor of the producer—which brought increased wealth to the companies that produced these goods and added tax revenue to government coffers. However, it also contributed to the wealth inequality between goods-producing and goods-consuming countries.

Pro: The Rapid Evolution of Labor-Saving Inventions

The rapid production of hand tools and other useful items led to the development of new types of tools and vehicles to carry goods and people from one place to another. The growth of road and rail transportation and the invention of the telegraph (and its associated infrastructure of telegraph—and later telephone and fiber optic—lines) meant that word of advances in manufacturing, agricultural harvesting, energy production, and medical techniques could be communicated between interested parties quickly. Labor-saving machines such as the spinning jenny (a multiple-spindle machine for spinning wool or cotton) and other inventions, especially those driven by electricity (such as home appliances and refrigeration) and fossil fuels (such as automobiles and other fuel-powered vehicles), are also well-known products of the Industrial Revolution.

Pro: The Rapid Evolution of Medicine

The Industrial Revolution was the engine behind various advances in medicine. Industrialization allowed medical instruments (such as scalpels, microscopelenses, test tubes, and other equipment) to be produced more quickly. Using machine manufacturing, refinements to these instruments could more efficiently roll out to the physicians that needed them. As communication between physicians in different areas improved, the details behind new cures and treatments for disease could be dispersed quickly, resulting in better care.

Pro: Enhanced Wealth and Quality of Life of the Average Person

Mass production lowered the costs of much-needed tools, clothes, and other household items for the common (that is, nonaristocratic) people, which allowed them to save money for other things and build personal wealth. In addition, as new manufacturing machines were invented and new factories were built, new employment opportunities arose. No longer was the average person so closely tied to land-related concerns (such as being dependent upon the wages farm labor could provide or the plant and animal products farms could produce). Industrialization reduced the emphasis on landownership as the chief source of personal wealth. The rising demand for manufactured goods meant that average

people could make their fortunes in cities as factory employees and as employees of businesses that supported the factories, which paid better wages than farm-related positions. Generally speaking, people could save some portion of their wages, and many had the opportunity to invest in profitable businesses, thereby growing their family "nest eggs." The subsequent growth of the middle class in the United Kingdom and other industrializing societies meant that it was making inroads into the pool of economic power held by the aristocracy. Their greater buying power and importance in society led to changes in laws that were updated to better handle the demands of an industrialized society.

Pro: The Rise of Specialist Professions

As industrialization progressed, more and more rural folk flocked to the cities in search of better pay in the factories. To increase the factories' overall efficiency and to take advantage of new opportunities in the market, factory workers were trained to perform specialized tasks. Factory owners divided their workers into different groups, each group focusing on a specific task. Some groups secured and transported to the factories raw materials (namely iron, coal, and steel) used in mass production of goods, while other groups operated different machines. Some groups of workers fixed machines when they broke down, while others were charged with making improvements to them and overall factory operation.

As the factories grew and workers became more specialized, additional teachers and trainers were needed to pass on specialized skills. In addition, the housing, transportation, and recreational needs of factory workers resulted in the rapid expansion of cities and towns.
Governmental bureaucracies grew to support these, and new specialized departments were created to handle traffic, sanitation, taxation, and other services. Other businesses within the towns also became more specialized as more builders, physicians, lawyers, and other workers were added to handle the various needs of the new residents.

Con: Overcrowding of Cities and Industrial Towns

The promise of better wages attracted migrants to cities and industrial towns that were ill-prepared to handle them. Although initial housing shortages in many areas eventually gave way to construction booms and the development of modern buildings, cramped shantytowns made up of shacks and other forms of poor-quality housing appeared first. Local sewerage and sanitation systems were overwhelmed by the sudden influx of people, and drinking water was often contaminated. People living in such close proximity, fatigued by poor working conditions, and drinking unsafe water

presented ideal conditions for outbreaks of typhus, cholera, smallpox, tuberculosis, and other infectious diseases. The need to treat these and other diseases in urban areas spurred medical advances and the development of modern building codes, health laws, and urban planning in many industrialized cities.

Con: Pollution and Other Environmental Ills

With relatively few exceptions, the world's modern environmental problems began or were greatly exacerbated by the Industrial Revolution. To fuel the factories and to sustain the output of each and every type of manufactured good, natural resources(water, trees, soil, rocks and minerals, wild and domesticated animals, etc.) were transformed, which reduced the planet's stock of valuable natural capital. The global challenges of widespread water and air pollution, reductions in biodiversity, destruction of wildlife habitat, and even global warming can be traced back to this moment in human history. The more countries industrialize in pursuit of their own wealth, the greater this ecological transformation becomes. For example, atmospheric carbon dioxide, a primary driver of global warming, existed in concentrations of 275 to 290 parts per million by volume (ppmv) before 1750 and increased to more than 400 ppmv by 2017. In addition, human beings use more than 40% of Earth's land-based net primary production, a measure of the rate at which plants convert solar energy into food and growth. As the world's human population continues to grow and more and more people strive for the material benefits promised by the Industrial Revolution, more and more of Earth's resources are appropriated for human use, leaving a dwindling stock for the plants and animals upon whose ecosystem services (clean air, clean water, etc.) the biosphere depends.

Con: Poor Working Conditions

When factories sprung up in the cities and industrial towns, their owners prized production and profit over all else. Worker safety and wages were less important. Factory workers earned greater wages compared with agricultural workers, but this often came at the expense of time and less than ideal working conditions. Factory workers often labored 14–16 hours per day six days per week. Men's meager wages were often more than twice those of women. The wages earned by children who worked to supplement family income were even lower. The various machines in the factory were often dirty, expelling smoke and soot, and unsafe, both of which contributed to accidents that resulted in worker injuries and deaths. The rise of labor unions, however, which began as a reaction to child labor, made factory work less grueling and less dangerous. During the first half of the 20th century,

child labor was sharply curtailed, the workday was reduced substantially, and government safety standards were rolled out to protect the workers' health and well-being.

Con: The Rise in Unhealthy Habits

As more cheap labor-saving devices become available, people performed less strenuous physical activity. While grueling farm-related labor was made far easier, and in many cases far safer, by replacing animal power and human power with tractors and other specialized vehicles to till the soil and plant and harvest crops, other vehicles, such as trains and automobiles, effectively reduced the amount of healthy exercise people partook in each day. Also, many professions that required large amounts of physical exertion outdoors were replaced by indoor office work, which is often sedentary. Such sedentary behaviors also occur away from work, as television programs and other forms of passive entertainment came to dominate leisure time. Added to this is the fact that many people eat food that has been processed with salt and sugar to help with its preservation, lower its cooking time, and increase its sweetness. Together, these lifestyle trends have led to increases in lifestyle-related diseases associated with obesity, such as heart disease, diabetes, and certain forms of cancer.

NEXT DAY

Immigrants: America's Industrial Growth Depended on Them

THE MAKING OF A NATION -- a program in Special English by the Voice of America.

In our last program, we told the story of the Statue of Liberty, given to the United States by the people of France. The "Lady of Liberty" holds a bright torch high over the harbor of New York City. Her torch of freedom was a welcome signal to millions of immigrants arriving to begin a new life in America.

American life was changing. And it was changing quickly. Before 1860, the United States had an agricultural economy. After 1860, the country began to change from an agricultural to an industrial economy.

In 1860, American shops and factories produced less than 2,000 million dollars' worth of goods. Thirty years later, in 1890, American factories produced ten thousand million dollars' worth. By then, more than five million persons were working in factories and mines. Another three million had jobs in the building industries and transportation.

Year after year, production continued to increase. And the size of the industrial labor force continued to grow.

A great many of the new industrial workers came from American farms. Farm work was hard, and the pay was low. Young men left the family farms as soon as they could. They went to towns and cities to look for an easier and better way of life. Many of them found it in the factories. A young man who worked hard and learned new skills could rise quickly to better and better jobs.

This was not only true for farmers, but also for immigrants who came to the United States from foreign countries. They came from many different lands and for many different reasons. But all came with the same hope for a better life in a new world.

In the 1850s, America's industrial revolution was just beginning. Factories needed skilled workers -- men who knew how to do all the necessary jobs. Factory owners offered high pay to workers who had these skills.

British workers had them. Many had spent years in British factories. Pay was poor in Britain, and these skilled workers could get much more money in America. So, many of them came. Hundreds of thousands. Some factories -- even some industries -- seemed completely British.

Cloth factories in Fall River, Massachusetts, were filled with young men from Lancashire, England. Most of the workers in the shipyards of San Francisco were from Scotland. Many of the coal miners in America were men from the British mines in Wales.

Many were farmers who came to America because they could get land for nothing. They could build new farms for themselves in the rich land of the American west.

One of the best-liked songs in Britain then was a song about the better life in America. Its name: "To The West. " Its words helped many men decide to Make the move to America.

"To The west, to the west, to the land of the free

where mighty Missouri rolls down to the sea;

where a man is a man if he's willing to toil.

And the poorest may harvest the fruits of the soil.

Where the young may exult and the aged may rest,

away, far away, to the land of the west."

To another group of immigrants, America was the last hope. Ireland in the 1840s suffered one crop failure after another. Hungry men had to leave. In 1850 alone, more than one hundred seventeen thousand people came to the United States from Ireland. Most had no money and little education. To those men and women, America was a magic name.

Throughout Europe, when times were hard, people talked of going to America. In some countries, organizations were formed to help people emigrate to the United States. A Polish farmer wrote to such an organization in Warsaw:

"I want to go to America. But I have no money. I have nothing but the ten fingers of my hands, a wife, and nine children. I have no work at all, although I am strong and healthy and only forty-five years old. I have been to many towns and cities in Poland, wherever I could go. Nowhere could I earn much money. I wish to work. But what can I do. I will not steal, and I have no work. So, I beg you to accept me for a journey to America."

As the years passed, fewer people were moving to America for a better job. Most were coming now for any job at all. Work was hard to find in any of the cities in Europe.

A British lawmaker told parliament in 1870 that Englishmen were leaving their country, not because they wanted to, but because they had to. They could not find work at home. He said that even as he spoke, hundreds were dying of hunger in London and other British cities. They were victims of the new revolution in agriculture and industry.

Small family farms were disappearing. In their places rose large modern farms that could produce much more. New machines took the place of men. And millions of farmers had to look for other work. Some found it in the factories. Industry was growing quickly...but not quickly enough to give jobs to all the farmers out of work.

In the next ten years, millions of people made the move from Britain, Germany, and the Scandinavian countries. But then, as industry in those countries grew larger, and more jobs opened, the flood of immigration began to slow.

The immigrants now were coming from southern and eastern Europe. Anti-Jewish feeling swept Russia and Poland. Violence against Jews caused many of them to move to America.

In the late 1880s, cholera spread through much of southern Italy. Fear of the disease led many families to leave for the United States.

Others left when their governments began building up strong armies. Young men who did not want to be soldiers often escaped by moving to America. Big armies were costly, and many people left because they did not want to pay the high taxes.

Whatever the reason, people continued to immigrate to the United States.

These new immigrants were not like those who came earlier. These new immigrants had no skills. Most were unable to read or write.

Factory owners found that these eastern and southern Europeans were hard workers. They did not protest because the work was hard and the pay was low. They did not demand better working conditions. They did not join unions or strike.

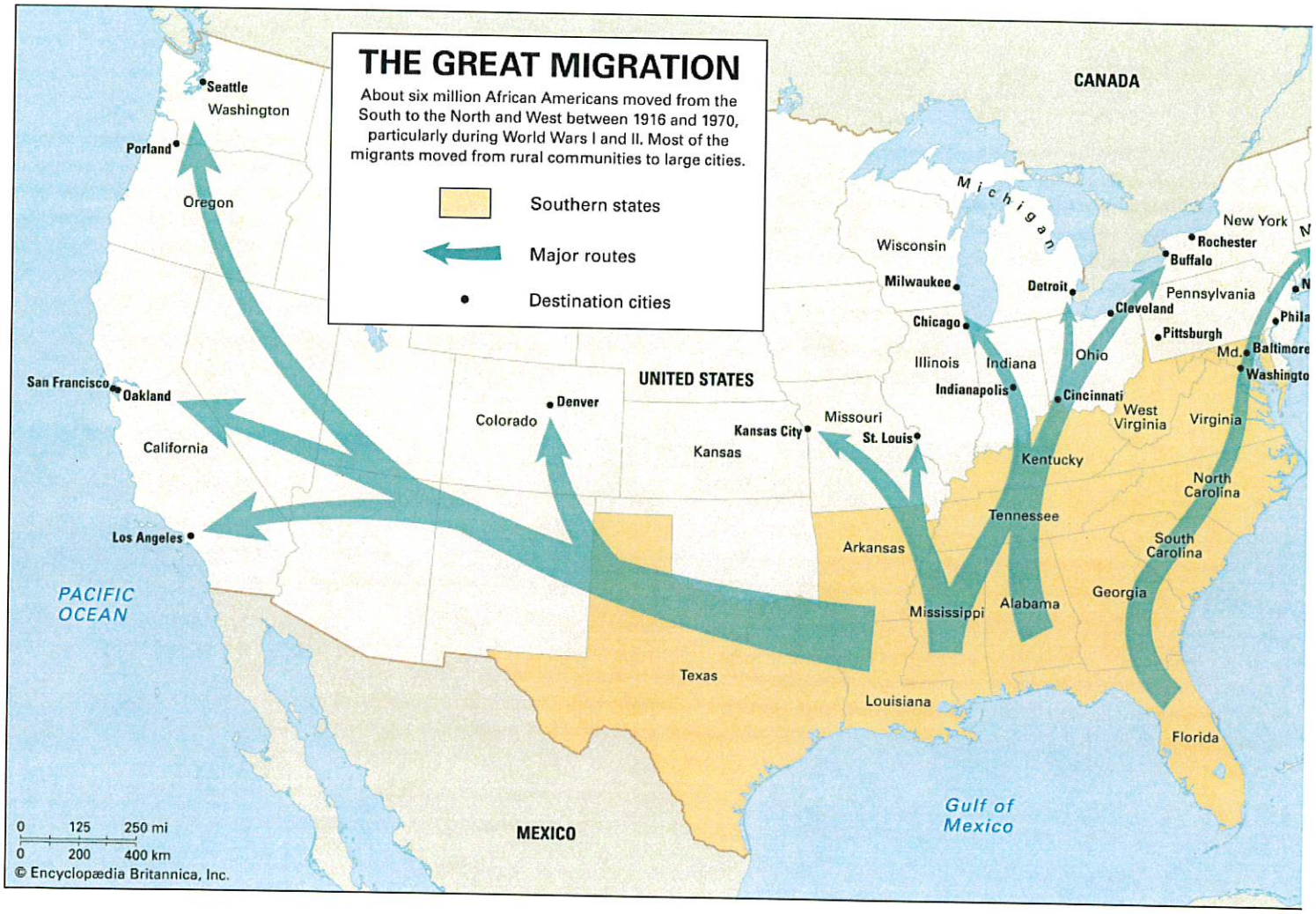
Factory owners began to replace higher-paid American and British workers with the new immigrants. Business leaders wanted more of the new workers. They urged the immigrants to write letters to their friends and relatives in the old country. "Tell them to come to America, that there are plenty of jobs."

Letters from America brought many more immigrants. The big steamship companies also helped industry to get more of the new workers. They paid thousands of agents throughout Europe to sell tickets for the trip to America. Their efforts meant that steamships bringing grain to Europe could return to America filled with immigrants.

They came by the hundreds of thousands. People of all religions, from all across Europe. Many remained in New York and other eastern cities. But many others moved westward. They took jobs in the steel factories of Pennsylvania and the coal mines of West Virginia. They worked in the lumber camps of Michigan and in the stockyards and meat-packing plants of Chicago.

Within a few years, foreign-born workers held most of the unskilled jobs in many American industries. American workers began to protest. They demanded an end to the flood of immigration.

