

# Webster County Schools

95 CLARK AVENUE – EUPORA, MS 39744

Office of Curriculum

662-258-5551, Extension 15

[packets@webstercountyschools.org](mailto:packets@webstercountyschools.org)

# 7<sup>th</sup> Grade

## Packet 2

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For Additional Online Resources, please see the Link to the following resources on the Curriculum page on [www.webstercountyschools.org](http://www.webstercountyschools.org):

## MDE Learning-at-Home Resources for Districts

The resources contained on this website contain materials and tools that may be used to provide additional resources to parents or students. This information is only intended to be a general summary of information provided to the public. The Mississippi Department of Education does not endorse or promote any commercial products or services. The views and opinion of authors expressed do not necessarily reflect those of the MDE, and they may not be used for advertising or product endorsement purposes. Please make sure that you choose the tool(s), resource(s) or material(s) that are developmentally appropriate and best fit the needs of your students, school, or district.

Resources have been divided into the following categories:

- Internet Services
- Multiple Content Area Resources
- Arts (Dance, Music, Theatre, Visual Arts) Resources
- Career Pathway Experiences (CPE) Alternative Resources
- English Language Arts Resources
- Mathematics Resources
- Science Resources
- Social Studies Resources
- World Language Resources
- Counselor Resources
- English Learner Resources
- Virtual Learning Resources

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## At-Home Learning Packet Schedule:

- Packet 2- April 20, 2020
- Packet 3- May 4, 2020
- Packet 4- May 18, 2020

# Understanding Addition with Negative Integers

- 1 Between the time Iko woke up and lunchtime, the temperature rose by  $11^\circ$ . Then by the time he went to bed, the temperature dropped by  $14^\circ$ .

Write an addition expression for the temperature relative to when Iko woke up.

---

Draw a model using integer chips and circle the zero pairs.

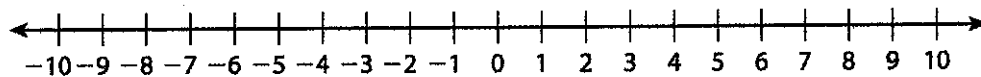
What is the value of the remaining integer chips after the zero pairs are removed?

---

What is the net change in the temperature relative to when Iko woke up?

---

- 2 Complete the number line model to find  $(-5) + 6$ .



$(-5) + 6 =$  \_\_\_\_\_

How would the number line model be different if you wanted to find  $(-5) + (-6)$ ?

---

---

# Understanding Addition with Negative Integers *continued*

► For problems 3–5, consider the sum  $4 + (-8)$ .

3 Explain how you can use a number line to find the sum.

4 Explain how you can use chips to determine the sum.

5 Does it matter what order you add the numbers in the problem? Explain how chips and number lines support your answer.

6 Write an addition expression that has a value of  $-8$ .

# Understanding Subtraction with Negative Integers

- 1 Mary takes 9 grapes from Rohin and then decides to give 4 back.

Write a subtraction problem to describe how many grapes Rohin has. \_\_\_\_\_

Draw a model for the subtraction problem using integer chips.

How many negative integer chips did you cross out? \_\_\_\_\_

Write the subtraction as addition. \_\_\_\_\_

Draw a model for the addition problem using integer chips.

How do the two integer chip models show that  $-9 - (-4)$  is the same as  $-9 + 4$ ?

What is the change in the number of grapes Rohin has? \_\_\_\_\_

# Understanding Subtraction with Negative Integers *continued*

- 2 Jin is 3 floors above ground level in a hotel. Leila is on a parking level of the hotel that is 4 floors below ground level. How many floors apart are they? Draw a number line model to show  $3 - (-4)$ .



What is  $3 - (-4)$ ? \_\_\_\_\_

What is the meaning of this answer in the context of the problem?

Rewrite  $3 - (-4)$  as an addition problem. \_\_\_\_\_

- 3 The variables  $a$  and  $b$  represent positive numbers. When you find the difference  $a - (-b)$ , do you expect the result to be less than or greater than  $a$ ? What if  $a$  is negative and  $b$  is positive? Explain.

# Understanding Multiplication with Negative Integers

➤ Practice multiplying negative integers.

1 Find each product. Then describe any patterns you notice.

$$3 \cdot (-7) = \underline{\hspace{2cm}}$$

$$2 \cdot (-7) = \underline{\hspace{2cm}}$$

$$1 \cdot (-7) = \underline{\hspace{2cm}}$$

$$0 \cdot (-7) = \underline{\hspace{2cm}}$$

$$(-1) \cdot (-7) = \underline{\hspace{2cm}}$$

$$(-2) \cdot (-7) = \underline{\hspace{2cm}}$$

$$(-3) \cdot (-7) = \underline{\hspace{2cm}}$$

2 Solve each problem. Explain how you determined the sign of the products.

$$(-3)(9) = \underline{\hspace{2cm}}$$

$$(-8)(-5) = \underline{\hspace{2cm}}$$

$$(-5)(-6) = \underline{\hspace{2cm}}$$

$$(-1)(2)(-6) = \underline{\hspace{2cm}}$$

$$(-2)(-4)(-7) = \underline{\hspace{2cm}}$$

$$(-3)(-4)(-3)(-1) = \underline{\hspace{2cm}}$$



## Understanding Multiplication with Negative Integers *continued*

- 3 Use the distributive property to show why the product  $(-6)(-3)$  is positive. The first step is done for you.

$$(-6)(-3) + (-6)(3) = (-6)[(-3) + 3]$$

- 4 Mark's work to simplify  $(-3)(-5)(-2)$  is shown. Explain his error and show how to find the correct product.

$$(-3)(-5)(-2) = (-15)(-2) = 30$$

# Adding and Subtracting Positive and Negative Fractions and Decimals

- Estimate each problem to check if the student's answer is reasonable. If not, cross out the answer and write the correct answer. Show your work.

Problems	Student Answers
<p>① <math>1.3 - (-2.5)</math></p>	<p><del>-1.2</del>      Possible estimate: <math>1 - (-3) = 1 + 3</math>  <math>= 4</math>  <math>3.8</math>  <math>1.3 - (-2.5) = 1.3 + 2.5</math>  <math>= 3.8</math></p>
<p>② <math>-3\frac{1}{6} + 6\frac{2}{3}</math></p>	<p><math>-3\frac{1}{2}</math></p>
<p>③ <math>-4.2 - (-2.9)</math></p>	<p><math>-1.3</math></p>
<p>④ <math>3\frac{1}{5} - 2\frac{1}{2} + 2\frac{3}{5}</math></p>	<p><math>-3\frac{1}{3}</math></p>

# Adding and Subtracting Positive and Negative Fractions and Decimals *continued*

Problems	Student Answers
5 $5.9 - 7.3 - 10.2$	11.6
6 $-5\frac{5}{6} - (-2\frac{1}{3}) + 5\frac{1}{6}$	$1\frac{2}{3}$
7 $11.5 - 5.4 - 4.7$	-1.4
8 $-11\frac{1}{8} - 12\frac{1}{4} - (-21\frac{1}{2})$	$2\frac{1}{8}$

- 9 How does estimating an addition or subtraction problem help you know if an answer is reasonable?

# Multiplying Negative Rational Numbers

► Find the product of the rational numbers. The answers are mixed up at the bottom of the page. Cross out the answers as you complete the problems.

1  $2 \times -\frac{7}{4}$

---

2  $-\frac{1}{3} \times -\frac{6}{5}$

---

3  $\frac{2}{5} \times -\frac{3}{4}$

---

4  $-2\frac{1}{3} \times \frac{5}{4}$

---

5  $-\frac{3}{7} \times -1\frac{2}{3}$

---

6  $-3\frac{5}{7} \times -2\frac{1}{2}$

---

7  $0.75 \times -\frac{4}{3}$

---

8  $-0.2 \times -\frac{2}{5}$

---

9  $-0.35 \times -1\frac{3}{7}$

---

10  $2.5 \times -3\frac{4}{5}$

---

11  $0.2 \times -0.45$

---

12  $-0.25 \times -1.4$

---

13  $-2.3 \times 6.8$

---

14  $-3.9 \times 5\frac{5}{9}$

---

15  $-4.2 \times -6\frac{2}{7}$

---

## Answers

$$-21\frac{2}{3}$$

$$-15.64$$

$$-9\frac{1}{2}$$

$$-3\frac{1}{2}$$

$$-2\frac{11}{12}$$

$$-1$$

$$-\frac{3}{10}$$

$$-0.09$$

$$\frac{2}{25}$$

$$0.35$$

$$\frac{2}{5}$$

$$\frac{1}{2}$$

$$\frac{5}{7}$$

$$9\frac{2}{7}$$

$$26\frac{2}{5}$$

# Dividing Negative Rational Numbers

► Find each quotient.