NEXT DAY


THE GREAT MIGRATION
About six million African Americans moved from the South to the North and West between 1916 and 1970, particularly during World Wars I and II. Most of the migrants moved from rural communities to large cities.
Southern states
Major routes
Destination cities
CANADA
Seattle
Washington
Porland
Oregon
Michigan
Wisconsin
New York
Rochester
Buffalo
Milwaukee
Detroit
Pennsylvania
Cleveland
Chicago
Pittsburgh
Phila
Illinois
Indiana
Ohio
Md.
Baltimore
Washingto
UNITED STATES
Indianapolis
Cincinnati
San Francisco
Oakland
Denver
Colorado
Missouri
West Virginia
Virginia
Kansas City
St. Louis
California
Kansas
Kentucky
North Carolina
Tennessee
Los Angeles
Arkansas
South Carolina
PACIFIC OCEAN
Georgia
Mississippi
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Texas
Louisiana
Florida
Gulf of Mexico
MEXICO
0 125 250 mi
0 200 400 km
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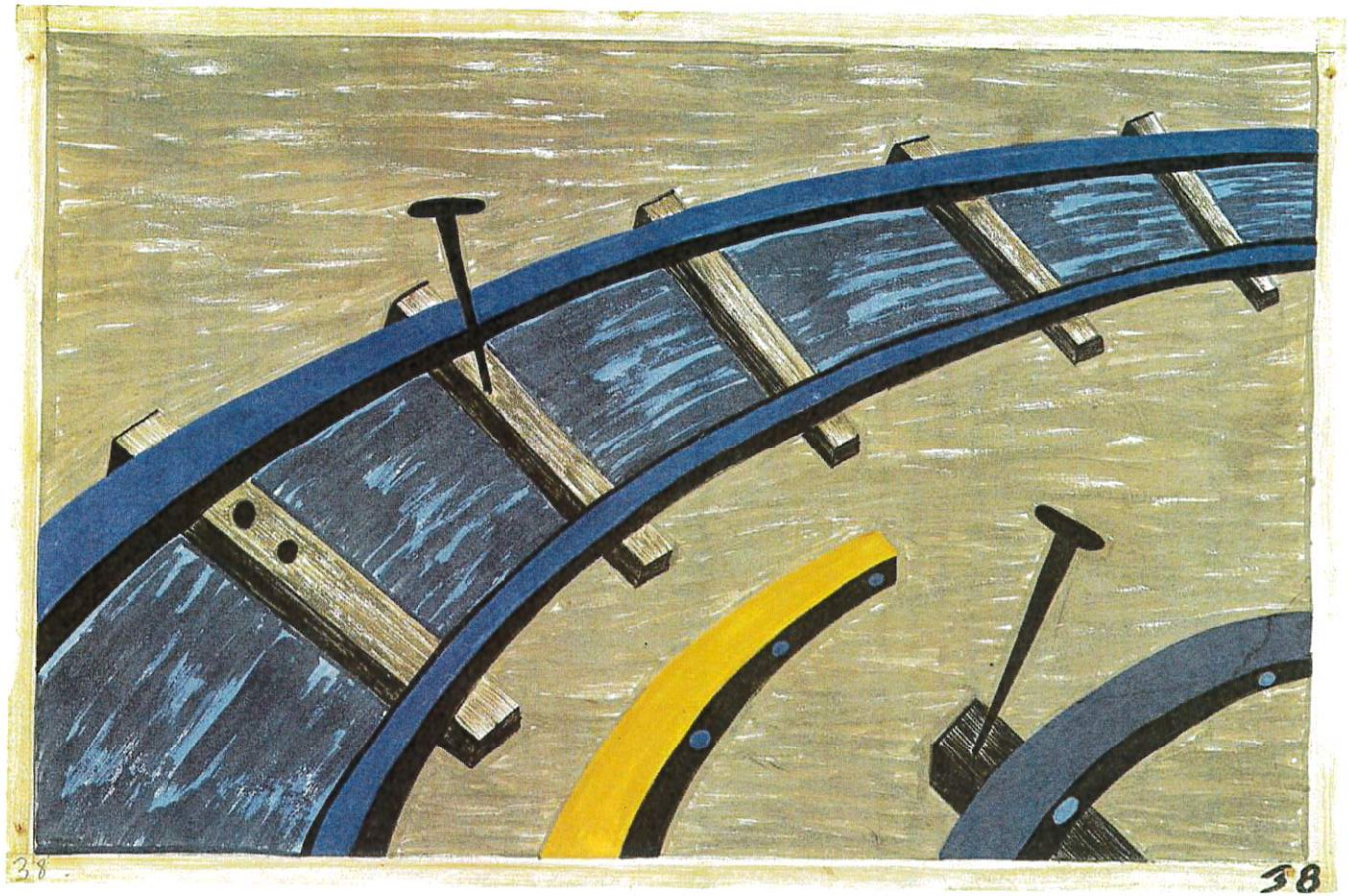
THE GREAT MIGRATION



AN AMERICAN STORY
PAINTINGS BY JACOB LAWRENCE

with a poem in appreciation by Walter Dean Myers

The Museum of Modern Art, New York • The Phillips Collection • HarperCollins*Publishers*

This is the story of an exodus of African-Americans who left their homes and farms in the South around the time of World War I and traveled to northern industrial cities in search of better lives. It was a momentous journey. Their movement resulted in one of the biggest population shifts in the history of the United States, and the migration is still going on for many people today.

The great migration is a part of my life. I grew up knowing about people on the move from the time I could understand what words meant. There was always talk in my house of other families arriving from the South. My family was part of the first big wave of the migration, which occurred between the years 1916 and 1919. My mother was born in Virginia, and my father was born in South Carolina. Somehow they met on their way north, and I was born in Atlantic City, New Jersey, in 1917. We settled for a while in Philadelphia. Many other families settled there, too, but many traveled even farther, to Pittsburgh, New York, Chicago, Detroit, Cleveland, and St. Louis.

I arrived in New York City's Harlem community in 1930, when I was thirteen years of age. Harlem was crowded with newcomers, but we all settled in somehow. I went to school, and after school I went to an arts-and-crafts program at the Utopia Children's House, which my mother enrolled me in to keep me busy while she was at work. I decided then that I wanted to be an artist. When I first started painting, I was just making designs. The colors and patterns that decorated my mother's apartment influenced my pictures. Later I started painting street scenes. I painted peddlers, parades, fire escapes, apartment houses—all that was new to me.

Eventually, teachers, friends, even actors on the street corners helped me to understand how my own experiences fit into a much larger story—the history of African-Americans in this country. It seemed almost inevitable that I would tell this story in my art. I spent many hours at the Schomburg Library in Harlem reading books about the

great migration, and I took notes. Soon my research gave me the images I needed to tell the story of the great migration. Many of the images were new for me—along with my street scenes, I would now need to paint rural landscapes, images of violence, and interiors, like the inside of a schoolroom.

I started the Migration series in 1940, when I was twenty-two years old, and finished it one year later. I can still remember all the panels spread out in my studio on tables made from boards and sawhorses. My wife, Gwen, helped me to prepare the surfaces. I painted the panels all at once, color by color, so they share the same palette. I had made some preparatory sketches that provided me with general outlines, but I worked out the details of the pictures as I painted them. There are sixty panels in the series, and since I wanted them to tell a story, I gave each one a number and painted it directly onto its frame.

To me, migration means movement. While I was painting, I thought about trains and people walking to the stations. I thought about field hands leaving their farms to become factory workers, and about the families that sometimes got left behind. The choices made were hard ones, so I wanted to show what made the people get on those northbound trains. I also wanted to show just what it cost to ride them. Uprooting yourself from one way of life to make your way in another involves conflict and struggle. But out of the struggle comes a kind of power, and even beauty. I tried to convey this in the rhythm of the pictures, and in the repetition of certain images.

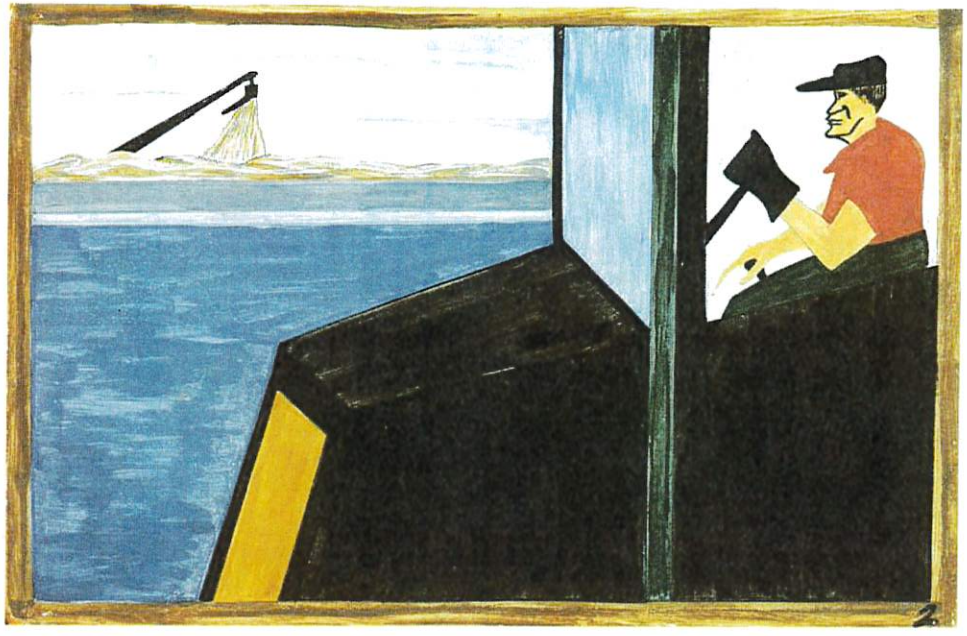
"And the migrants kept coming" is a refrain of triumph over adversity. My family and others left the South on a quest for freedom, justice, and dignity. If our story rings true for you today, then it must still strike a chord in our American experience.

Jacob Lawrence, 1992

Around the time I was born, many African-Americans from the South left home and traveled to cities in the North in search of a better life. My family was part of this great migration.

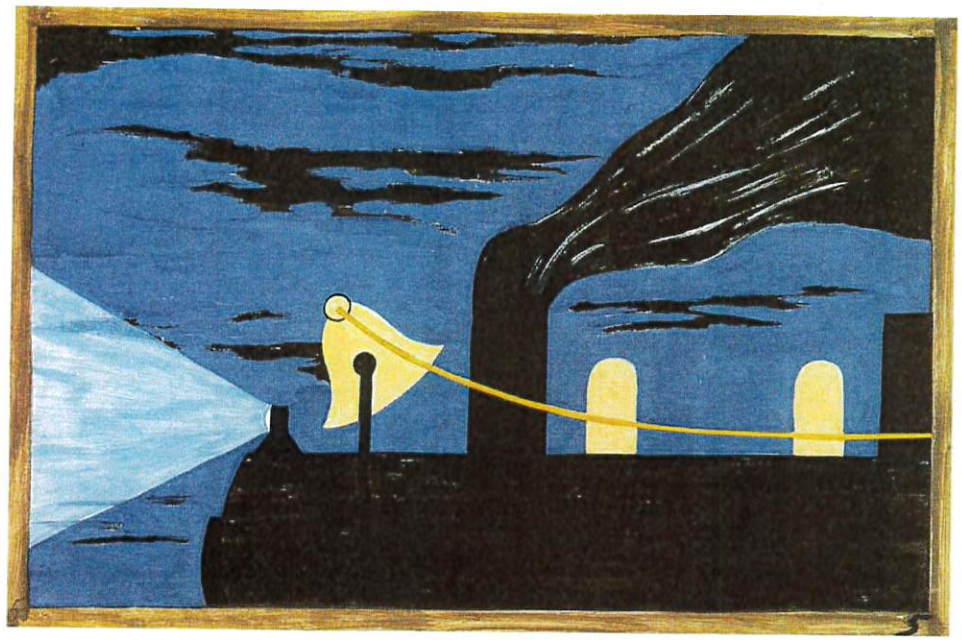

CHICAGO
NEW YORK
ST. LOUIS

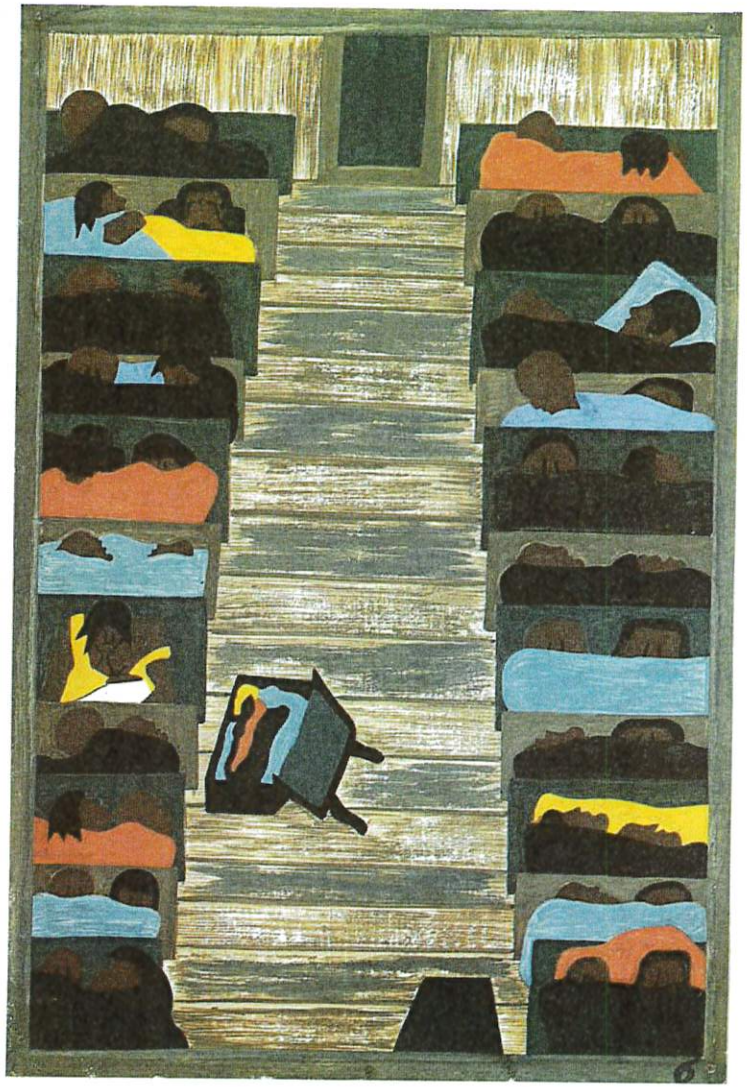
There was a shortage of workers in northern factories because many had left their jobs to fight in the First World War.

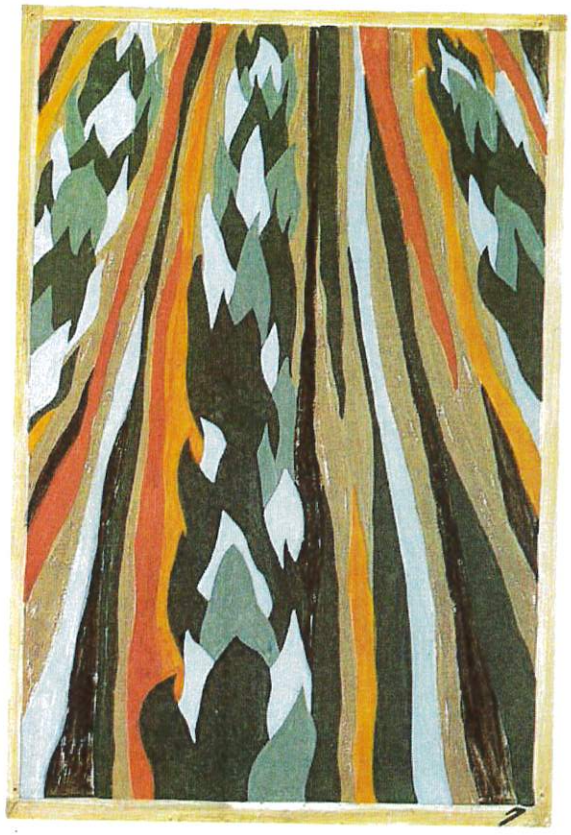


The factory owners had to find new workers to replace those who were marching off to war.

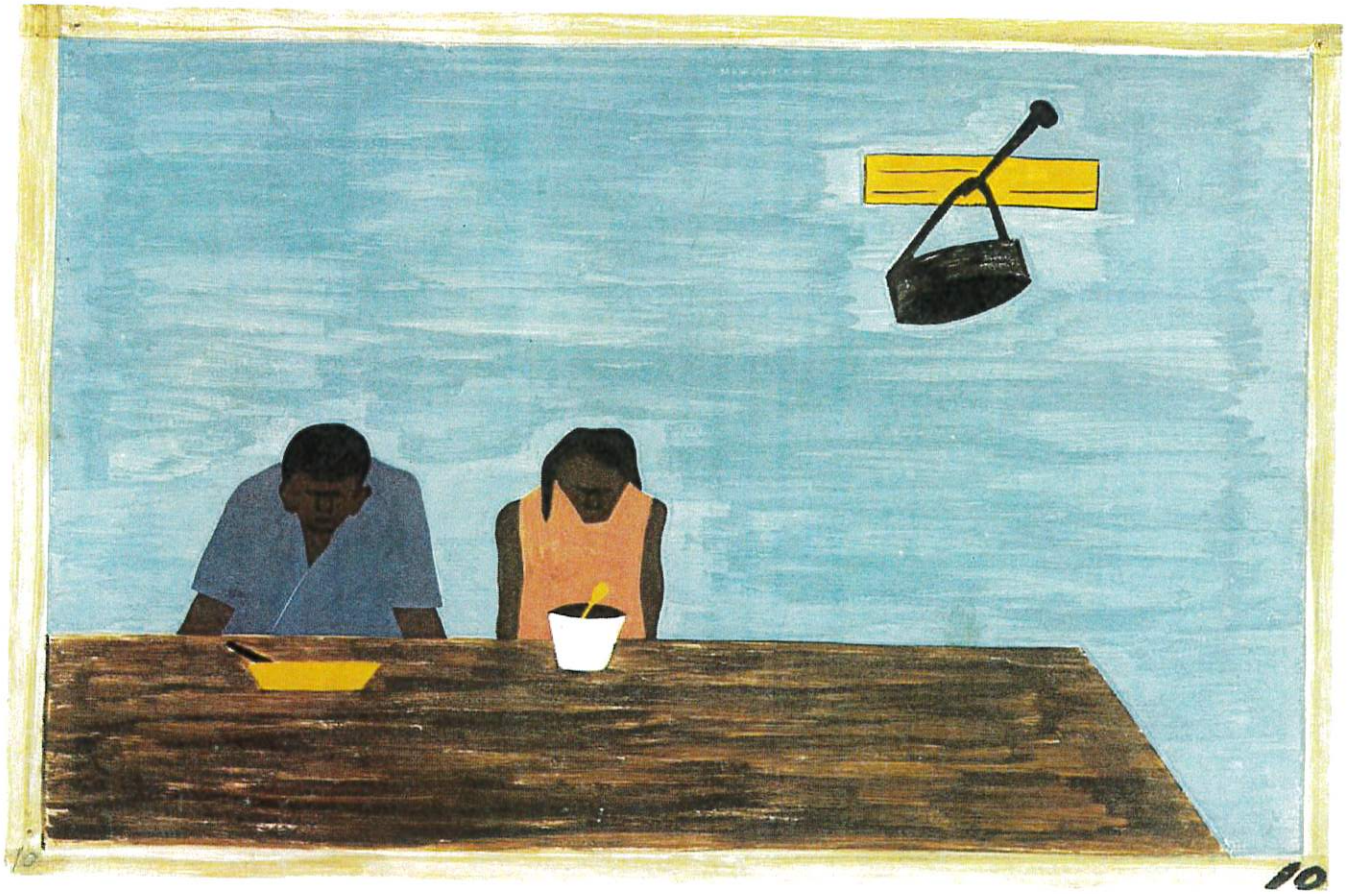
Northern industries offered southern blacks jobs as workers and lent them money, to be repaid later, for their railroad tickets. The northbound trains were packed with recruits.

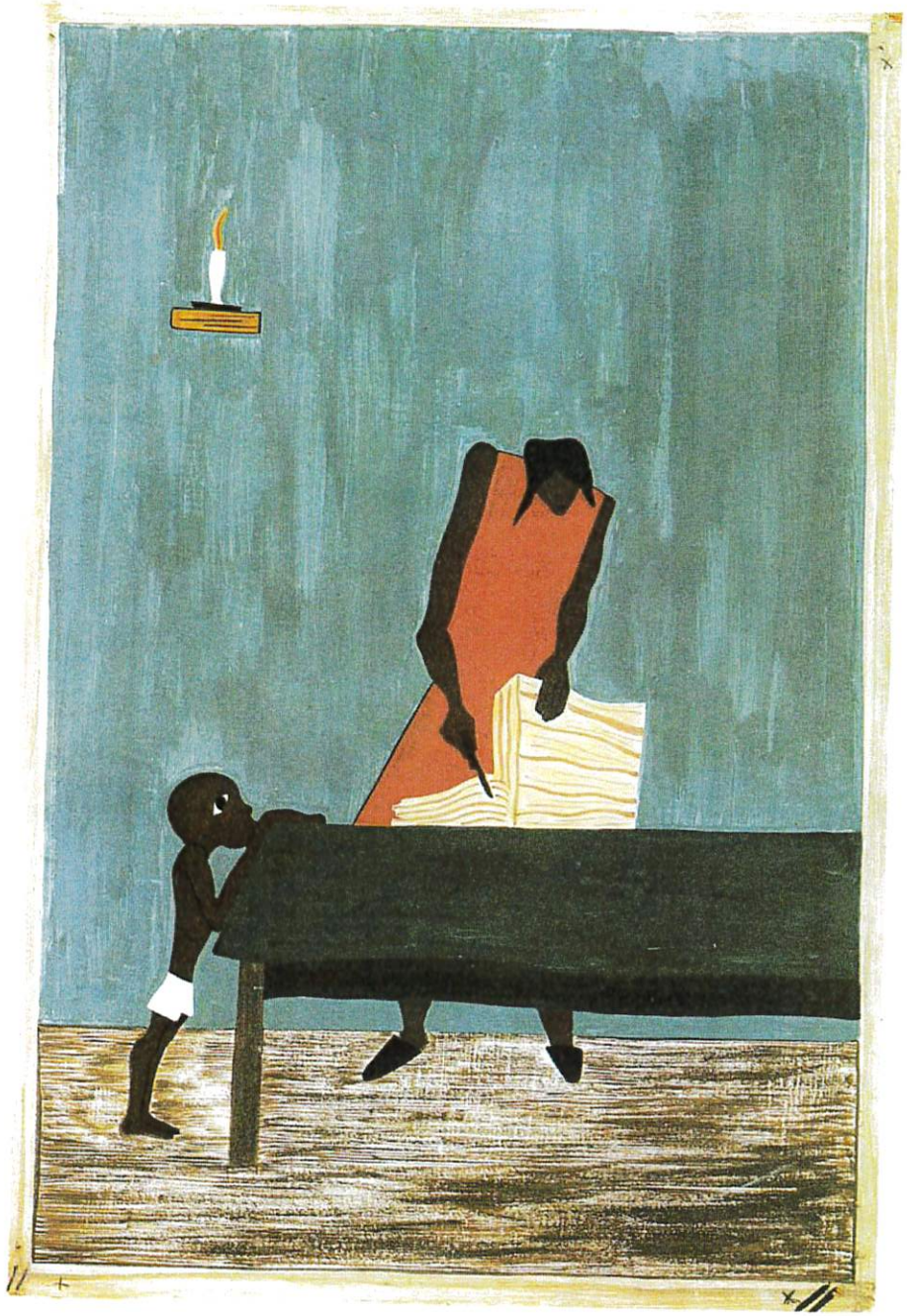






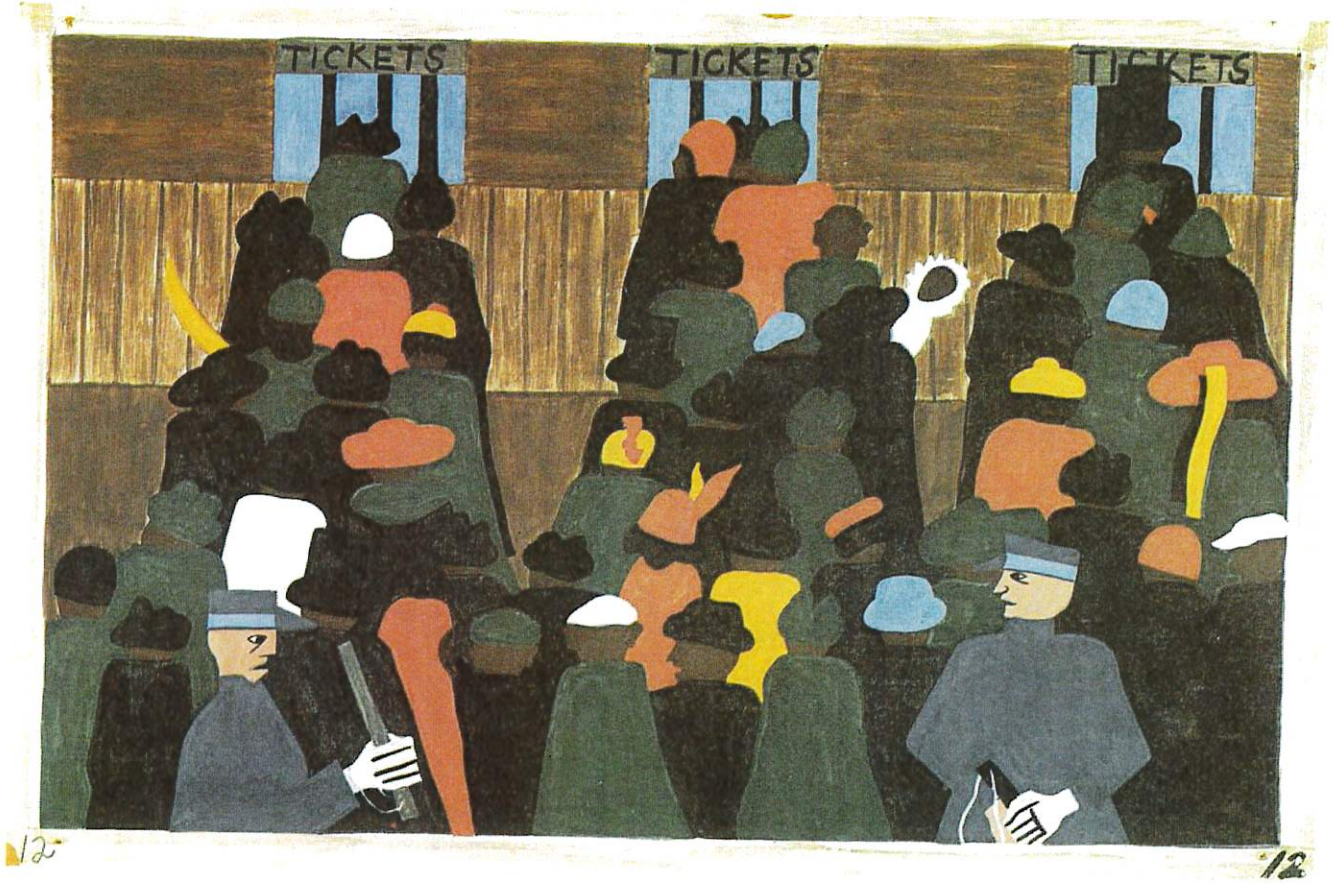
Nature had ravaged the South. Floods ruined farms.
The boll weevil destroyed cotton crops.





The war had doubled the cost of food,
making life even harder for the poor.

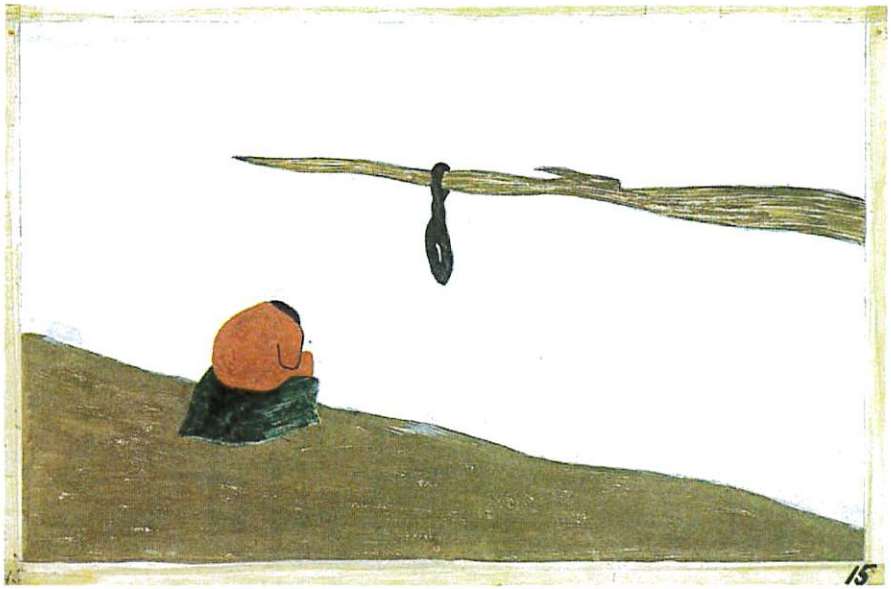
Railroad stations were so crowded with migrants that guards were called in to keep order.



12

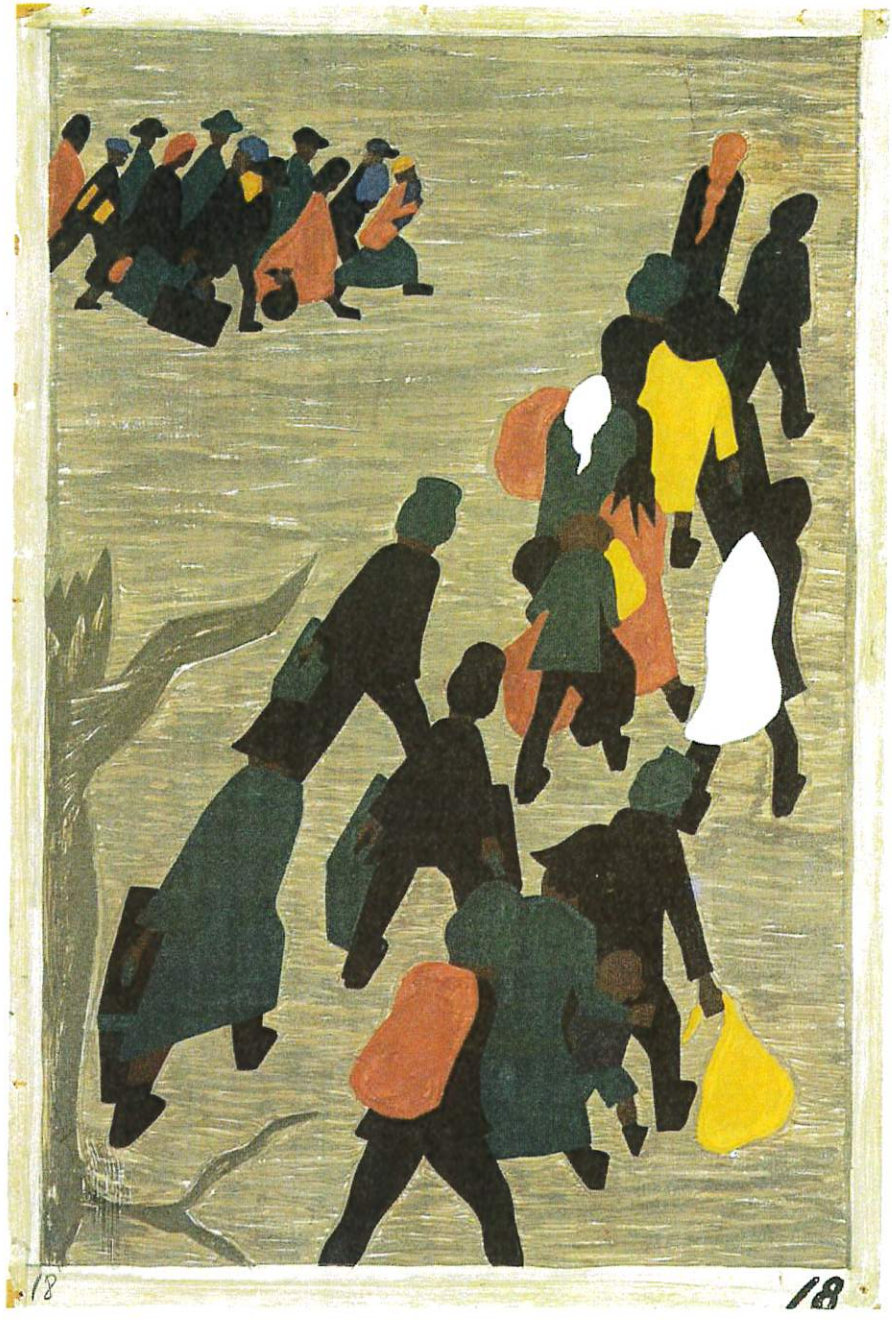
The flood of migrants northward left crops back home to dry and spoil.

For African-Americans the South was barren in many ways. There was no justice for them in the courts, and their lives were often in danger.



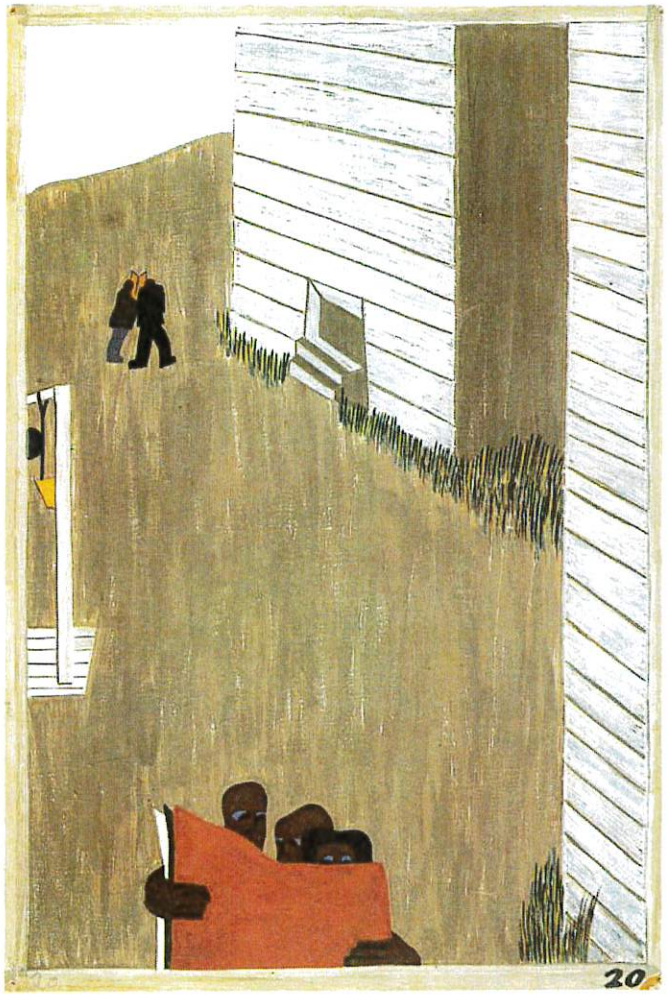
Although slavery had long been abolished, white landowners treated the black tenant farmers harshly and unfairly.

And so the migration grew.



Segregation divided the South.

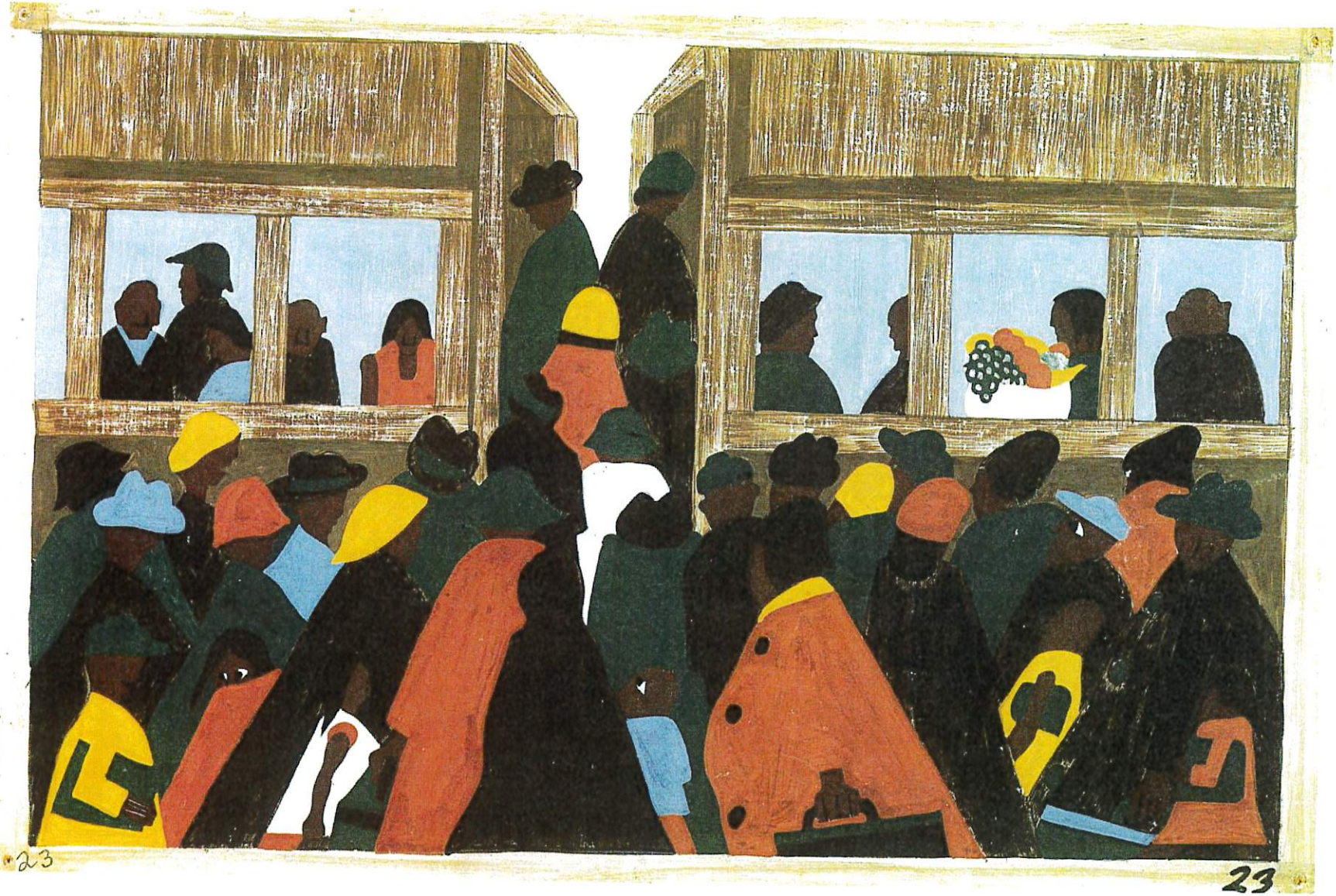
The black newspapers told of better housing and jobs in the North.