1  $-5 \div \frac{5}{7}$

---

2  $-\frac{8}{9} \div \frac{2}{3}$

---

3  $\frac{3}{10} \div -\frac{6}{7}$

---

4  $-2\frac{3}{4} \div 11$

---

5  $-4\frac{2}{7} \div -\frac{15}{16}$

---

6  $-1\frac{4}{7} \div -3\frac{2}{3}$

---

7  $-8 \div 6.4$

---

8  $-\frac{3}{2} \div 0.5$

---

9  $-3\frac{1}{3} \div 1.2$

---

10  $9.28 \div -3.2$

---

11  $0.056 \div -0.004$

---

12  $-0.28 \div 0.07$

---

13 Explain the steps you used to solve problem 11.

# Writing Rational Numbers as Repeating Decimals

► Write each number as a repeating decimal.

1  $\frac{1}{9}$

---

2  $-\frac{2}{11}$

---

3  $\frac{7}{11}$

---

4  $\frac{1}{3}$

---

5  $2\frac{4}{9}$

---

6  $-\frac{13}{6}$

---

7  $-1\frac{5}{6}$

---

8  $\frac{13}{99}$

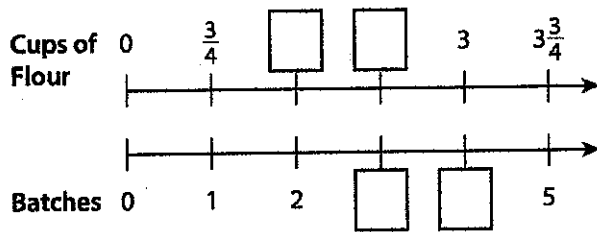
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- 9 When the denominator of a proper fraction is 99, what do you notice about the repeating digit(s) in its decimal form?

# Understanding Proportional Relationships

► Read and solve the problems. Show your work.

- 1 Josie is making pizza dough. Complete the double number line by filling in the missing values. Then write an equation that models the relationship between the total cups of flour,  $c$ , and number of batches,  $n$ . Show your work.



- 2 Lilli bought each of her friends a pair of colorful socks that cost \$5.50. Complete the table to show how much Lilli paid to buy different numbers of socks. Then write an equation that shows the total cost,  $c$ , for  $p$  pairs of socks.

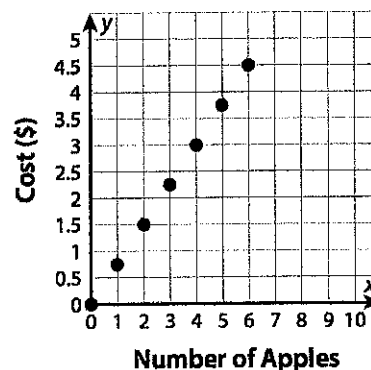
<b>Cost</b>		\$11.00			
<b>Pairs of socks</b>	1	2	3		

- 3 Explain how using a table is similar to using a double number line and how it is different.
- 4 Mrs. Lopez types at a constant rate. The constant of proportionality for the relationship between the number of words she types,  $w$ , and the number of minutes she types,  $m$ , is 38. Write an equation to show this relationship.

# Interpreting Graphs of Proportional Relationships

► The graph shows the cost of apples at a local market. Use the graph to answer problems 1–3.

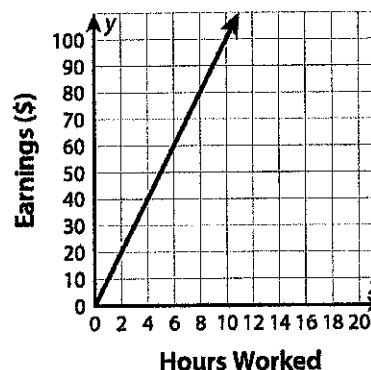
- 1 What is the cost of 1 apple and of 3 apples?  
How do you know?



- 2 What does the point  $(0, 0)$  represent in this context?
- 3 What does the point  $(2, 1.5)$  represent in this context?

► The graph shows Manuela's earnings for the number of hours she spends tutoring. Use the graph to answer problems 4 and 5.

- 4 How much does Manuela earn for each hour of tutoring?  
Explain.



- 5 Write an equation that shows the relationship between Manuela's earnings,  $y$ , and hours,  $x$ .



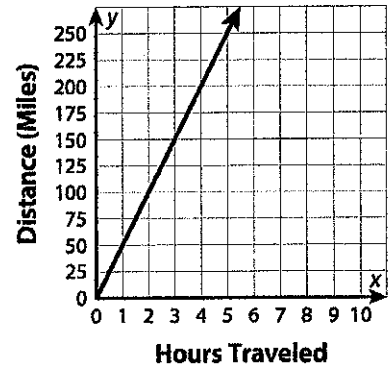
# Interpreting Graphs of Proportional Relationships *continued*

➤ The graph shows the distance Jason’s family traveled on a recent road trip. Use the graph to answer problems 6–8.

6 What is the constant of proportionality? Explain how you know.

7 Identify and interpret one other point on the graph.

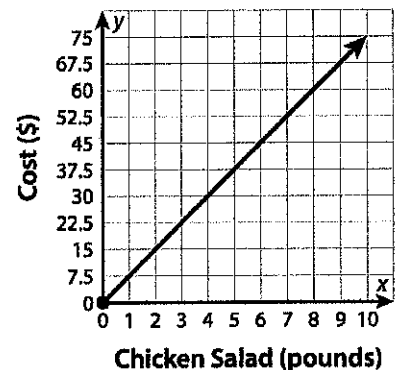
8 Write an equation that models the distance,  $d$ , traveled in  $t$  hours.



➤ The graph shows the cost per pound of chicken salad. Use the graph to answer problems 9 and 10.

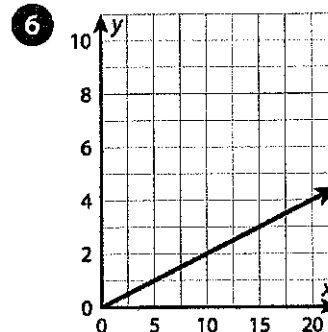
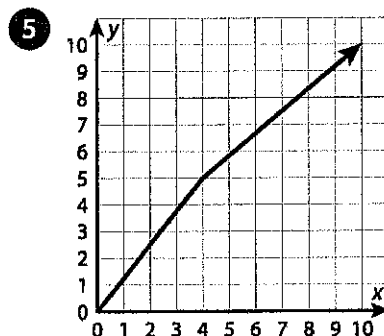
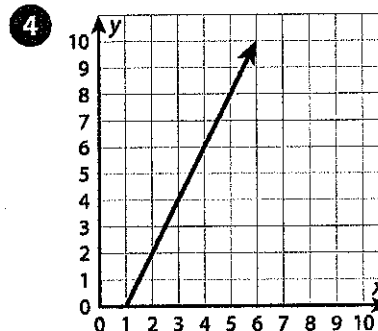
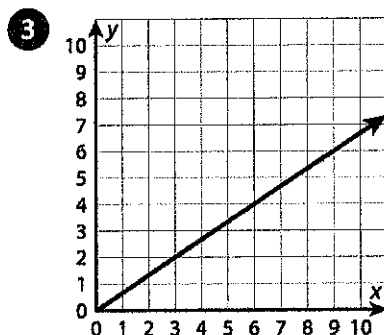
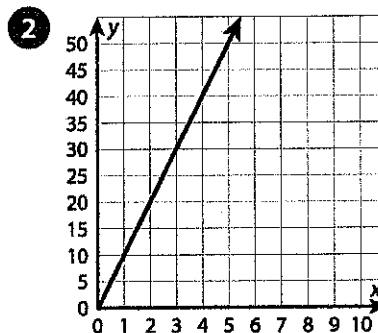
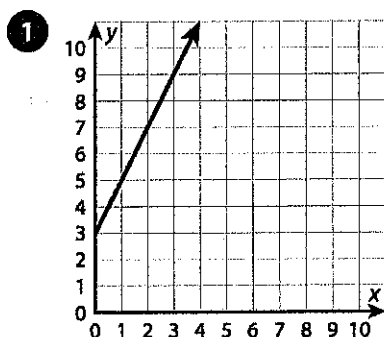
9 Randy claims that he can purchase 3.5 pounds of chicken salad for \$23.50. Is he correct? Explain.