Families would arrive very early at railroad stations to make sure they could get on the northbound trains.

Early arrival was not easy, because African-Americans found on the streets could be arrested for no reason.

And the migrants kept coming.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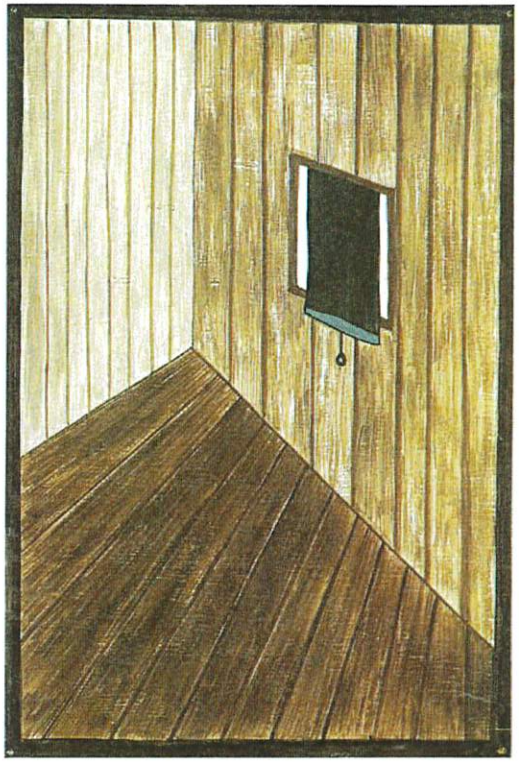
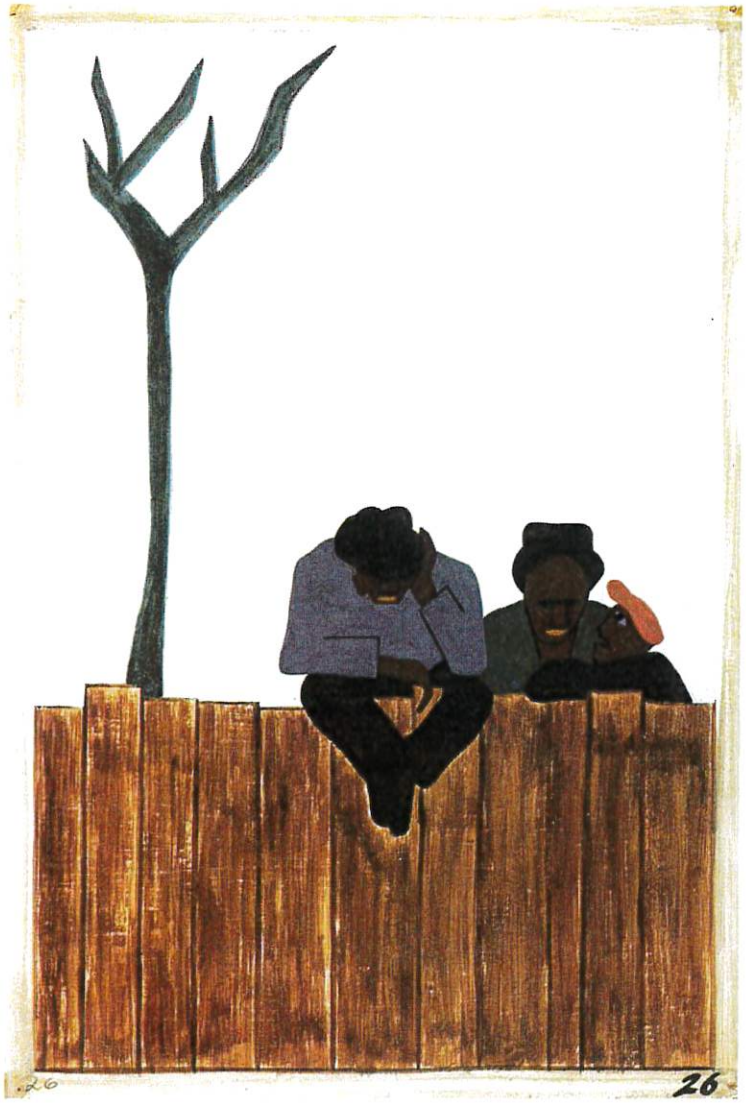
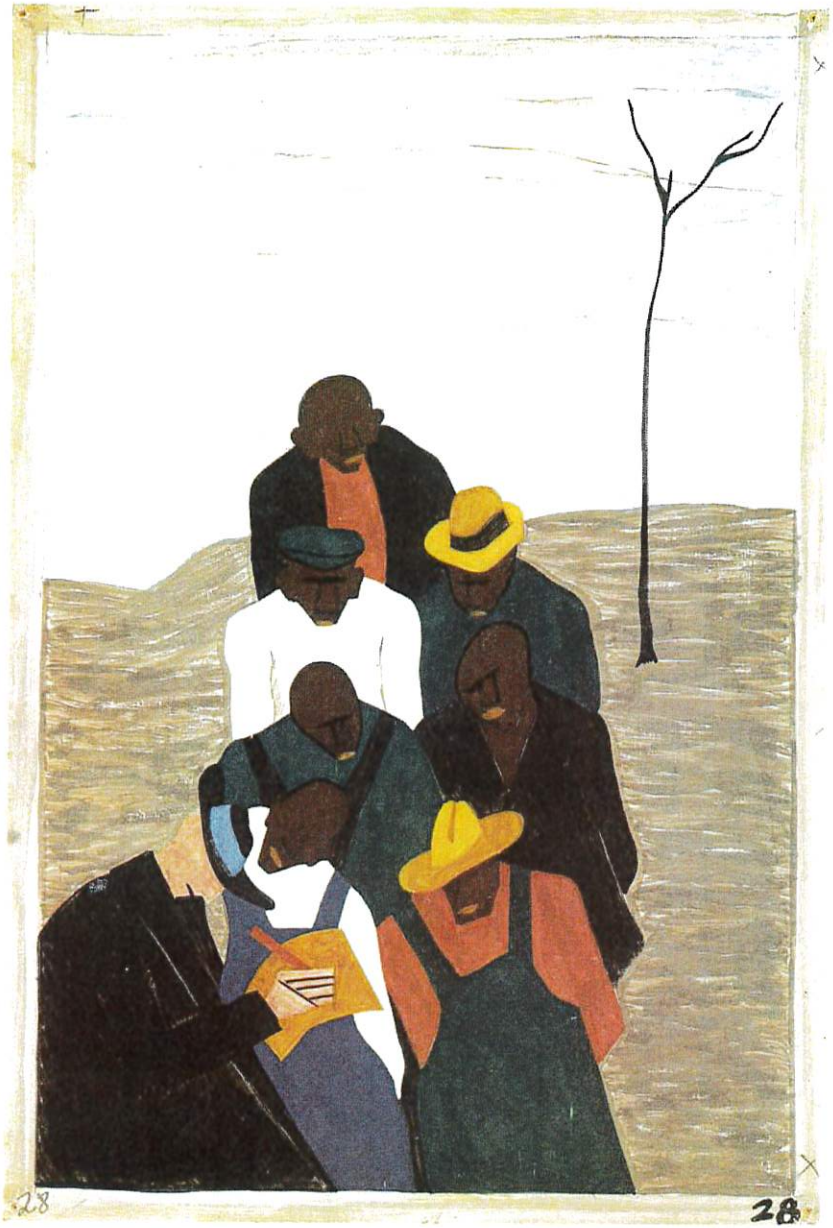


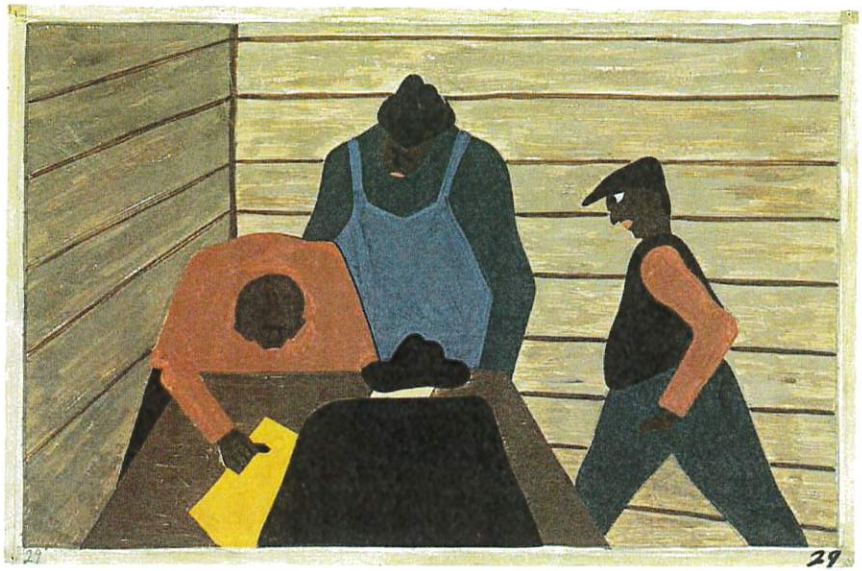
In the South there was little opportunity for education, and children labored in the fields. These were more reasons for people to move north, leaving some communities deserted.

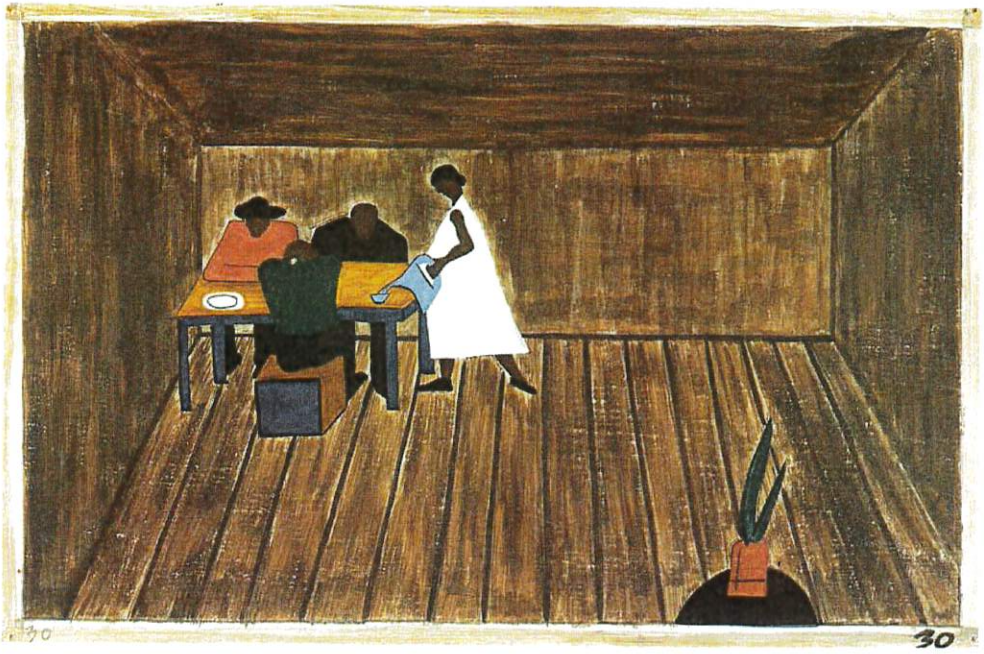


There was much excitement and discussion about the great migration.

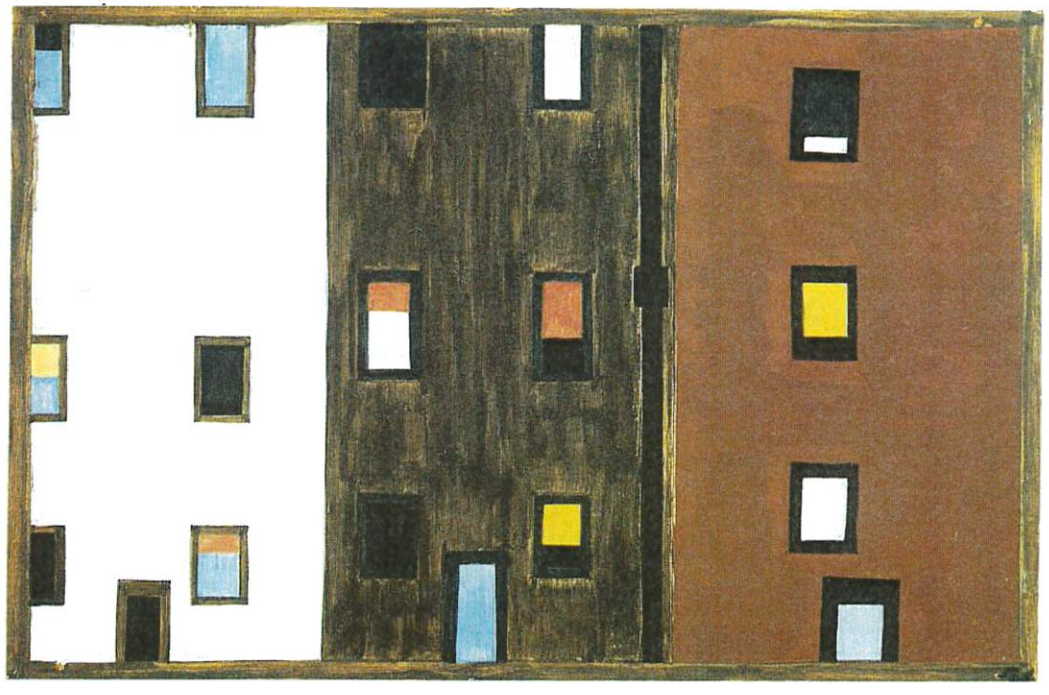


Agents from northern factories flocked into southern counties and towns, looking for laborers.





Families often gathered to discuss whether to go north or to stay south. The promise of better housing in the North could not be ignored.



The railroad stations were crowded with migrants.

Letters from relatives in the North and articles in the black press portrayed a better life outside the South.

Many migrants arrived in Chicago.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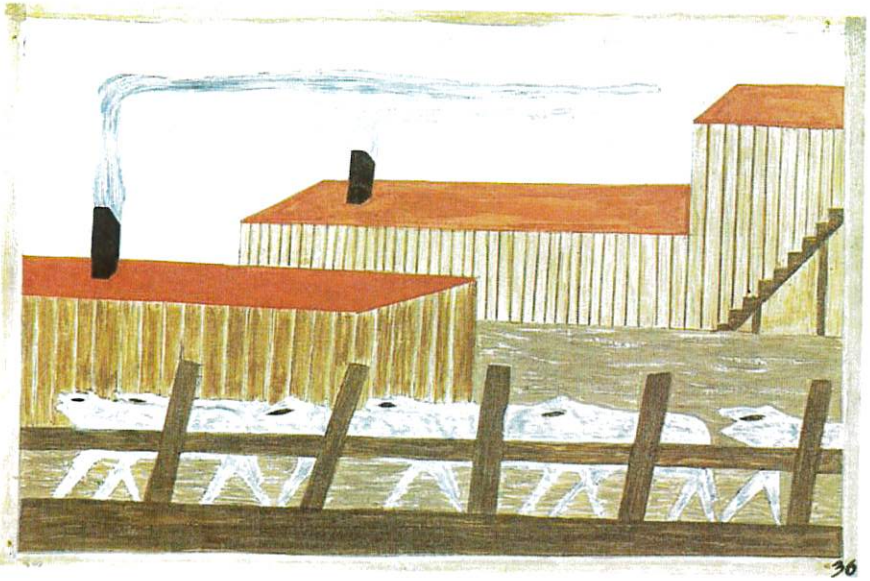
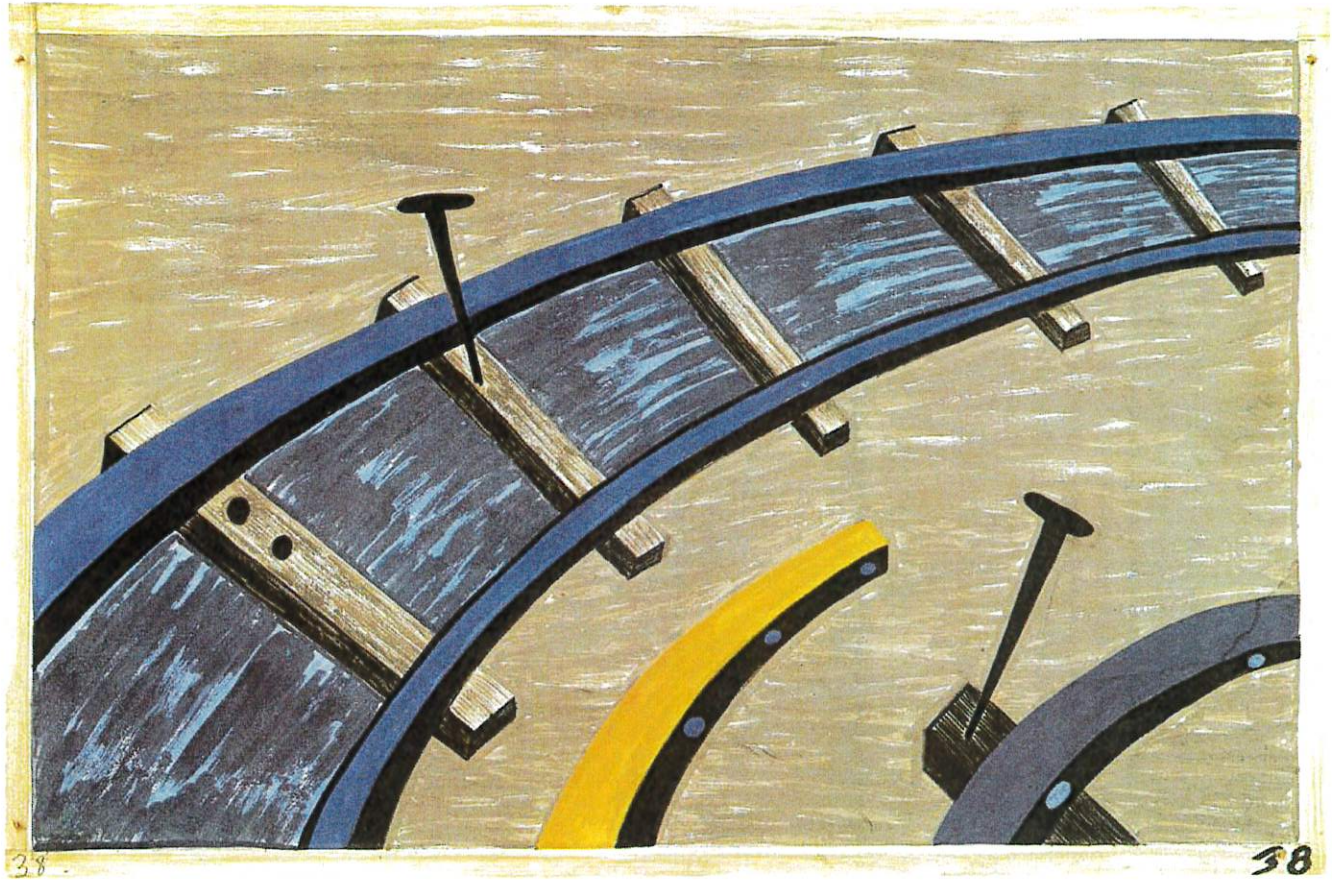
35



In Chicago and other cities they labored in the steel mills . . .



and on the railroads.

And the migrants kept coming.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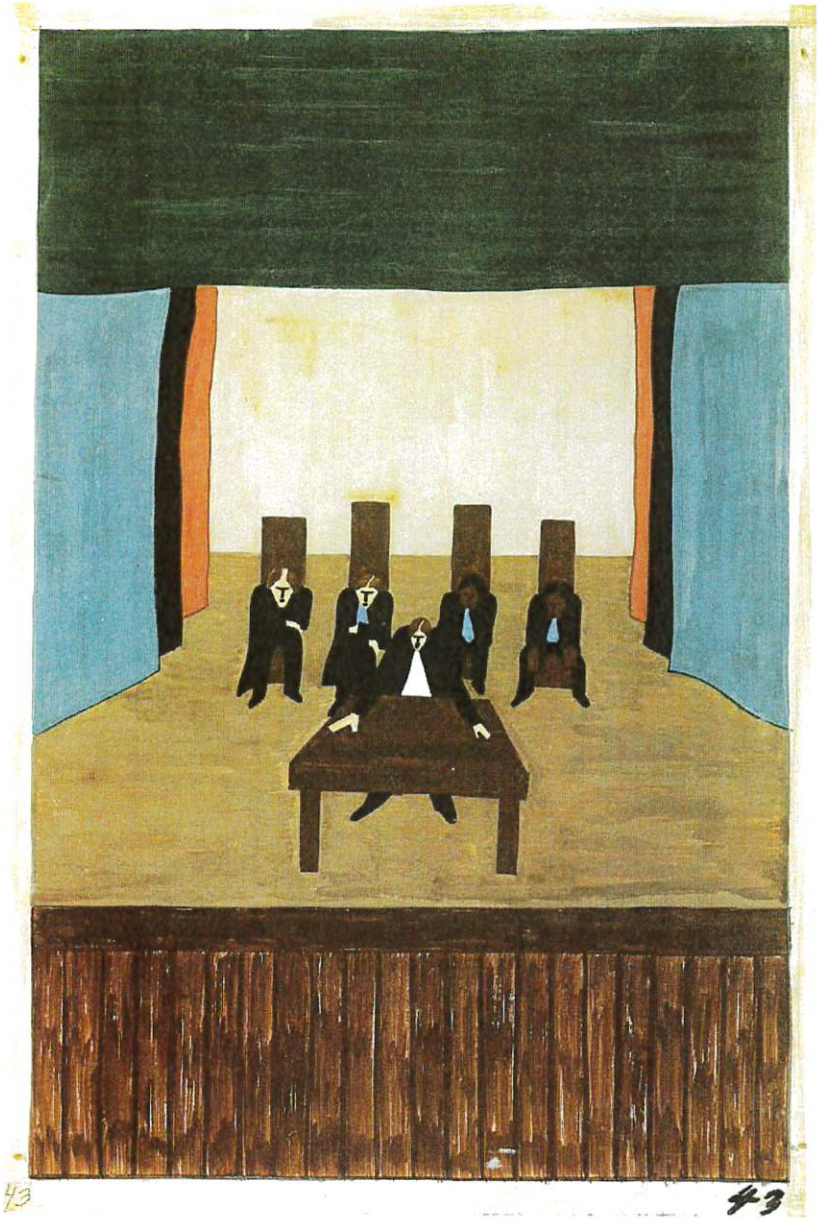
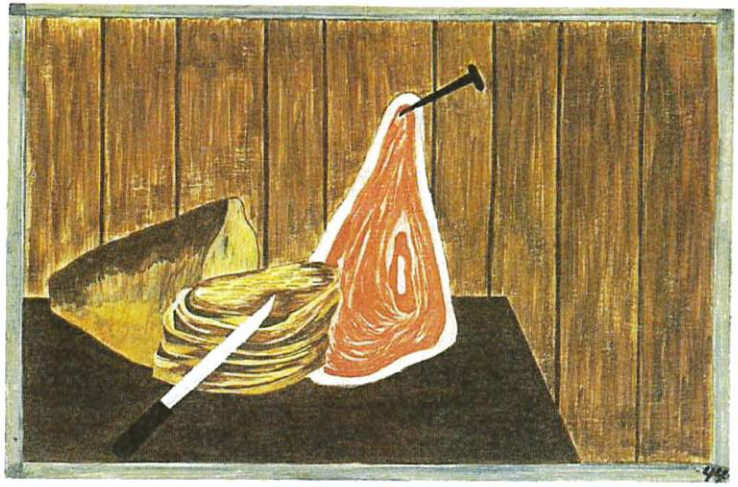
Southern landowners, stripped of cheap labor, tried to stop the migration by jailing the labor agents and the migrants. Sometimes the agents disguised themselves to avoid arrest, but the migrants were often taken from railroad stations and jailed until the trains departed.

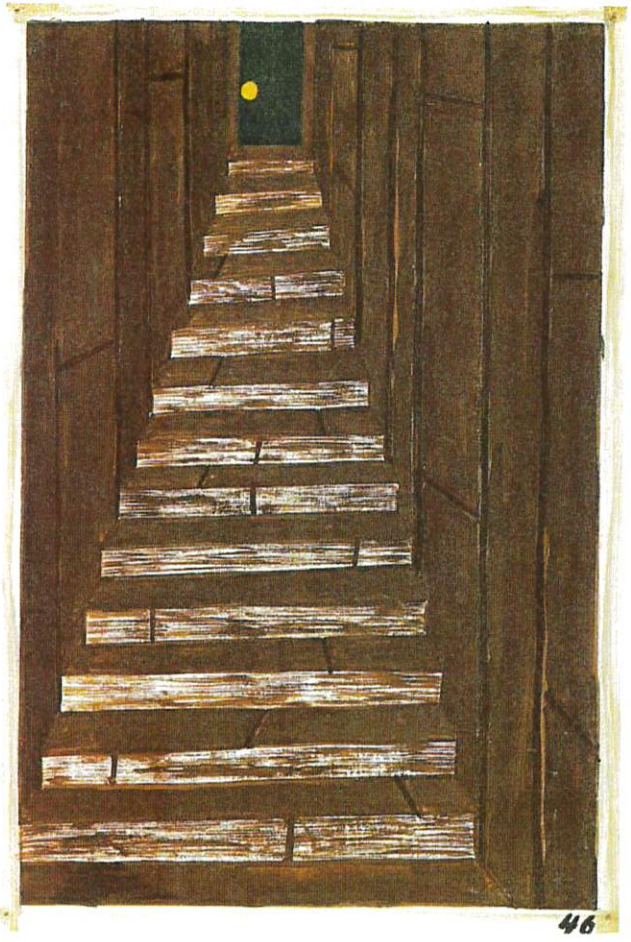


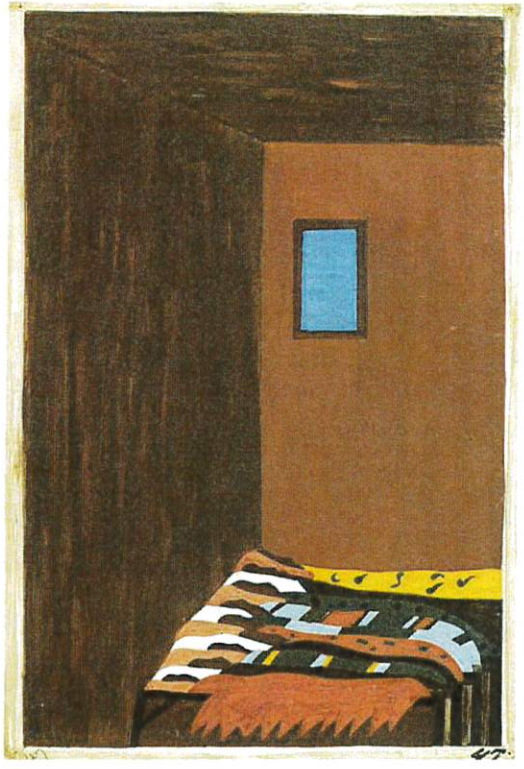
Black and white southern leaders met to discuss ways to improve conditions to stop the flow of workers north.



Although life in the North was better, it was not ideal.

Many migrants moved to Pittsburgh, which was a great industrial center at the time.

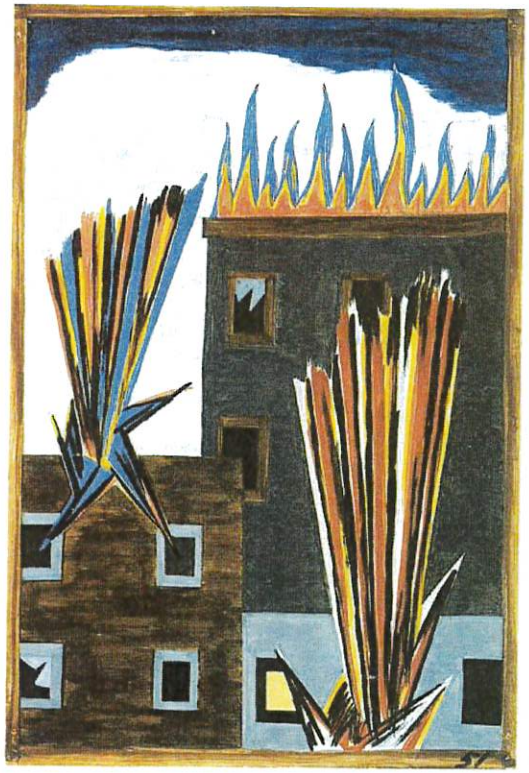


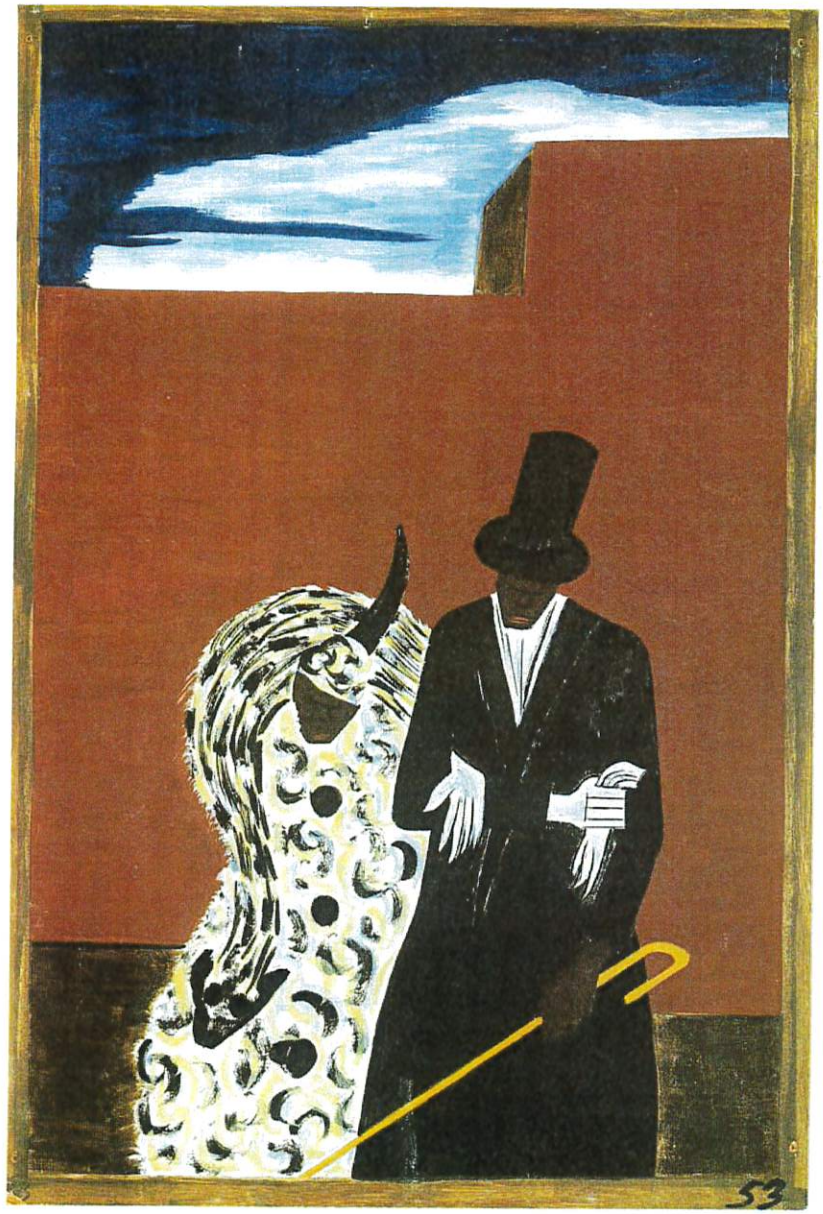


Although they were promised better housing in the North, some families were forced to live in over-crowded and unhealthy quarters.

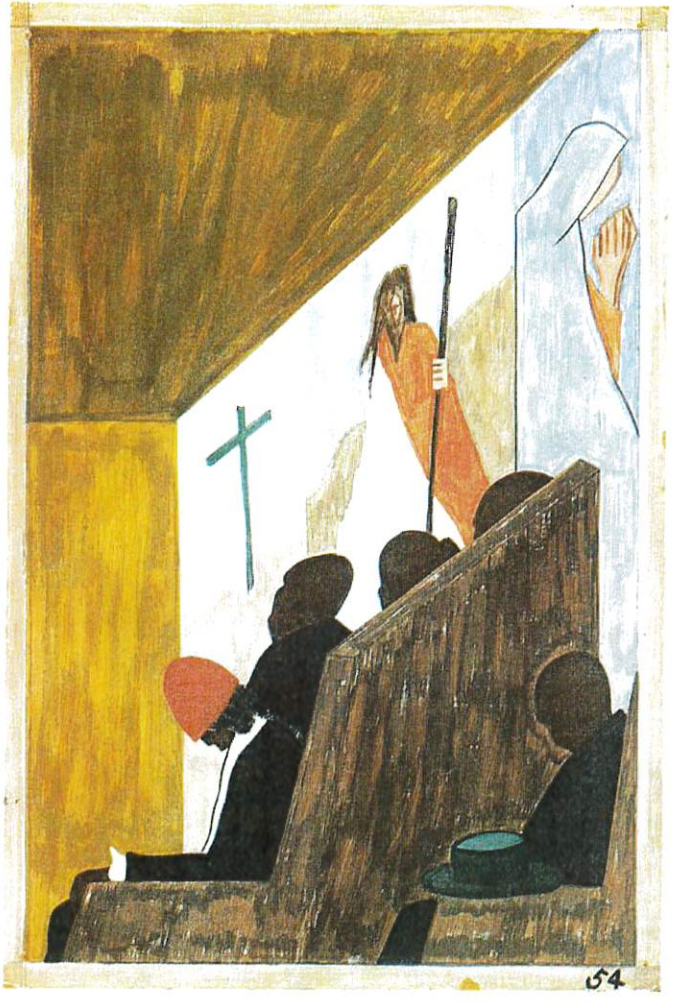
The migrants soon learned that segregation was not confined to the South.

Many northern workers were angry because they had to compete with the migrants for housing and jobs. There were riots.