10 Explain how you can determine how much chicken salad may be purchased for \$52.50.

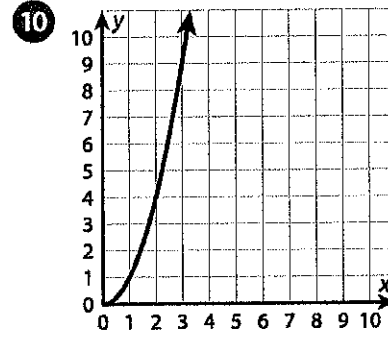
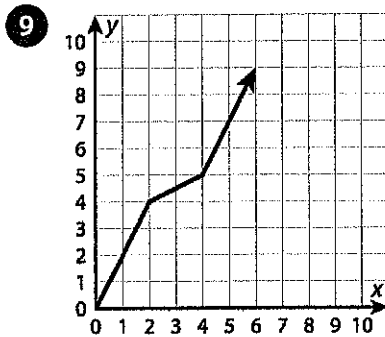
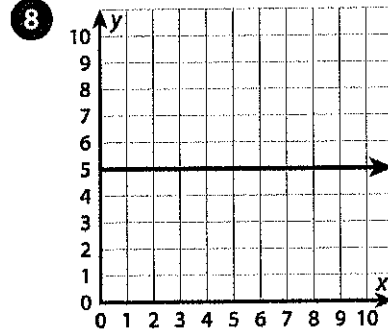
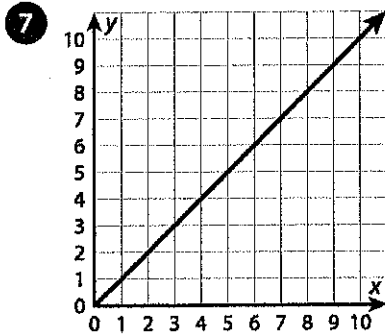


# Recognizing Graphs of Proportional Relationships

- Circle all the problems with graphs that do NOT represent a proportional relationship. For the problems that are circled, explain why the graphs do not represent a proportional relationship.



# Recognizing Graphs of Proportional Relationships *continued*



- 11 Without analyzing specific points on a graph, explain how you know whether a graph shows a proportional relationship.

# Solving Multi-Step Ratio Problems

► Solve each problem.

- 1 At The Green House of Salad, you get a \$1 coupon for every 3 salads you buy. What is the least number of salads you could buy to get \$10 in coupons?
- 

- 2 Kim orders catering from Midtown Diner for \$35. She spends \$5 on a large order of potato salad and the rest on turkey sandwiches. Each sandwich is \$2.50. How many sandwiches does Kim buy?
- 

- 3 Molly and Liza are exercising. Molly does 10 push-ups at the same time as Liza does 15 push-ups. When Molly does 40 push-ups, how many push-ups does Liza do?
- 

- 4 A shark swims at a speed of 25 miles per hour. The shark rests after 40 miles. How long, in minutes, does the shark swim before resting?
- 

- 5 Ali and Janet are selling gifts at a local craft show. For every bar of soap that Ali sells, she earns \$5. For every mug that Janet sells, she earns twice as much as Ali. Ali sells 5 bars of soap, and Janet sells 7 mugs. How much money did they make altogether?
- 

- 6 Ted is making trail mix for a party. He mixes  $1\frac{1}{2}$  cups of nuts,  $\frac{1}{4}$  cup of raisins, and  $\frac{1}{4}$  cup of pretzels. How many cups of pretzels does Ted need to make 15 cups of trail mix?
- 

- 7 The ratio of chaperones to students on a field trip is 2 : 7. There are 14 chaperones on the field trip. In all, how many chaperones and students are there?
- 

- 8 Dayren is driving to visit family. She drives at an average of 65 miles per hour. She drives 227.5 miles before lunch and then 97.5 miles after lunch. How many hours did she spend driving?
-

# Solving Problems Involving Multiple Percents

► Solve each problem.

- 1 A chair's regular price is \$349. It is on clearance for 30% off, and a customer uses a 15% off coupon after that. What is the final cost of the chair before sales tax?
- 2 A calculator is listed for \$110 and is on clearance for 35% off. Sales tax is 7%. What is the cost of the calculator?
- 3 Cara started working for \$9 per hour. She earns a 4% raise every year. What is her hourly wage after three years?
- 4 A factory manufactures a metal piece in 32 minutes. New technology allowed the factory to cut that time by 8%. Then another improvement cut the time by 5%. How long does it take to manufacture the piece now? Round your answer to the nearest minute.
- 5 An apartment costs \$875 per month to rent. The owner raises the price by 20% and then gives a discount of 8% to renters who sign an 18-month lease. How much less do renters who sign an 18-month lease pay per month to rent the apartment?

## Solving Problems Involving Multiple Percents *continued*

- 6 Damon buys lumber worth \$562. He gets a 20% contractor's discount. The sales tax is 6%. His credit card gives him 2% off. How much does he pay?
- 7 Cindy is shopping for a television. The original price is \$612. Store A has the television on clearance for 30% off. Store B has it on clearance for 25% off, and Cindy has a 10% off coupon to use at Store B. At which store will she pay less? How much less?
- 8 John goes to a restaurant and has a bill of \$32.57. He uses a 10% off coupon on the cost of the meal. The tax is 8%. He leaves a tip of 18% on the amount before the coupon or tax is applied. How much does he spend?
- 9 Explain which situation will give you the best price: a discount of 15% and then 10% off that amount, a discount of 10% and then 15% off that amount, or a discount of 25%.

# Solving Problems Involving Percent Change

- Find the percent change and tell whether it is a percent increase or a percent decrease.

1 Original amount: 20  
End amount: 15

---

2 Original amount: 30  
End amount: 45

---

3 Original amount: 625  
End amount: 550

---

4 Original amount: 320  
End amount: 112

---

5 Original amount: 165  
End amount: 222.75

---

6 Original amount: 326  
End amount: 423.80

---

7 Original amount: 27  
End amount: 38.61

---

8 Original amount: 60  
End amount: 70.02

---

9 How do you know when a situation involves a percent increase or a percent decrease?

# Solving Problems Involving Percent Error

► Solve each problem. Round to the nearest hundredth of a percent if needed.

1 Mrs. Rowan allotted 30 minutes at the beginning of class for her students to complete an exam. The last student took 42 minutes to complete the exam. What is Mrs. Rowan's percent error?

---

2 Harper needs to mail an envelope. She weighs it at home as 10.4 ounces. When she gets to the post office, the clerk weighs it at 9.6 ounces. What is the percent error in the weight of the envelope?

---

3 An airline ticket states that the flight takes 2 hours and 45 minutes. The flight time is actually 2 hours and 54 minutes. What is the percent error in the flight time?

---

4 Luna buys a shirt that costs \$15.65. She gives the cashier \$20 and receives \$3.25 in change. What is the percent error in the amount of change she was given?

---

5 Judy thinks there will be 325 people at the county fair on Friday, while Atticus thinks there will be 600 people. On Friday, 452 people attend the fair. Who is closer in their estimate? What is the difference between the percent errors?

---

6 Sussex County received 43 inches of rainfall this year. The percent error in the local meteorologist's rainfall prediction was about 18.02%. What are two possible values for the meteorologist's prediction?

---



# Expanding Expressions

► Expand each expression and combine like terms if possible.