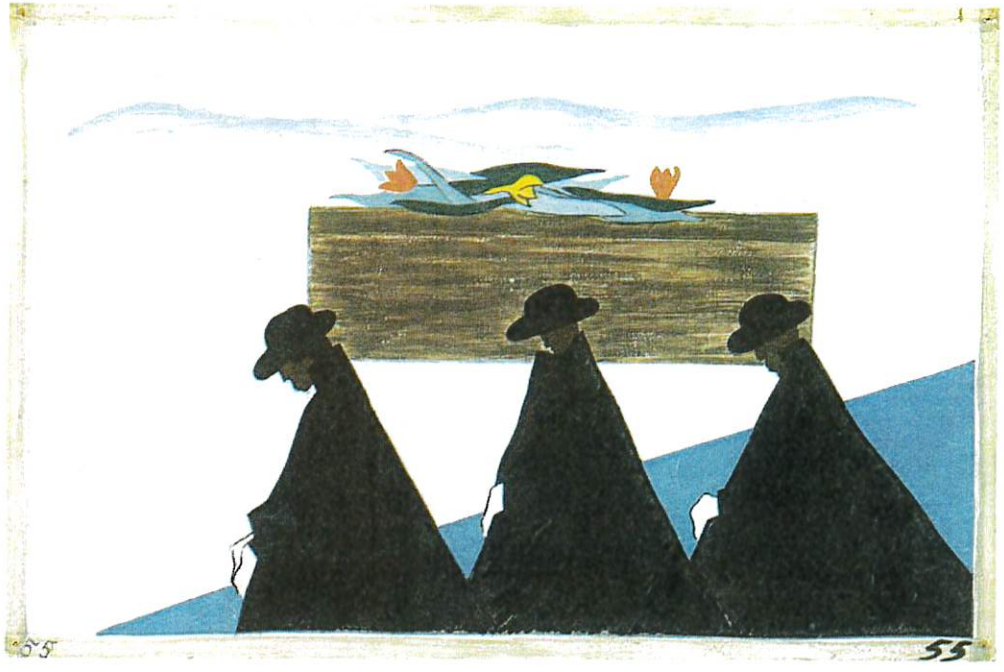




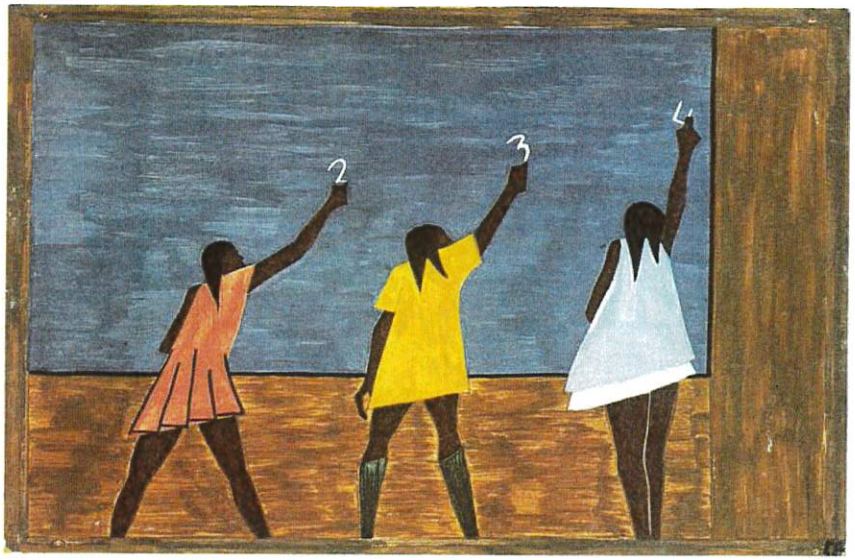
Longtime African-American residents living in the North did not welcome the newcomers from the South and often treated them with disdain.



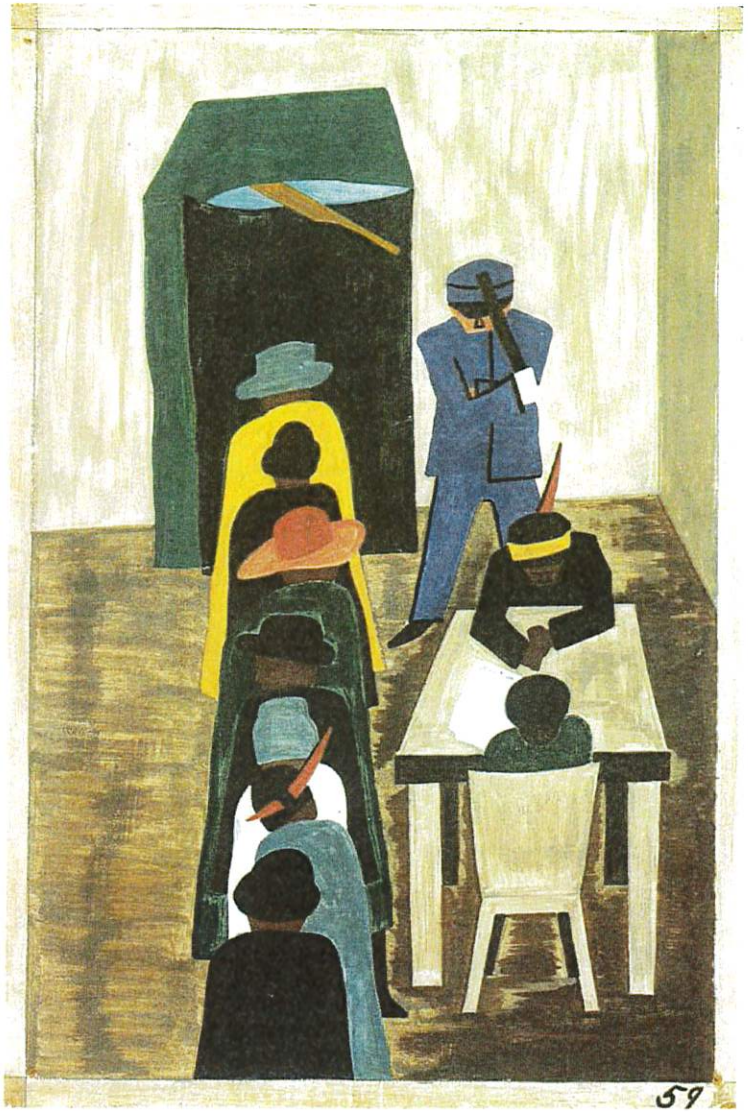
The migrants had to rely on each other. The storefront church was a welcoming place and the center of their lives, in joy and in sorrow.



Black professionals, such as doctors and lawyers, soon followed their patients and clients north. Female workers were among the last to leave.



Life in the North brought many challenges, but the migrants' lives had changed for the better. The children were able to go to school, and their parents gained the freedom to vote.



And the migrants kept coming.

Theirs is a story of African-American strength and courage. I share it now as my parents told it to me, because their struggles and triumphs ring true today. People all over the world are still on the move, trying to build better lives for themselves and for their families.

60

MIGRATION
Walter Dean Myers

In the waiting room, "Colored,"
Hands, calloused and as black as the rich
Georgia/Carolina/Alabama dirt they leave behind,
Clasp and unclasp silently,
Some hold Bibles older than freedom,
Others hold food that will not last the long journey.
There is no need to speak, to explain
How so many nights of love and terror
So many back cracking, heartbreaking days
So many humbled dreams
Can fit into the small rope-tied case that sits
On the ancient hardwood floor between them

A stirring at the ticket counter
Stiffens backs, tightens stomachs
Hard-eyed men with guns in their belts
Stare daggers into the waiting room, "Colored."
In the distance the *whoo! whoo!* of the train breaks
The stillness of a forever moment
The men with guns look, shake their heads, and leave
Life goes on

The tickets to Chicago/Detroit/New York are heavy
As heavy as the memory of a church built
With sweat and faith and knotted pine
On the edge of the old burying ground

But there are the children, and there is the hope
Of a people with yet one more river to cross

Dedicated to the migrants whose struggle for "life, liberty, and the pursuit of happiness" is a moving story in American history

This book has been made possible by Osa Brown, Director of Publications, The Museum of Modern Art, New York, and by Elizabeth Hutton Turner, Associate Curator, The Phillips Collection; Jessica Altholz and David Gale, editors; Tom Starace, art director; Marc Sapir, John Vitale, and Lucille Schneider, production; Darla Decker and Elisabeth Foxley Leach, project assistants. Project consultants: George Nicholson, Gwendolyn Knight, Harriet Bee, Michael Hentges, Tim McDonough, Helen Santini, and John B. Murphy.

The Migration of the Negro. 1940–41. A series of sixty works. Tempera on gesso on composition board, each 18 x 12 inches (vertical or horizontal). The Museum of Modern Art, New York, Gift of Mrs. David M. Levy (even numbers); The Phillips Collection, Washington, D.C. (odd numbers).

Introduction based on an interview conducted by curator Elizabeth Hutton Turner, October 3, 1992, available in The Phillips Collection Archives.

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Summary: A series of paintings chronicles the journey of African Americans who, like the artist's family, left the rural South in the early twentieth century to find a better life in the industrial North.
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About the Artist

Jacob Lawrence was born in 1917 and grew up in New York City during the Depression. He studied art at the Harlem Workshop and the American Artists School. Mr. Lawrence is best known for several sequences of narrative paintings, including *Harriet Tubman* and *Frederick Douglass*, and for his illustration of the book *Harriet and the Promised Land*. He has won numerous awards, including the National Medal of Arts, and his work is represented in the collections of major museums. Along with his wife, Gwendolyn Knight, Mr. Lawrence lives in Seattle, where he is Professor Emeritus at the University of Washington.

About the Poet

Walter Dean Myers is the highly acclaimed author of dozens of books for children and young adults. He has received the Coretta Scott King Award four times, and a Newbery Honor. His books have been named ALA Notables and ALA Best Books for Young Adults.

Mr. Myers lives in Jersey City, New Jersey, with his family.

About the Art

The Migration of the Negro, a narrative series of sixty individual panels, was painted between 1940 and 1941. In March 1942, less than one year after its completion, the series was divided evenly between the collections of The Museum of Modern Art, New York, and The Phillips Collection, Washington, D.C. The series was last reunited in 1971 for the exhibition *Artist as Adversary*, which was shown at both The Museum of Modern Art and The Phillips Collection. This book is published on the occasion of the 1993 exhibition *Jacob Lawrence: The Migration Series*, organized by The Phillips Collection, which will be traveling from Washington, D.C., to Milwaukee; Portland, Oregon; Birmingham; St. Louis; and New York City.

About the Book

The text of this book was set in 17 pt. Gill Sans. The paper is 80# L.O.E. Dull. The color separations and interior printing were done by Princeton Polychrome Press. The jacket was printed by New England Book Components. The book was bound by Worzalla. Book design by Tom Starace.

NEXT DAY

Pioneers moving westward: Pioneer settlers were sometimes *pushed* west because they couldn't find good jobs that paid enough. Others had trouble finding land to farm. With more and more people from Europe moving into the eastern states, crowding was sometimes a problem. Still others wanted to move from their homes in the east because they didn't like the new industries and the developing cities.

Pioneer settlers were sometimes *pulled* west because they wanted to make a better living. Others received letters from friends or family members who had moved west. These letters often told about a good life on the frontier. The biggest factor that pulled pioneers west was the opportunity to buy land. Pioneers could purchase land for a small price compared to what it cost in states to the east.

The news of open land reached the ears of immigrants, freed slaves, farmers, single women, and others. For many, life in the eastern states had lost its appeal. Some had trouble finding a job, overcrowding started being an issue in certain areas, and farmers wanted more land to farm. Others just didn't like living in what was becoming an industry-driven country with large cities. Still others moved west to escape persecution. Many people living in modern-day Utah and surrounding areas had pioneers in their family move west with Brigham Young and the Mormon pioneers starting in 1846.

In 1848, the California Gold Rush began. The gold rush attracted opportunists, miners, and businessmen. It also brought much needed goods to the West and created small mining towns. Pioneers came on several routes, the most common being the California and Oregon Trails.

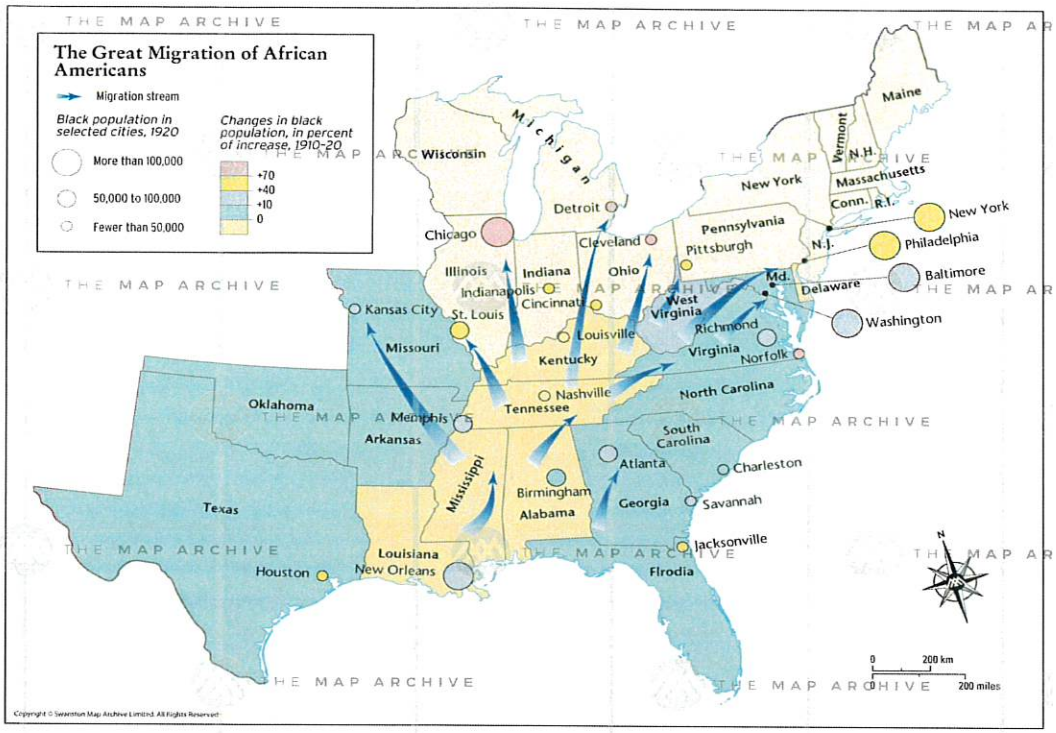
Texas ranches provided work for cowboys and ranchers. In later years, free-range cattle would be rounded up and fenced in. With less cattle roaming the open land, space was made for even more pioneers to settle on.

The government also provided incentives such as the Homestead Act for people to move west into the newly acquired territory. The Homestead Act offered land in the West for cheap or even free.

Europeans immigrating to the US: Between 1880 and 1920, a time of rapid industrialization and urbanization, America received more than 20 million immigrants. Beginning in the 1890s, the majority of arrivals were from Central, Eastern and Southern Europe. In that decade alone, some 600,000 Italians migrated to America, and by 1920 more than 4 million had entered the United States. Jews from Eastern Europe fleeing religious persecution also arrived in large numbers; over 2 million entered the United States between 1880 and 1920.

The peak year for admission of new immigrants was 1907, when approximately 1.3 million people entered the country legally. Within a decade, the outbreak of World War I (1914-1918) caused a decline in immigration. In 1917, Congress enacted legislation requiring immigrants over 16 to pass a literacy test, and in the early 1920s immigration quotas were established. The Immigration Act of 1924 created a quota system that restricted entry to 2 percent of the total number of people of each nationality in America as of the 1890 national census–a system that favored immigrants from Western Europe–and prohibited immigrants from Asia.

African-Americans migrating from the South to the North: The Great Migration was the relocation of more than 6 million African Americans from the rural South to the cities of the North, Midwest and West from about 1916 to 1970. Driven from their homes by unsatisfactory economic opportunities and harsh racist, segregationist laws, many African-Americans headed north, where they took advantage of the need for industrial workers that arose during the First World War. During the Great Migration, African Americans began to build a new place for themselves in public life, actively confronting racial prejudice as well as economic, political and social challenges to create a black urban culture that would exert enormous influence in the decades to come.



Asian Immigrants during the late 1800s to early 1900s: Beginning in the 1850s when young single men were recruited as contract laborers from Southern China, Asian immigrants have played a vital role in the development of this country. Working as miners, railroad builders, farmers, factory workers, and fishermen, the Chinese represented 20% of California's labor force by 1870, even though they constituted only .002% of the entire United States population. With the depression of 1876, amidst cries of "They're taking away our jobs!," anti-Chinese legislation and violence raged throughout the West Coast.

In 1882, Congress passed the Chinese Exclusion Act—the only United States law to prevent immigration and naturalization on the basis of race—which restricted Chinese immigration for the next sixty years. The "Chinese Must Go" movement was so strong that Chinese immigration to the United States declined from 39,500 in 1882 to only 10 in 1887.

By 1885, following Chinese Exclusion Act, large numbers of young Japanese laborers, together with smaller numbers of Koreans and Indians, began arriving on the West Coast where they replaced the Chinese as cheap labor in building railroads, farming, and fishing. Growing anti-Japanese legislation and violence soon followed. In 1907, Japanese immigration was restricted by a "Gentleman's Agreement" between the United States and Japan.

Small numbers of Korean immigrants came to Hawaii and then the mainland United States following the 1904-1905 Russo-Japanese War and Japan's occupation of Korea. Serving as strike-breakers, railroad builders, and agricultural workers, Korean immigrants faced not only racist exclusion in the United States but Japanese colonization at home. Some Korean patriots also settled in the United States as political exiles and organized for Korean independence.

By 1924, with the exception of Filipino "nationals," all Asian immigrants, including Chinese, Japanese, Koreans, and Indians were fully excluded by law, denied citizenship and naturalization, and prevented from marrying Caucasians or owning land.

Economic Motivations for U.S. Immigration in the late 1800s to early 1900s: In the late 1800s, people in many parts of the world decided to leave their homes and immigrate to the United States. Fleeing crop failure, land and job shortages, rising taxes, and famine, many came to the U. S. because it was perceived as the land of economic opportunity. Others came seeking personal freedom or relief from political and religious persecution. With hope for a brighter future, nearly 12 million immigrants arrived in the United States between 1870 and 1900. During the 1870s and 1880s, the vast majority of these people were from Germany, Ireland, and England--the principal sources of immigration before the Civil War.

NEXT DAY

Name: _____

4th grade Unit 4 Study Guide

How to use:

- ❑ For each item in bold, create your own test question. Write the answer, too.
- ❑ Describe how rights have expanded to groups of people who haven't always had them in this country. Describe how "citizenship" has changed.

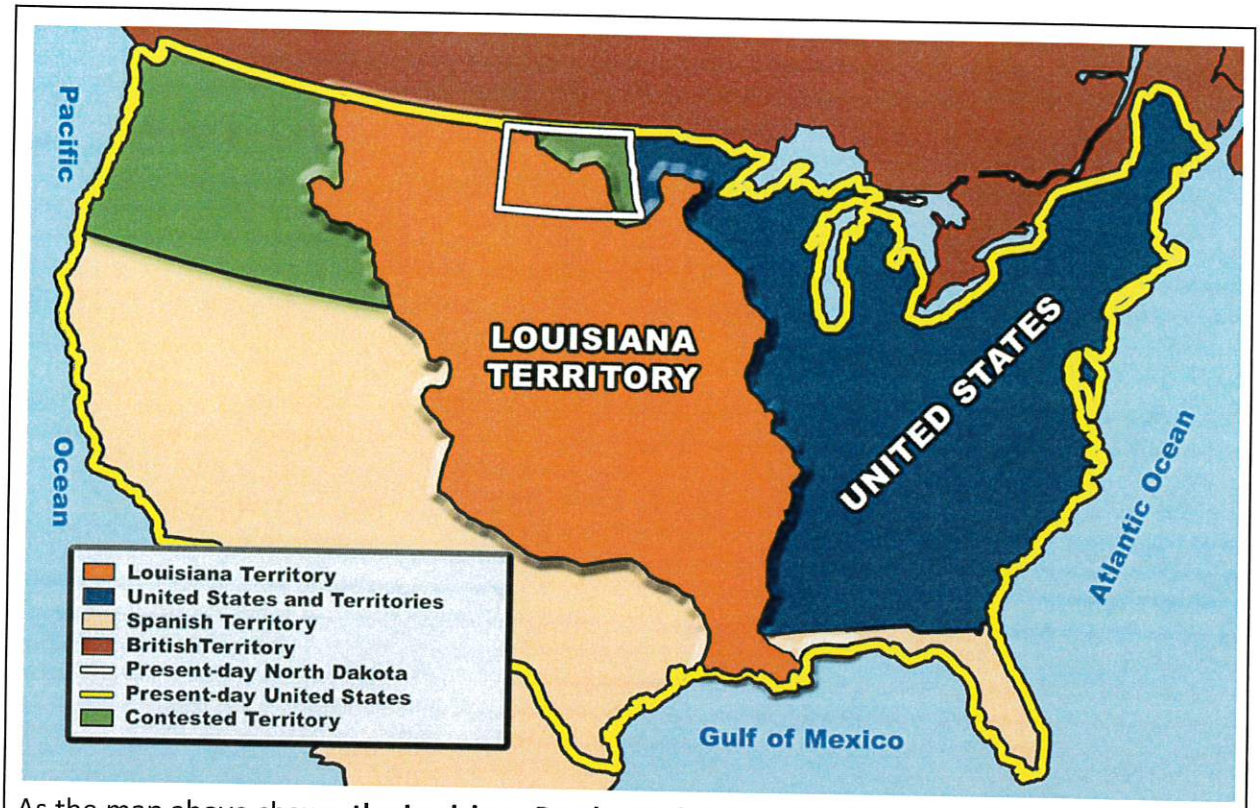
Explain why Napoleon decided to sell the Louisiana Territory to the U.S

In the late 1700's France was trying to grow a North American Empire like many other European countries. The main reason for this was that France and other European countries wanted to use the land in North America to grow crops, or find natural resources that they could sell and make a lot of money.

France's plan to make money off of North America relied on their colony of Haiti in the Carribean. Haiti was home to many enslaved people who were forced to grow and harvest Sugar by the French government. **In 1804, after over 10 years of fighting, the people the French government had enslaved on Haiti won their freedom and chased off the French. This meant that France had no way to make money off of North American land.**

This is the main reason that Napoleon, the leader of France at the time, **wanted to sell the Louisiana Territory** to the U.S.. Napoleon was also leading France into wars against other European countries and **wanted the money from the Louisiana Purchase to fund his army.**

Explain how the territory of the United States changed with the Louisiana Purchase.



As the map above shows, **the Louisiana Purchase about doubled the size of the US in terms of land area.** The Louisiana Purchase included all land West of the Mississippi River for hundreds of miles.

List the major physical features the U.S. gained in the Louisiana Purchase and their importance (Mississippi River for trade, more land for agricultural production and settlement).

Mississippi River:
By far the **most important physical feature** added to the US with the Louisiana Purchase is the **Mississippi River.** The Mississippi is the largest river in North America by a longshot. The Mississippi and the other rivers that flow into it (Tributaries) provide **fresh water** to the entire central region of the present day US. In addition to the **vital fresh water and fertile farmland** that the river provides, it also allows **easy trade** from the Northern part of the country to the southern. **Trade along the Mississippi River has been incredibly important to the US economy since the Louisiana Purchase.**

530 Million Acres of New Land:
In addition to the Mississippi River, the US gained access to over 530 million acres of new land. **This land could be used for Agriculture, a fancy word for farming, as well as simply a place for new people to settle**. This extra land would attract new people to the US because buying land to live and farm on was extremely inexpensive compared to pretty much everywhere else in the world.

Describe the purpose and hazards of the Lewis and Clark expedition (map the territory newly acquired by the U.S., document natural resources, establish trading relationships with Native Americans, open the door for other Americans to move west)

After the **Louisiana Purchase (1803)** President Jefferson needed to know what was in all this land that he just purchased. So, he sent explorers **Merriwether Lewis and William Clark** to travel all over the land, draw maps, and describe the people, plants, and animals of the area.

Though Lewis and Clark nearly died on the journey, they made it through with the help of a Native American Woman named **Sacagawea**. Their trip was called a success for three main reasons:

1. Though not all Native American tribes were friendly about the white men moving in to take over their land, some Native American tribes agreed to trade with them and these **trade relationships would benefit the US.**
2. Though they probably exaggerated how easy it would be, their writings about the territory **convinced many settlers to move out into the new Louisiana Territory**.
3. The two successfully **mapped most of the Louisiana Territory** so future settlers would know what the land looked like and **what natural resources the land held.**

Explain what the term "Manifest Destiny" means, and how the belief in Manifest Destiny influenced Westward Expansion.

The phrase "Manifest Destiny" was introduced by journalist **John L. O'Sullivan** in an 1845 newspaper article. In that year the United States admitted Texas to the Union as the 28th state. Writing about the event, O'Sullivan spoke of America's **"manifest destiny to overspread the continent allotted by Providence for the free development of our yearly multiplying millions."** The idea of Manifest Destiny was later used to justify the addition of Oregon, New Mexico, California, Alaska, and Hawaii to the United States.

Basically, Manifest Destiny is the idea that **America had the right and the duty to expand all the way to the Pacific Coast in order to provide space for its growing population.** This idea led **people in the US to continue to travel west** in search of cheap land to settle on, it led the **US government to continue to take new land in the West either by purchase or by force**, and finally it had **horrifying consequences for the Native Americans** who already lived on the land Americans now somehow felt they had a right to.

Identify the impact of the Homestead Act on Western Expansion.

The **Homestead Act**, passed and signed into law in **1862,** allowed **any free person in the US to travel west and claim up to 160 acres of land currently owned by the government**. This included land in the Louisiana Territory as well as land purchased or forcibly obtained by the US government after the Louisiana Purchase.

The purpose of this law was to get people in the US to move into this new territory so that it could become useful farmland for the US economy. **The main result was that settlers moved**

from more heavily populated areas to the new territories and started farms and towns there.

An unintended consequence of the Act was **wealthy people, called Speculators, taking advantage of the law**. Since the law required people to build on the new land, ideally a farm, even though the land itself was cheap many regular people could not afford to farm it. So these **wealthy speculators bought up most of the land for their factories, large farms, and railroads.**

Explain why Americans wanted to move West (wanted to claim land for farming and economic opportunities, in search of fortune from new natural resources such as gold)

The reasons Americans wanted to move West can be sorted into Push and Pull categories.

Push Factors are reasons that people wanted to leave the Eastern part of the US.

- As people moved to the US from all over the world, mostly Europe, **cities on the East Coast became overcrowded and places to live and jobs to work became extremely hard to find.**
- After decades of farming in the Southern US states like Virginia, the Carolinas, and Georgia, the **soil was getting worn out**. Plantation owners and even small farmers, began to leave in search of better farmland.

Pull Factors are the reasons that people wanted to move to the West.

- **Land in the West was incredibly cheap** because there was so much of it and the government passed the **Homestead Act** to encourage settlement in the West.
- As the US territory expanded to California, reports of settlers finding gold in the new Western Territories pulled new settlers to the region in hopes of finding their fortune in gold.
- New inventions, like the windmill and barbed wire, made farming in the Great Plains area easier and more likely to make money.
- Some settlers were pulled to the West by ideas of being a "cowboy" or having an adventure in the unknown new territories.

Describe the experience of pioneers on the Oregon Trail migrating westward (traveling in wagons pulled by mules/oxen, physical risks of the journey, camping, encountering Native Americans, supplies needed).

The **Oregon Trail** was a roughly 2,000-mile route from Independence, Missouri, to Oregon City, Oregon, which was used by hundreds of thousands of American pioneers in the mid-1800s to emigrate west. The trail was arduous and snaked through Missouri and present-day Kansas, Nebraska, Wyoming, Idaho and finally into Oregon. Without the Oregon Trail and the passing of the Oregon Donation Land Act in 1850, which encouraged settlement in the Oregon Territory, American pioneers would have been slower to settle the American West in the 19th century.

Oregon Trail Experience included:

- traveling through unknown lands

Much of the land in the Western territories had limited mapping and those maps were often not very reliable. This meant that settlers didn't know if they were always going the right way, never knew what physical features might be in their way, and could easily run into areas they should have avoided.

- traveling in wagons pulled by mules/oxen

- supplies needed/starvation

These settlers packed whatever belongings and supplies they could into these wagons. This presented a number of challenges including limited storage space so settlers could run out of supplies and the fact that the animals pulling the wagons had to be fed and taken care of.

- physical risks of the journey

The journey was long and taxing. The weather could turn at any point, most settlers did not have enough animals or wagons for everyone so many folks walked, wild animals presented a physical risk to people traveling on the Oregon Trail. The Trail also crossed many dangerous waterways like fast flowing rivers and frozen lakes.

- camping

The journey lasted months and that meant months of sleeping outside under the stars. Sleeping out in the elements exposed settlers to further risk of injury or illness, not to mention danger from bandits who might attack camp at night

- encountering Native Americans

Travelers on the Oregon Trail encountered Native Americans along their journey all the time. Sometimes this provided essential trading and even help in terms of giving directions or tips on how to survive in the region. Sometimes, however, the Native Americans did not want white settlers in their area because they knew that settlers often meant Natives would be kicked off their lands.

- disease/lack of medicine

One type of supply that was in very low stock was medicine. At this point in history medicine was not as effective as it is today and it was definitely harder and more expensive to get. Being outdoors, walking, and not having enough food for months at a time makes people more likely to get sick and most settlers did not have the medicine they needed to heal their sick family members. Many people died on the Oregon Trail as a result.

Explain the impact of Westward migration and expansion on Native American populations (pushed out of land and forced relocation, loss of resources vital to survival, substantial population losses due to spread of foreign diseases).

The great **losers in this westward wave were the Native American tribes.** Displaced as new settlers moved in, **they lost their traditional way of life and were relegated to reservations.**

As the picture above shows, Native American land was taken from them and sold off to American settlers by the US Government. **The US Government took land from Native Americans by force or through treaties that they almost always violated after.** Native Americans were kicked off of land they had lived on for centuries or longer and **moved to small plots of land called reservations where the land was usually not very good for growing crops or hunting.**

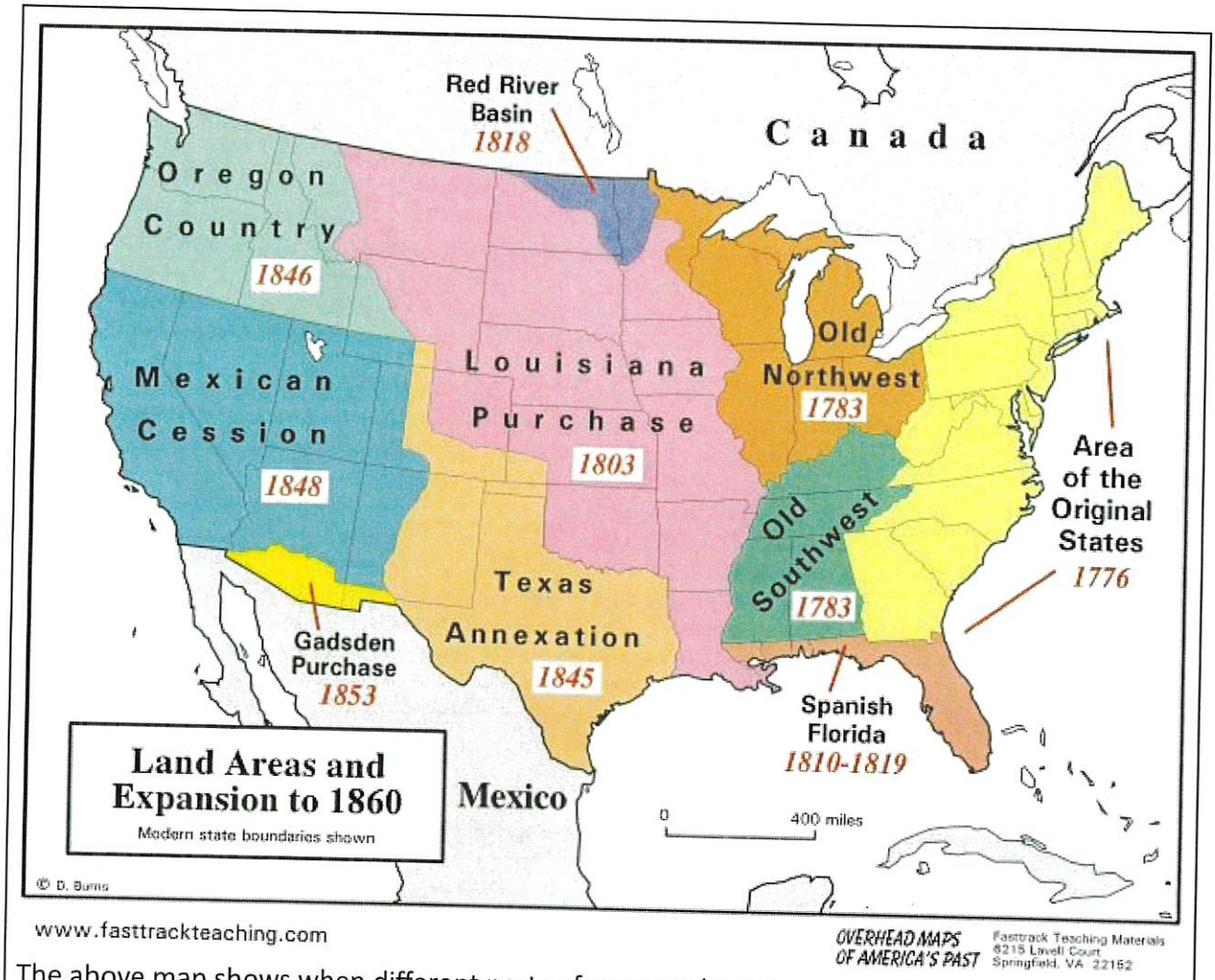
Quotation from Santana, Chief of the Kiowas

"A long time ago this land belonged to our fathers; but when I go up to the river I see camps of soldiers here on its bank. These soldiers cut down my timber; they kill my buffalo; and when I see that, my heart feels like bursting; I feel sorry."

As the quote above shows, **natural resources that Native Americans depended upon were also overused by the new white inhabitants of the West.** US settlers over hunted the buffalo, which many Native tribes used for meat, clothes, and other necessities. US settlers also cleared forests to build their homes and villages.

The above image shows a **Native American infected with a European disease called smallpox.** European settlers brought the disease with them unintentionally as most Europeans had developed immunity to the disease which meant that they could carry the disease without it really affecting them. **Since smallpox was not native to North America, the Native Americans didn't have that immunity and the disease was deadly to them**. Later, the **US army would go as far as to intentionally spread the disease to Native Americans** to get them off of land they wanted by giving them **infected blankets.**

Explain migration patterns as influenced by the belief in Manifest Destiny.



The above map shows when different parts of present day US were purchased or taken by the US government. This expansion all the way from the Atlantic coast and the original 13 colonies to the Pacific coast was influenced by the idea of Manifest Destiny. The US government, and many US citizens, believed that the US had the right and the duty to expand from Ocean to Ocean to spread American ideals of freedom and democracy. Whether they fought wars or killed Native Americans to do so did not stop them.

Explain the negative consequences of the belief in Manifest Destiny (justification for forced cultural assimilation of Native tribes, loss of identity, forced relocation).

The belief in **Manifest Destiny, the idea that the US has the right and duty to expand all the way across the continent to the Pacific Ocean and spread its ideas of democracy, created a disaster for the Native American tribes** already living in the lands Americans now believed was theirs.

Many Americans were convinced that Manifest Destiny was the right thing mainly because they believed the "American Way of Life" (things like having a democracy, being a Christian, speaking English, having your own farm, going to formal school) was the best thing for people all over the world, not just white European settlers in the US. **So, Manifest Destiny was used**

as justification for forcing Native Americans to change their way of life, lose their religion, learn a new language, and try to fit in with White Americans Additionally, any Native Americans who wished to retain any part of their own culture were **forced off of land they had lived on for generations to move to small areas of less fertile land called reservations** to make way for White Americans to move in.

Explain the impact of the cotton gin on America's economy and western migration (made cotton production more profitable, more Americans wanted to move west to find land to produce cotton, slavery increased with growth of cotton production)

In 1794, U.S.-born inventor Eli Whitney (1765-1825) patented the cotton gin, a machine that revolutionized the production of cotton by greatly speeding up the process of removing seeds from cotton fiber. By the mid-19th century, cotton had become America's leading export.

The invention of the cotton gin made cotton much more profitable to grow because the harvesting process became much quicker and easier. This meant that plantation owners could harvest huge amounts of the crop really quickly and make a lot of money. **This led to many farmers and plantation owners switching to grow cotton almost exclusively to increase their profits.**

As farming of cotton expanded, many **Americans moved out west in search of cheap land to grow more cotton on.**

Additionally, even though the cotton gin reduced the amount of labor needed to harvest cotton, it increased the demand for cotton to the point that the overall amount of work being done increased greatly. **This led southern plantation owners to increase the number of enslaved people working on their plantations. The cotton gin led to many many more souls being enslaved in the US.**

Explain the impacts of new farming technologies on the economy and settlement in the West (barbed wire, plows, water pumps)

At the same time that land the US government was buying up or taking so much new land in the West, **farmers and other inventors were creating new technologies that made farming easier or more profitable.**

Barbed wire allowed ranchers (farmers who raise livestock) to build cheap and effective fences to keep their livestock in and keep other people and predator animals out. This made raising livestock a more profitable form of farming.

Plows allowed farmers without a huge labor force, this mostly meant either northern farmers or southern farmers who couldn't afford slaves, to prepare more land for farming quickly. The act of tilling or loosening the dirt before you plant crops is an essential and time consuming step that the invention of the plow made much easier and faster. One important effect of this was to make farming in parts of the West that didn't allow slavery more

profitable.