1  $4(x - 2)$

---

2  $-3(x + 7)$

---

3  $-4(-x - 8)$

---

4  $\frac{1}{3}(x - 9)$

---

5  $-\frac{1}{4}(x + 16)$

---

6  $-\frac{1}{5}(-x - 35)$

---

7  $\frac{2}{3}(x + 18 - 2x)$

---

8  $\frac{3}{4}(16x - 27 - 1)$

---

9  $-12\left(\frac{5}{6}x - 5\right) + 2x$

---

► Determine which expressions, if any, are equivalent. Show your work.

10  $4(x - 3)$

$6x - 2(x - 3)$

$x + 3(x - 2) - 6$

## Expanding Expressions *continued*

11  $\frac{1}{3}(9x + 16 + 2) + 2x$

$7x + 14 - 2(x + 4)$

$x - 3 + 7(x + 3) - 3x - 12$

12 Use two different methods to expand  $\frac{1}{4}(x + 2x + 16 - 8)$ .

# Factoring Expressions

► Factor each expression.

1  $8a + 16$

---

2  $12x - 20$

---

3  $-6a + 18$

---

4  $-14w - 21$

---

5  $8a - 12b + 28$

---

6  $-6x + 15y - 24$

---

7  $2a + 3 + 7a$

---

8  $-2x - 8x + 20$

---

9  $5y + 10 - 25y$

---

10 Simplify  $(4x + 7) - (-3x - 9) + 9x - 28$ . Then rewrite in factored form, if possible.  
Show your work.

## Factoring Expressions *continued*

**11** Determine which of the following expressions are equivalent. Show your work.

- $\frac{1}{6}(x - 3)$

- $\frac{1}{4}x - \frac{3}{5} - \frac{1}{12}x + \frac{1}{10}$

- $\frac{1}{18}x + \frac{1}{9}x - \frac{1}{2}$

**12** Explain a different method you could use to solve problem 11.

# Understanding Representing a Situation with Different Expressions

➤ Complete the problems by rewriting algebraic expressions.

- 1 Goby fish and shrimp naturally live close together. A pet store is selling bags of goby fish and shrimp to aquarium hobbyists. Each goby fish costs \$15, and each shrimp costs \$10. Each bag has an equal number of goby fish and shrimp.
  - a. The pet store models the cost per bag with the expression  $x(15 + 10)$ . Explain what the expression represents.
  
  
  
  
  
  
  
  
  
  
  - b. What other expression can you use to model the cost? Explain what the expression represents.
  
  
  
  
  
  
  
  
  
  
- 2 Ms. Ghandi runs 1 mile each morning and 1 mile each evening. She also does 10 push-ups each morning and each evening.
  - a. Ms. Ghandi writes the two expressions  $2(m + 10p)$  and  $2m + 20p$ . Explain how each expression represents how much she exercises.
  
  
  
  
  
  
  
  
  
  
  - b. Ms. Ghandi wants to determine how much she will exercise this week. Write an expression to model this situation. Explain your expression.
  
  
  
  
  
  
  
  
  
  
- 3 Write two expressions for the perimeter of a square. Explain what information is in one of your expressions that is not in the other.

# Writing and Solving Equations with Two or More Addends

► Solve each equation. The answers are mixed up at the bottom of the page. Cross out the answers as you complete the problems.

1  $8x + 15 = 63$

---

2  $9x - 13 = 23$

---

3  $135 = 2x + 25$

---

4  $33 = 32x - 31$

---

5  $12x - 16 = 68$

---

6  $7x + 115 = 136$

---

7  $82 = 4x + 14$

---

8  $2x - 56 = 34$

---

9  $3x - 4\frac{1}{2} = -19\frac{1}{2}$

---

10  $10 = -\frac{1}{4}x + 12$

---

11  $6x + 4.59 = 11.19$

---

12  $25.68 = 2x - 6.32$

---

## Answers

$x = 1.1$

$x = 45$

$x = -5$

$x = 6$

$x = 7$

$x = 16$

$x = 4$

$x = 55$

$x = 17$

$x = 8$

$x = 2$

$x = 3$

# Writing and Solving Inequalities

➤ Write and solve an inequality to answer each question.

- 1 Tetsuo has 50 arcade tokens. Each arcade game at RetroRama costs 4 tokens. How many games can Tetsuo play?

---

---

- 2 Kimberly has \$120 to spend at the bookstore. Kimberly buys a hardcover book for \$36, as well as some gift cards for her family and friends. Each gift card is \$15. How many gift cards can Kimberly buy?

---

---

- 3 Kwame has a budget of \$720 for his college class. He buys a laptop for \$330 and wants to use the rest to buy computer programs. Each program costs \$60. How many programs can Kwame purchase?

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- 4 A farmer ties 4 bags on his mule. If the mule can carry up to 200 lb and each bag weighs 30 lb, how many more bags can the mule carry?

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## Writing and Solving Inequalities *continued*

- 5 Helga signs up to coach hockey. She wants to make at least \$775 during the season. She gets \$200 at the start of the season and \$50 for each practice session she has. How many practice sessions does Helga need to have this season?

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- 6 Logan has a budget of \$400 to have family pictures taken. There is a sitting fee of \$38. Prints cost \$25 per page. How many pages of prints can Logan order?

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- 7 At TopLine's 50th anniversary celebration, managers and assistants earn custom-engraved plaques in recognition of their outstanding performance. TopLine purchased a total of 81 plaques for the event. The company gives 25 plaques to the managers and at least 2 plaques to each assistant. What is the maximum number of assistants at the event?

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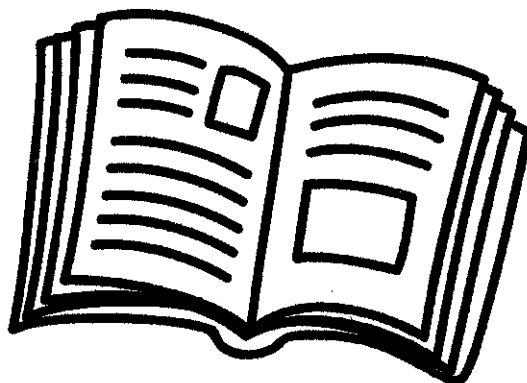
- 8 A cartoonist has 150 pieces of original artwork to give to his publishers and some fans who won his online contest. He plans to send 30 drawings to his publishers. He is sending at least 3 pieces of artwork to each contest winner. How many contest winners could there be?

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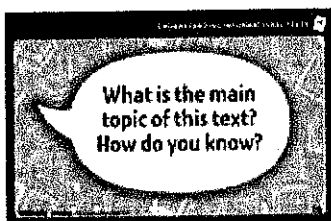
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# Independent Reading!



See pages  
68 and 69  
of this  
packet.



Use the questions/ prompts on the Discourse Card resource to start a conversation about something the student has read. You may talk about a text the student read in one of the lessons above, or anything else the student is reading.

**Encourage daily reading.** And remember, reading isn't just about the books on the shelves—it's about anything around you with letters! Turn on the closed captioning feature on your TV or read catalogs that come in the mail. The backs of cereal boxes work, too, as do directions to board games!

Running out of stuff to read? **Grab some sticky notes, and label household objects, or make up new, silly names for things!** Communicating with sticky notes, instead of talking, is fun, too—start with a half hour and see if you can go all afternoon. Reading is everywhere!

**Don't worry about right/wrong answers** when you talk about text—the important thing is that you and your student share a reading experience and have fun!

**Here are some websites that offer fun, free, high-quality material for kids:**

[www.starfall.com](http://www.starfall.com)

[www.storyplace.org](http://www.storyplace.org)

[www.uniteforliteracy.com](http://www.uniteforliteracy.com)

[www.stornory.com](http://www.stornory.com)

[www.freekidsbooks.org](http://www.freekidsbooks.org)

[en.childrenslibrary.org](http://en.childrenslibrary.org)

# Lesson 1

## Phrases and Clauses



### Introduction

**Phrases and clauses** are groups of words that give specific information in a sentence.

- A **phrase** may contain the subject or the predicate of a sentence but never both—and sometimes neither. For this reason, a phrase cannot stand alone.