Water pumps are another invention that made operating a larger farm without a huge labor force more doable. Getting water to all of the crops on a large farm is really difficult if you have to hand pump the water from a well or get it from another nearby water source. **Windmill powered water pumps allowed farmers to get water up from a creek or underground well and to their crops much faster and easier.**

Explain the impact of the Erie Canal on America's economy and western migration (easier to transport goods, increased access to fertile farmlands in the west, and helped make New York City a world financial capital).

The Erie Canal is a man-made canal in New York state that connects New York City to both the Atlantic Ocean and the Great Lakes in the Midwest. It opened in 1825 and had a huge impact on the development of New York City as well as migration into the west.

Before the canal was opened the only way to get people and goods from the East Coast into the west was by pack animals (horses and oxen) and wagons. **Shipping goods and/or people by the canal was much faster and cut transportation costs by up to 95%. This led to far more people moving out west** now that they knew supplies and help could reach them faster and also it was cheaper to make the initial move out west along the Canal.

Additionally, the Erie Canal gave New York City an advantage over all other port cities in the East Coast. NYC was now the only city where goods could come all the way from the Atlantic Ocean to the Great Lakes without having to go on land at all. This led to NYC becoming the financial capital of the US and eventually the world.

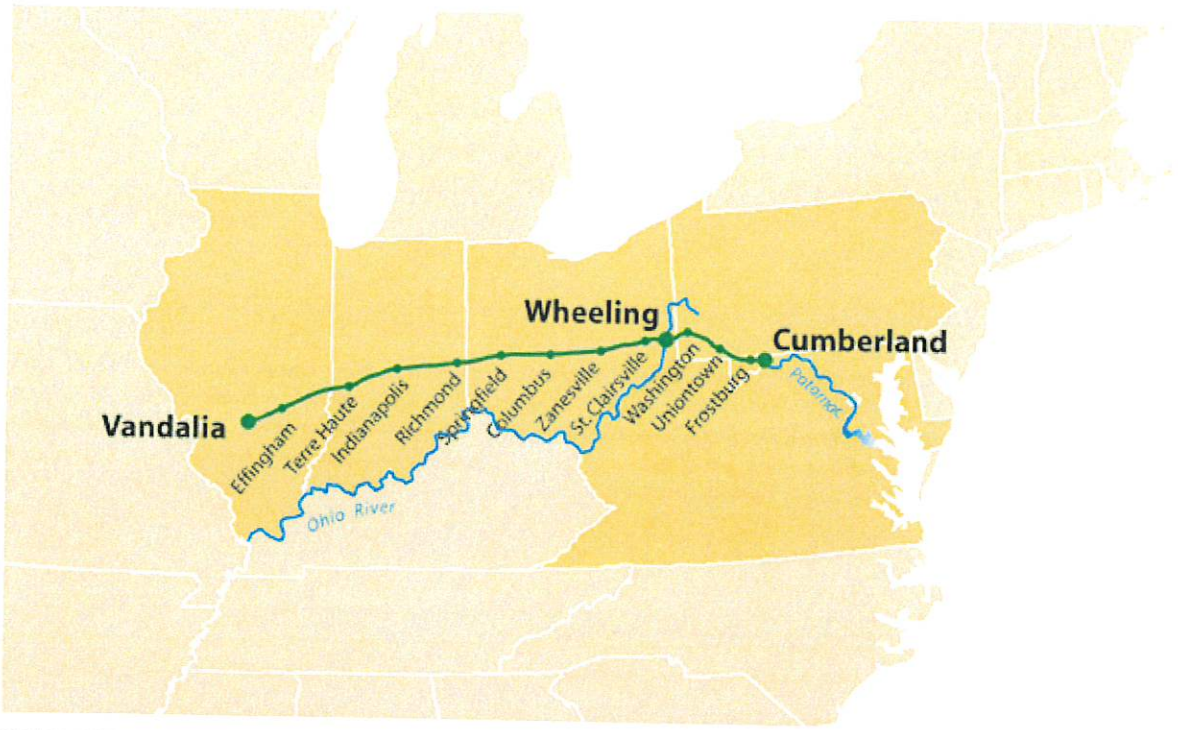
Explain the impact of steamships on America's economy and western migration (faster transport of people and goods).

In the early 1800's the invention of a new type of boat, the steamship, changed the way that Americans transported goods and people along rivers. While people had been using rivers for trade and travel for a long time, the speed of the boats depended on the current of the river and could also not move up river. **The invention of the steamship allowed goods to be traded and people to travel much faster. This increased the amount of money that people could make through trade, increased the distance that crops could be transported before they went bad, and made it easier for people to move further away from the East Coast.**

Explain the impact of the National Road on migration and the economy

The National Road, sometimes called Cumberland Road, was the first major road built by the US Federal Government. The road was built between 1811 and 1837 and connected Cumberland, Maryland--a major East Coast city at the time--with Vandala, Illinois which was the capital of Illinois at the time.

The road made transporting people and goods by land from the East Coast into the midwest much easier and faster. Wagons pulled by oxen and horses could travel much more quickly along the road than they previously could along the winding paths that connected cities before the National Road.



Explain the effects of the Transcontinental Railroad on people, migration, and the economy (faster transport for people moving west, easier transport for goods and materials, provided jobs, dangerous to construct, damaging to environment and animals, destructive to Native American lands and hunting).

In 1862 the US Government, by passing the Pacific Railroad Act, hired the Central Pacific and Union Pacific Railroad companies to build a railroad that would cross the entire US from east to west. By 1869 the two companies, which had started construction on either end and raced toward each other, met in the middle in Utah.

The main impact of the Railroad was that it was now **easier for people and goods to move across the country.** This allowed people to move further west without fear of being too disconnected from the rest of the country and speeding up travel means trade is more profitable. **The building and then operation of the railroad itself also added many jobs to the US economy.**

Unfortunately, like most things that benefited the US government in this period, it had many negative consequences as well. For one, **building the railroad was incredibly dangerous** and

many of the workers (mostly immigrants) died along the way. The trains that went along the railroad were also **bad for the environment and contributed to pollution that was dangerous to humans and animals.** Finally, the railroad was constructed through the land of many Native American tribes and thus is **continued and even sped up the removal of Native Americans from their land as well as the disruption of lands that they used for hunting.**

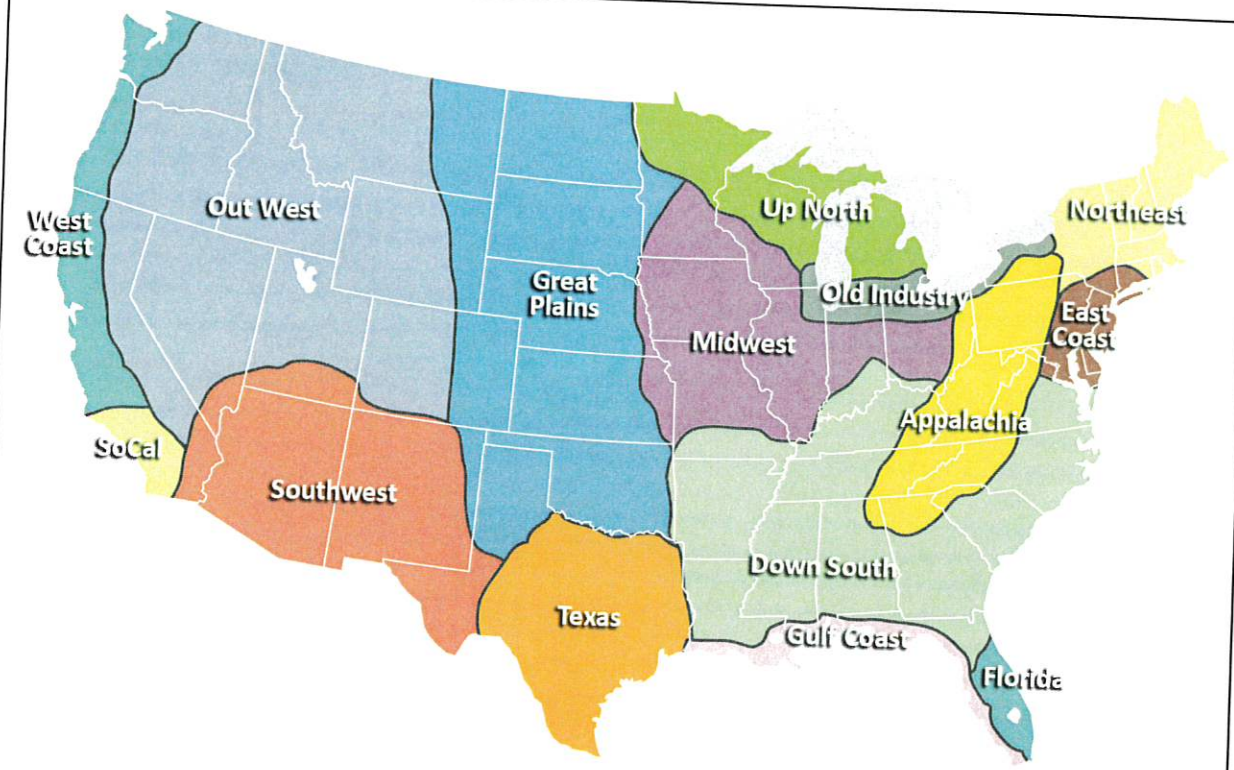
Analyze how the physical characteristics of the land in the Midwest and the Great Plains attracted settlers and provided economic opportunity (lots of fertile soil and affordable land for farming or mining).

Explain how physical features of the Midwest and the Great Plains made for favorable settlement (fertile soil, plentiful land, profitable natural resources).

The Midwest and Great Plains are areas of North America gained by the US with the Louisiana Purchase and other additions of territory to the country. Both of these areas were being flooded with new American settlers throughout the 1800s. **Both regions had physical characteristics that attracted settlers to move there for better economic opportunities--people could make money in the regions.**

The **Midwest had access to the Great Lakes which meant it would be possible to ship goods back to the major cities on the East Coast.** The Midwest also had a **lot of fertile soil** for farming and the US government was selling it to new settlers for very cheap. Additionally the Midwest was home to many **dense forests** that provided lumber for people to build homes and other buildings with or even to sell to other settlers moving further west.

The **Great Plains are even further west and also had attractive physical characteristics.** The region is called the Great Plains because before US settlers moved in the region was home to a lot of large flat grassy areas called plains. **Farmers would take up a lot of this land and transform it into farmland where they grew things like wheat and corn because these crops require about the same type of soil as the grass that grew in the plains.** The large areas of flat land and rivers that ran through them also made it easy to build large farms and use the rivers to power them and ship their goods.



Explain how the Transcontinental Railroad and the National Road removed the barrier of the Appalachian Mountains in migrating to the West.

One of the main obstacles to many settlers who wanted to move west was the Appalachian Mountain Range. The Appalachian Mountains made it hard to get oxen-drawn wagons from the East Coast to the midwest and other new US Territories. The wheels of the wagons had a hard time making it over the rough terrain and any uphill travel was hard on the animals that pulled them.

The Transcontinental Railroad and the National Road made it much easier to pass the mountains. The Railroad had tracks that went through the mountains and the National Road created even surfaces for wagons to roll on. These two additions made travel across the Appalachian Mountains way easier and faster.

Define and provide examples of the economic terms human, natural, and capital resources.

Human Resources refers to the work that people do to make money in the economy. Much of the work that makes the economy function cannot be done without humans to do it. So, people in the workforce are thought of as a resource when talking about the economy. If you don't have enough people to harvest the crops or cut down the trees, it doesn't matter how fertile the land is or how many trees you have for lumber.

Natural Resources are things that exist in nature that are helpful or profitable for the

economy. This could mean having fish in a river that people can eat or sell, it could mean having gold in mines to sell, or it could mean having oil underground that can be made into gas for cars and ships.

Capital Resources refers to the stuff you use to make other stuff. This includes things like tools, machines, and vehicles. For instance, a cotton gin, a plow, and a shovel are all capital resources that would have been common in the period of Western Expansion.

Explain how human, natural, and capital resources were used in cotton production in the South.

Producing cotton on cotton plantations in the South used all three types of resources we just learned about. **Human resources in the form of the labor of enslaved people** did the work of planting, tending to, and harvesting the cotton plant. **Natural Resources like fresh water from rivers and fertile soil** allowed the cotton to grow so well in the South. **Finally, the cotton gin was a capital resource** used to separate the cotton fibers from the plant so that the fibers could be sold.

Use the terms profit and risk to discuss cotton production, the building of the Transcontinental Railroad, and farming in the Midwest and Great Plains.

Cotton production brought in huge profits for plantation owners who used the labor of enslaved people to grow and harvest the crop. The **cotton gin** made processing cotton easier and **increased the profits** of cotton plantations because the crop took less work to get to market. The **economic risk of starting a cotton plantation is that it took a large capital investment** at the start as the machinery and purchasing enslaved people was expensive but there was a lot of competition since many people wanted to become rich off of cotton. So there was a **risk that your farm could not make it due to the success of others and your large investment in the beginning would be lost.**

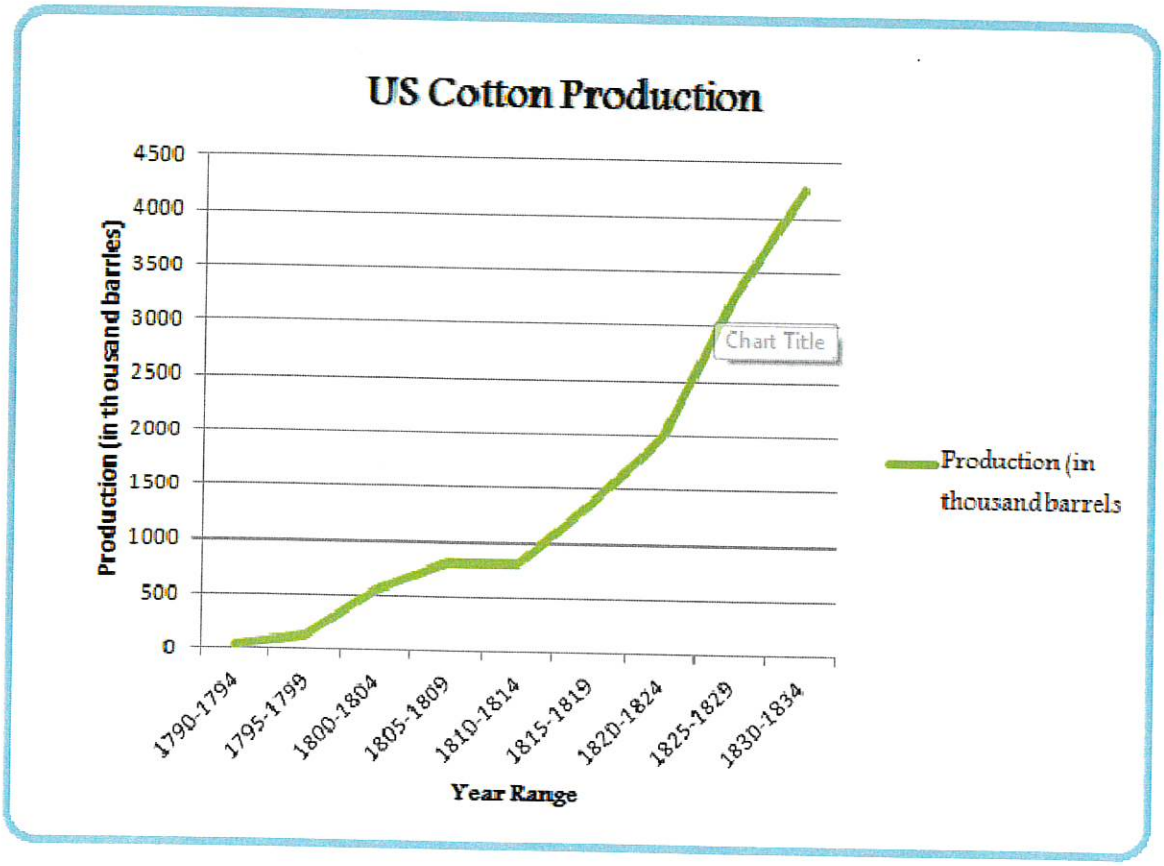
Building the Transcontinental Railroad was seen as a huge risk at the time. The railroad was going to be incredibly **expensive** to build, was going to **take a long time and a lot of manpower,** and **not that many people even lived where the railroad was being built.** The US government was taking a risk and betting on the idea that building the railroad would cause people to want to move out west since it would be easier with the help of trains. **The Railroad also increased profits for farmers and other settlers out west because their goods could get out to market faster and they could also get the supplies and labor that they needed faster through the railroad.**

Going out west to start a farm in the Midwest or Great Plains was a risky thing for settlers to do, however they did it because there was the possibility of a greater profit than they could make where they currently lived. There was risk involved because it was uncharted territory and settlers did not really know what they would encounter. Taking whatever they could by wagon or train or steamship and moving thousands of miles away meant that if they failed to make it as a farmer or some other job they would likely be left with little to no

options for survival. However, the US government was reducing that risk by selling land for really cheap, building roads to make getting there easier, and building a railroad that made shipping any goods you did manage to create much easier. These new forms of transportation also made the west seem less far away and thus less risky. Finally, farming out west was more profitable in the east because land was more readily available and the new transportation methods only increased profits for western farmers.

Investigate how supply, demand, and price impacted cotton production in the South.

When the Cotton Gin was invented it became much easier to separate cotton fibers from cotton seeds, making it much easier and faster to get cotton to market to sell. This increased the supply of cotton, and lowered the price of it. Once cotton became readily available, more people wanted it to make clothes. This drove up the demand of cotton and the price rose to match that demand. As more and more cotton plantations popped up and existing ones expanded, the demand for labor increased which led to more enslaved people working on cotton plantations in the south. Thus the supply of cotton boomed again to meet the demand and cotton became by far the biggest export in the US.



Investigate how the Transcontinental Railroad influenced the supply of goods.

The Transcontinental Railroad increased the supply of goods to the west by making travel from east to west much easier. It also increased the supply of certain goods, like gold and silver from California mines and wheat from farms in the midwest, to the east. Since the Transcontinental Railroad made getting out west easier and faster, more settlers moved out that way. This in turn increased the supply of crops and other natural resources coming from out west back to the population centers of the East like Philadelphia and New York.