**Sentence:** The great American artist Romare Bearden was born on September 2, 1911.

**Phrase 1:** The great American artist Romare Bearden (*contains subject*)

**Phrase 2:** was born (*contains predicate*)

**Phrase 3:** on September 2, 1911 (*contains neither*)

- A **clause** contains both a subject and a predicate. An **independent clause** can stand alone. A **dependent (subordinate) clause** depends on another clause and cannot stand alone.

**Sentence:** Although Bearden was born in North Carolina, his family eventually moved to New York.

**subject      predicate**

**Clause 1:** Although Bearden was born in North Carolina (*dependent*)

**subject                      predicate**

**Clause 2:** his family eventually moved to New York (*independent*)



### Guided Practice

Circle **P** for *phrase* or **C** for *clause* to identify the underlined group of words in each sentence. Then write **D** above any dependent clauses.

**Tip:**

A dependent clause often begins with *before*, *after*, or *until*. Phrases can also begin with these words, but phrases cannot have both a subject and a predicate.

- |   |  |       |
|---|--|-------|
| 1 | <u>Before he began his career as an artist</u> , Bearden received a degree in education. | P   C |
| 2 | <u>After college</u> , he worked as a social worker in New York City.                    | P   C |
| 3 | He studied <u>the works of many European artists</u> , including Picasso and Matisse.    | P   C |
| 4 | Bearden also studied <u>African art and Chinese landscape paintings</u> .                | P   C |



## Independent Practice

For numbers 1–5, select the group of words that answers each question.

- 1** Which group of words in this sentence is a clause?

When World War II broke out, Bearden served in the U.S. Army.

- A** broke out
- B** in the U.S. Army
- C** served in the U.S. Army
- D** When World War II broke out

- 2** Which group of words in this sentence is a dependent clause?

After that, Bearden spent time in Paris, where he studied art.

- A** where he studied art
- B** spent time in Paris
- C** After that
- D** Bearden spent time

- 3** Which group of words in this sentence is an independent clause?

Back in New York once more, Bearden briefly became a songwriter before pursuing art again.

- A** Bearden briefly became a songwriter
- B** became a songwriter before pursuing art again
- C** Back in New York once more
- D** before pursuing art again

### Answer Form

1 (A) (B) (C) (D)

2 (A) (B) (C) (D)

3 (A) (B) (C) (D)

4 (A) (B) (C) (D)

5 (A) (B) (C) (D)

Number  
Correct

5

- 4** Which group of words in this sentence is a phrase?

In the 1960s, while Bearden focused on creating collages that depicted African-American life, he also became active in civil rights.

- A** he also became active in civil rights
- B** In the 1960s, while Bearden focused on creating collages
- C** In the 1960s
- D** while Bearden focused


- 5** Which group of words in this sentence is a dependent clause that contains a phrase?

Bearden was supporting young minority artists when he helped establish the Cinque Gallery in 1969.

- A** Bearden was supporting young minority artists
- B** when he helped establish the Cinque Gallery in 1969
- C** was supporting young minority artists when he helped
- D** establish the Cinque Gallery in 1969

# Lesson 4

## Simple and Compound Sentences

 **Introduction** Sentences can be described according to the number and type of clauses in them. Remember that a **clause** is a group of words that contains both a subject and a predicate. An **independent clause** is a clause that can stand alone as its own sentence.

- A **simple sentence** contains one independent clause.


subject
predicate

[My great-grandmother Lucy] [was born in Oklahoma in 1911.]

- A **compound sentence** is made up of two or more **independent clauses**. Those clauses are joined by a **coordinating conjunction** such as *and*, *or*, *so*, *but*, or *yet*, with a comma between the first clause and the conjunction.

independent clause 1
independent clause 2

Lucy's sister Rosene was born in 1913, *and* her other sister, Rotha, was born in 1915.

 **Guided Practice** Write *simple* next to each simple sentence. Write *compound* next to each compound sentence, then circle the conjunction that joins the two clauses.

*Plan:*

A simple sentence can have a compound subject or compound predicate.

**Compound subject:**

*My brother and I loved Grandma Lucy.*

**Compound predicate:**

*She wrote music and played the piano.*

Both sentences are simple sentences.

1 Lucy's mother and father were both schoolteachers. \_\_\_\_\_

2 They traveled all over Oklahoma, yet Lucy and her sisters never minded or complained. \_\_\_\_\_

3 As a young girl, Lucy was always one of the best students in her class. \_\_\_\_\_

4 Schools were segregated in Oklahoma in the early 1900s, so Lucy and her sisters attended schools for black children.  
\_\_\_\_\_

5 Lucy's family did not have much money but lived happily.  
\_\_\_\_\_



## Independent Practice

For numbers 1–3, choose the sentence that answers each question.

- 1** Which of these is a simple sentence?
- A** Great-Grandma Lucy married Richmond Bell in 1937, and they moved to Arizona.
  - B** There was little work in Oklahoma, but in Arizona they got jobs picking cotton.
  - C** The work was difficult, yet Lucy was glad to have a job.
  - D** She and Richmond worked hard and saved their money.

- 2** Which of these is a compound sentence?
- A** Lucy and Richmond heard about work in California.
  - B** They could buy some land and a house in California's Central Valley.
  - C** Folks were struggling to survive in most places, but in California they had jobs.
  - D** Lucy and Richmond packed up, hopped on a train, and went west.

- 3** Which of these is a compound sentence?
- A** The couple found a house in the town of Dos Palos.
  - B** Dos Palos was a small community, but the land was good for farming.
  - C** Lucy and Richmond bought a cow, raised chickens, and grew vegetables.
  - D** Their first child was born in Dos Palos in the summer of 1945.

## Answer Form

1 (A) (B) (C) (D)

2 (A) (B) (C) (D)

3 (A) (B) (C) (D)

4 (A) (B) (C) (D)

5 (A) (B) (C) (D)

Number  
Correct

5

For numbers 4 and 5, choose the answer that correctly combines each pair of simple sentences into a compound sentence.

- 4** World War II began. Richmond joined the army.
- A** World War II began but Richmond joined the army.
  - B** World War II began, Richmond joined the army.
  - C** World War II began, and, Richmond joined the army.
  - D** World War II began, and Richmond joined the army.

**5** With the men away, many jobs were open to women. Lucy became a librarian.

- A** With the men away, many jobs were open to women, so Lucy became a librarian.
- B** With the men away, many jobs were open to women, Lucy became a librarian.
- C** With the men away, many jobs were open to women, so, Lucy became a librarian.
- D** With the men away, many jobs were open to women so, Lucy became a librarian.

# Analyzing the Development of Central Ideas

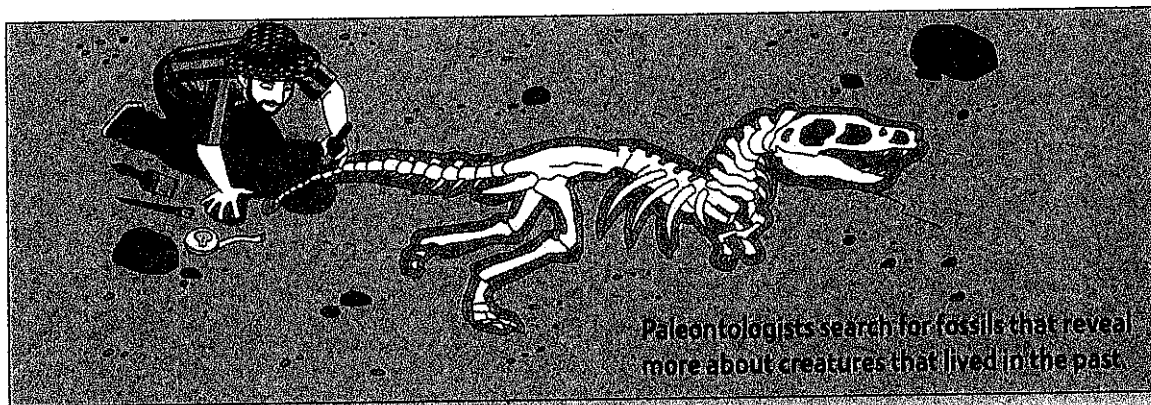
**CCLS**

RI.7.2 Determine two or more central ideas in a text and analyze their development over the course of the text. ...

Theme: *Careers*

As you read, do you wonder what the author is trying to tell you in the text? Try to figure out the **central idea**, or the most important point (or points) an author is trying to make about the topic. Sometimes a central idea may be stated directly, but more often it is implied. Then you must figure it out by analyzing the **supporting details**. These facts, examples, reasons, and other pieces of information are meant to explain and expand on the central idea.

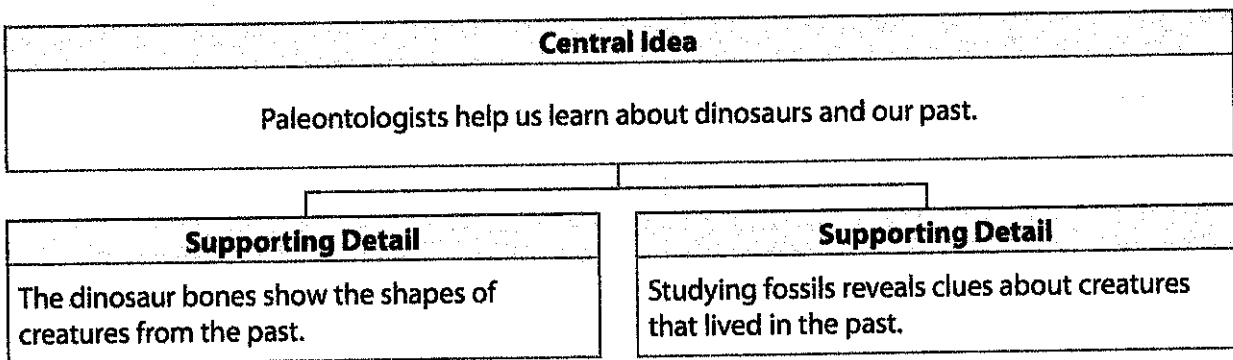
Examine the cartoon below. Think about the central idea and its supporting details.



Paleontologists search for fossils that reveal more about creatures that lived in the past.

What central idea is shown? Circle parts of the picture and caption that support the central idea.

Study the web below that shows the central idea of the picture and details that support it.



As a good reader, make sure you figure out how the supporting details work together to develop the central idea in the text. This will help you understand each important point the author wants to make.



Read the first two paragraphs of an account about deep-sea divers.

Genre: Social Studies Account

# Deep-Sea Treasure Hunters *by Ramona Rivera*

Deep-sea diving is a dangerous but fascinating activity. Some people dive for fun or sport, and some make a career out of hunting for sunken treasure. These types of career divers fall into one of two categories: those who want to study their discoveries and those who want to sell the treasures they find.

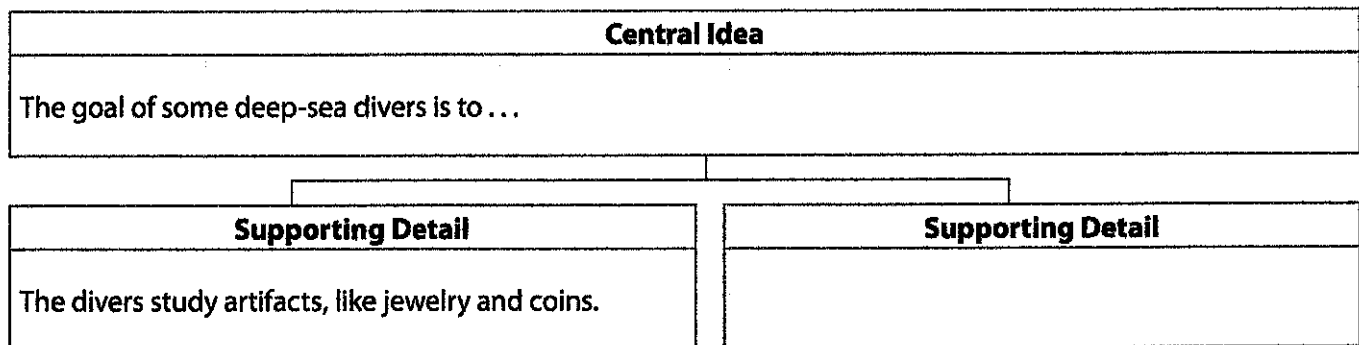
The divers who study sunken treasures are concerned with preservation of the sites. These divers often locate, map, and study shipwrecks. When they find a site, the divers are interested in using the information that the treasure provides to form a story about the ship that wrecked. By studying artifacts such as coins or jewelry found at a site, these divers learn many things about the lives of the ship's passengers. They also learn more about the cargo and the daily lives of the sailors aboard the ship. Sometimes they even learn why the ship sank.

*(continued)*

**Explore how to answer these questions:** "What is the central idea of paragraph 2? What details are given to support it?"

The author describes two career paths: deep-sea treasure diving for money, and deep-sea treasure diving for gathering information. Which career path is described in paragraph 2? How do the details help you learn more about it?

**Study the account to figure out the central idea and supporting details in paragraph 2. Then complete the idea web below. Add more supporting details if necessary.**



**Work in a group and compare your web with your classmates'. Are your supporting details similar? Discuss how you chose each detail. Revise your web as needed, but remember that your answers can vary from your classmates' and still be correct.**



### Close Reading

The author mentions two central ideas in these paragraphs. **Circle** the first central idea and **underline** the second central idea.

**Continue reading about deep-sea treasure hunters. Use the Close Reading and the Hint to help you answer the question.**

*(continued from page 4)*

The deep-sea divers pursuing profit must carefully research their sites to make sure it is legal to take artifacts from the location. They must also take measures to preserve the artifacts so that they don't corrode and lose value once they are recovered. For these deep-sea divers, the measure of their success is the dollar value of the treasure they find.

Whether deep-sea divers wish to study treasure or collect it, divers must obey the laws, dive in teams, and be careful at all times. We must respect the power and mystery of our oceans if we hope to uncover their many hidden treasures.

### Hint

Which choice explains more about the central idea you circled?

**Circle the correct answer.**

Which sentence provides a supporting detail for the idea that we must respect the oceans and their treasures?

- A Some divers spend a lot of time searching for sunken treasures.
- B Deep-sea diving involves a great deal of physical training.
- C Divers must identify sites that are legal before they collect artifacts.
- D Profit is the main motivation for some deep-sea divers.



### Show Your Thinking

Explain how the supporting details given by the author develop the central idea about divers searching for profit.

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With a partner, discuss details about each of the two careers described in the account. Then analyze the author's statement in the concluding sentence of the account.





Read the biography. Use the Study Buddy and Close Reading to guide your reading.

Genre: Biography



## Commander Suni Williams

by Margo Carlin

As I read, I'll think about the central ideas the author is telling me about Suni Williams. Why is she famous? What details about her life does the author want to share?

### Close Reading

What does Suni say about why she hadn't yet become an astronaut? **Underline** the quote in paragraph 3.

Reread paragraph 1. Find and **star** (\*) a sentence that gives a central idea about Suni Williams. Then **underline** sentences with details that support this idea.

- 1 As 5-year-old Sunita "Suni" Williams watched Neil Armstrong's fascinating moon walk on television, she thought, "That's what I would like to do." While she never thought of moon walking as a realistic career goal, Williams' story proves that we can't always know where our path is going to lead us. If we believe in ourselves, though, we'll end up in the right place.
- 2 Williams' career path was far from predictable. She says she was just an "okay" high school student. Because her brother had gone to the U.S. Naval Academy, she was drawn there, too.
- 3 Williams graduated from the Naval Academy and trained to become a Navy helicopter test pilot. Listening to a former astronaut talk about flying a helicopter as preparation for flying a moon lander, a light bulb went on in Williams's head. It dawned on her that her helicopter training could be her ticket to space. She realized: "The only one who's telling me I'm not going to be an astronaut is me."
- 4 Williams eventually trained to become a member of the *International Space Station* crew, where she served as flight engineer and set a new record for women in space. Another first: She "ran" the Boston Marathon—on a space station treadmill.
- 5 Williams believes there is a message for young people in learning about the twists and turns that led to her space station adventure. "Maybe you want something, but you get something else. But if you make the best of it, things sorta work out."



### Hints

Which choice matches one of the central ideas from the previous page?

Which sentence tells something about Williams not believing in herself?

Which central idea did you choose in the second Close Reading activity?

Use the Hints on this page to help you answer the questions.

- 1 Which sentence best captures a central idea of the biography?
  - A Career paths are not always easy to identify and follow.
  - B Suni Williams did not face any difficult challenges in her career.
  - C The career path chosen by Suni Williams was very predictable.
  - D People should never change their career path.
  
- 2 Which sentence from the biography best captures a second central idea of the text?
  - A "She says she was just an "okay" high school student."
  - B "It dawned on her that her helicopter training could be her ticket to space."
  - C ""The only one who's telling me I'm not going to be an astronaut is me.""
  - D "Williams eventually trained to become a member of the *International Space Station* crew, where she served as flight engineer and set a new record for women in space."
  
- 3 Describe one central idea about Suni Williams' life. List at least three details from the text that support this idea.

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Read the biography about a famous dancer. Then answer the questions that follow.

## Martha Graham: Modern Dance Innovator

*by Eva Milner*

1 In the world of dance, Martha Graham is a giant. A true innovator, it was she who led the way into the brave new world of modern dance, leaving behind the constraints of classical ballet. Through her work as a dancer, choreographer, and teacher, Martha has inspired both audiences and generations of dance students. Her institute, the Martha Graham Dance Company, has produced some of the finest dancers in the world today.

2 Martha Graham was born in 1894 in a small town near Pittsburgh, Pennsylvania. Her father was a doctor who specialized in nervous disorders. He was interested in how illnesses and disorders could be revealed through the way a patient's body moved. Martha also believed in the body's ability to express what is inside. She would channel this belief through dance, not medicine, however.

3 Martha was an athletic child, but it wasn't until after seeing the ballet dancer Ruth St. Denis in her teens that she became interested in dance. Martha was so inspired by the performance that she enrolled at an arts college where she studied theater and dance. After graduating in 1916, she joined the Denishawn School, a dance company founded by Ruth St. Denis and Ted Shawn to teach both American dance and world dance.

4 Though Martha began her eight years at Denishawn as a student, it wasn't long before she became a teacher and one of the school's best-known performers. It was during this time that Martha costarred with Ted Shawn in "Xochital," a duet that Ted created specifically for Martha. In this ballet, Martha played the role of an Aztec maiden attacked by an Aztec emperor. Her wildly emotional performance brought her critical acclaim.

5 By 1923, however, Martha felt ready to try new things. She took a job dancing in a vaudeville show in New York City. Here Martha had the opportunity to create her own dances. While there was some room for creativity, she still had to please the audience. Soon she longed for someplace she could take her experimental dance techniques even further. Her search led her to a job teaching at the Eastman School of Music, where she had complete control over her classes and the dance program. This was her chance to truly experiment.

6 Martha felt that classical ballet focused too much on fluidity and grace and ignored deeper, darker emotions and themes. At Eastman, Martha began to use jerky, trembling movements and falls to express ideas and feelings. She developed a fresh, new method of muscle control she called "contraction and release." Through this method, a dancer creates movement by first contracting a muscle and then allowing the movement to flow as the muscle relaxes. This method of muscle control gives the dancer's motions a hard, angular look. This was a big change from the dance style found in classical ballet.

7 Audiences did not always appreciate Martha's style. They were used to the more graceful, flowing motions of ballet dancers, and Martha's choppy, angular style was shocking to them. Many reviewers criticized her for dancing in an "ugly" way. During her first performance in Paris, she and her dancers were booed by the audience.

8 In 1926, Martha formed her own dance company, the now-famous Martha Graham School for Contemporary Dance. She brought in several of her students from the Eastman school and also began



working with Louis Horst, the musical director from her days at Denishawn. Under Horst's influence, Martha began to use music by modern composers, rather than music from the eighteenth and nineteenth centuries. This was yet another way in which Martha's work departed from classical ballet.

9 Many of Martha's dances explored emotional and psychological themes. One example is her solo piece "Lamentation." In this dance, a grieving figure sits alone on a bench and moves to a mournful piano score. The dancer wears a tube of stretchy, purple fabric. Only the dancer's head, hands, and feet show. The movements of the dancer's body within the fabric create a sort of moving sculpture. The dancer represents the raw emotions of grief.

10 Martha was also interested in exploring social issues and political themes. Her dance "Deep Song" was a statement about the Civil War in Spain, and "Chronicle" looked at the menace of fascism and war in Europe. This second dance was created the same year Martha had turned down an invitation to the 1936 Olympic Games being held in Germany. Both the dance itself and her refusal to attend the games expressed Martha's integrity and desire to highlight important political issues.

11 Martha Graham's career spanned her entire life. Health issues forced her to quit dancing at the age of 76, but she continued teaching and creating works until her death in 1991. In her lifetime, she created 181 masterpieces of dance, which continue to inspire dancers and audiences alike.

Answer Form

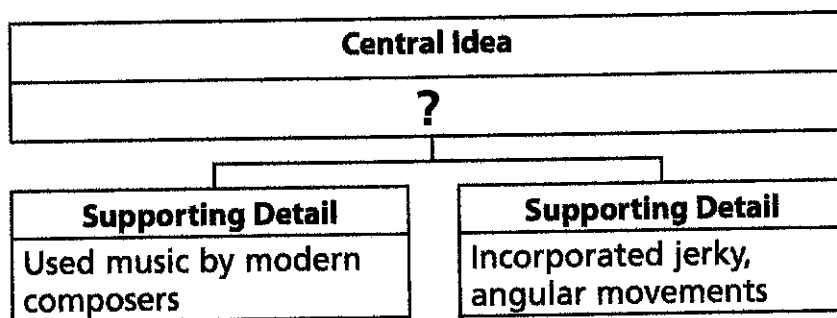
- 1 (A) (B) (C) (D)
- 2 (A) (B) (C) (D)
- 3 (A) (B) (C) (D)

Number Correct

3

Answer the questions. Mark your answers to questions 1-3 on the Answer Form to the right.

1 Study the idea web below.



Which sentence completes the idea web?

- A Classical ballet focused on flowing, graceful movements.
- B Martha's dance style was very different from classical ballet.
- C Martha was one of the best dancers in America.
- D Louis Horst was the musical director at Denishawn.



2

Which sentence **best** supports the central idea that Martha Graham was an innovator?

- A "While there was some room for creativity, she still had to please the audience."
- B "Her search led her to a job teaching at the Eastman School of Music, where she had complete control over her classes and the dance program."
- C "She developed a fresh, new method of muscle control she called 'contraction and release.'"
- D "In 1926, Martha formed her own dance company, the now-famous Martha Graham School for Contemporary Dance."

3

Which sentence could be added to **best** support the idea that Graham was an innovator?

- A By 1927, Graham was working full-time as a dancer and choreographer.
- B Graham was the first choreographer to fully collaborate with other modern artists.
- C During the Depression in the 1930s, Graham sewed her dance costumes herself.
- D Graham was given the title "Dancer of the Century" by *Time* magazine in 1998.

4

Describe the central idea of paragraphs 9 and 10. Identify at least **two** details the author used to develop that central idea.

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 **Self Check** Go back and see what you can check off on the Self Check on page 2.

## Reading

Read the passage. Then answer the questions that follow.

# The Aqua-Lung—Bringing Ocean Exploration to New Depths

by Jess Therell

1 Jacques Cousteau was an adventurer and an explorer with a passion for the ocean. He wanted not only to observe what was beneath the ocean's surface, but also to protect it by making the public aware of its importance. For this reason, many people also view him as an environmentalist.

2 Cousteau accomplished many things during his distinguished career. He helped author dozens of books about the ocean. He made a number of films, and he led several expeditions aboard his ship, *Calypso*. The explorer even created an underwater camera. Along with an engineer by the name of Emile Gagnan, Cousteau also invented the Aqua-Lung. This was a device that could be used to breathe underwater. Perhaps the most important outcome of the creation of the Aqua-Lung was that it made it possible for more people to explore the ocean's depths.

### The Aqua-Lung—An Overview of Its Invention

3 The inspiration for the most important part of the Aqua-Lung was a regulator designed by Emile Gagnan. It was first used for car engines. Its chief feature was that it helped supply the exact amount of fuel needed for an engine to run, reducing unnecessary usage and minimizing waste.

4 Cousteau adapted Gagnan's invention to create the "demand regulator," the defining component of the Aqua-Lung system. The regulator is the piece that fits into the diver's mouth. The other essential parts were tanks containing air that were strapped to the diver's back, as well as a hose to carry air from the tank to the regulator.

5 The design of the Aqua-Lung was completed in the early 1940s. It was available for purchase in France a short time later. Within a decade, the system was being sold in several countries throughout the world.

### What Made the Aqua-Lung Different?

6 The Aqua-Lung differed from most underwater devices that existed at the time in two main ways. First, it allowed divers to stay underwater for a much longer period of time. Before the invention of the Aqua-Lung, divers could only remain underwater for a matter of minutes before their air ran out. With the Aqua-Lung, that time could be extended to an hour or even more.

7 Second, it addressed the issue of air pressure. Pressure rapidly increases as water depth increases. In order to breathe without risk of harm in deep water, any inhaled air must have the same pressure as the surrounding water. The Aqua-Lung regulator automatically adjusted the pressure of the air in the tank to equalize air and water pressure, which made diving safer.

**Go On**

## **Do Cousteau and Gagnan Deserve All the Credit?**

8 While Cousteau and Gagnan’s self-contained underwater breathing apparatus (SCUBA) known as the Aqua-Lung was an important new creation, it may not have been the revolutionary advancement many people seem to think. Cousteau and Gagnan built on the work of those who came before by modifying existing technologies and devices. This practice is common among inventors and scientists.

9 Support for the above claim can be found by looking at the history of ocean exploration and the devices that preceded the “invention” of the Aqua-Lung. First, it is important to note that people have always been intrigued by the ocean. Hundreds of years ago, people were already searching for ways to “breathe” underwater so they could stay beneath the surface longer and go deeper. They used hollow reeds as snorkels and wooden barrels as crude air tanks. Although these devices have little in common with the Aqua-Lung and other equipment currently on the market, they show that many people had aspirations and ideas that were similar to Cousteau’s.

10 Second, the Aqua-Lung emerged after very similar devices had already been invented. By far the most notable one was the apparatus that was developed by Captain Yves Le Prieur in 1925. The main difference between it and the Aqua-Lung was air flow. Le Prieur’s SCUBA released air constantly. The Cousteau/Gagnan device released it “on demand”—when the diver inhaled. Certainly, the world-famous Cousteau owed much of the credit for the creation of the Aqua-Lung to the comparatively unknown Le Prieur.

### **The Impact of the Aqua-Lung**

11 Although Cousteau and Gagnan built on earlier technology, their invention did open the world of diving to more people. The Aqua-Lung made SCUBA diving simpler, safer, and accessible to the public. In the decades after the device became available, countless individuals adopted underwater diving as a hobby. Aqua-Lung is still a brand name that appears on many types of diving equipment, from regulators to masks to fins.

12 Cousteau’s greatest legacy as a conservationist may have been giving ordinary people the tools needed to view the wonders of the ocean firsthand. Movies and books can certainly show people the beauty of marine life and explain why it needs protection. However, seeing the splendor of the ocean and some of its marvels in person is likely to be much more convincing than anything that appears on a screen or in print.

**1**

The following question has two parts. First, answer part A. Then, answer part B.

**Part A**

What does the word "regulator" mean as it is used in the passage?

- A** a device used to control the pressure of air
- B** a device used to control the flow of liquids
- C** a mechanism in a watch or clock by which its speed is adjusted
- D** a person who makes sure laws or rules are followed

**Part B**

Which of the phrases from the passage **best** helps the reader understand the meaning of "regulator"?

- A** "supply the exact amount of fuel needed for an engine to run"
- B** "the piece that fits into the divers mouth"
- C** "automatically adjusted the pressure of the air in the tank"
- D** "the system was being sold in several countries throughout the world"

**2**

Select **two** central ideas of the passage.

- A** Jacques Cousteau promoted the conservation of our oceans.
- B** Over the centuries, many people have invented devices similar to the Aqua-Lung to assist divers.
- C** The Aqua-Lung differs from Le Prieur's SCUBA in one important way.
- D** The Aqua-Lung allowed longer, safer dives.
- E** Cousteau and Gagnan might not deserve all the credit for inventing the Aqua-Lung.
- F** Aqua-Lung is still a brand of equipment sold today.
- G** Cousteau and Gagnan built upon previous technologies when creating their Aqua-Lung.

**Go On**



**3**

What is the author's main purpose in writing this passage?

- A** to give facts about a valuable invention and its impact on diving
- B** to make readers question Cousteau's contribution to the world of diving
- C** to explain the differences between the Aqua-Lung and Le Prieur's invention
- D** to describe how diving has changed and improved over the years

**4**

Read this sentence from the passage.

Cousteau's greatest legacy as a conservationist may have been giving ordinary people the tools needed to view the wonders of the ocean firsthand.

What connotation does the phrase "ordinary people" have in this sentence?

- A** uneducated people
- B** dull and tiresome people
- C** people who do not know how to swim
- D** people who are neither explorers nor scientists

5

Below are three claims that one could make based on the passage "The Aqua-Lung—Bringing Ocean Exploration to New Depths."

<b>Claims</b>	Jacques Cousteau was committed to helping people learn more about the world around them.
	The Aqua-Lung was superior to other devices that were available at the time.
	Cousteau made many contributions in a variety of areas.

Circle one of the claims, and then write down **two** sentences from the passage that support the claim.

First sentence: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Second sentence: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Go On**

Read the passage. Then answer the questions that follow.

# Did Franklin Really Collect Electric Fire from the Sky?

by Neve Reed

1 The story of Benjamin Franklin and his kite experiment is one that captivates people of all ages. It begins when a thunderstorm is on its way. Most of the sensible people in the area are indoors seeking shelter. But not Benjamin Franklin! He's flying a kite with a piece of metal attached to the top. His goal: to prove that lightning is a form of electricity. The story goes that a bolt of lightning soon struck his kite, traveling down the string and charging a metal key near the end. Franklin touched the key, and the "very evident electric spark" he felt proved his theory correct.

2 This experiment is much more exciting than the idea of a scientist writing a paper at a desk or working in the laboratory. However, it's also quite likely that it didn't happen, at least not in the way people imagine. Evidence for this statement comes from numerous sources, including current knowledge and correspondence written by Franklin himself.

## Priestley's Account of Franklin's Experiment

3 Joseph Priestley was the man who recounted the story of Franklin's experiment conducted in 1752. June 15th is often cited as the date. An entire chapter of Priestley's book, *The History and Present State of Electricity with Original Experiments*, is devoted to Franklin's work on the similarities between electricity and lightning. He explains how Franklin planned to use a kite to draw "lightning from the clouds," and gives an account of the actual experiment.

4 There are a few points that should be made about Priestley's account. The first is that it's not clear exactly where his information comes from. Priestley says it was obtained from the "best authority," but then goes on to say that Franklin's son was the only witness present during the experiment. If the information came from Franklin himself, why didn't Priestley say so?

5 The second is that a close reading of the section that describes the actual experiment does not explicitly state that the kite was struck by *a bolt of lightning*. He does mention thunderstorms and drawing lightning from the clouds. But is it possible that "lightning" is being used interchangeably with "electrical charges" here, an assertion that is supported by the thoughts of some modern scientists? Wouldn't the actual dramatic lightning strike have been a focus of Priestley's story? If, that is, it actually took place.

## Franklin's Letter

6 One of the best pieces of evidence we have comes from Franklin himself. In 1752, he wrote a letter to a friend. In it, he describes how he performed the experiment.

7 However, some believe Franklin was merely describing how he would *theoretically* use a kite to prove that electricity and lightning were one in the same. There are several details about the setup that would make actually performing the experiment impractical. These include flying the kite from inside a building, keeping the silk ribbon dry, and not allowing the twine to touch any portion of the door or window.

**Go On**

8 Furthermore, the letter is far from a formal description of Franklin's hypothesis, procedure, results, and conclusions. It would seem likely that Franklin would have presented his findings to the scientific community in an official report, but there is no indication that one exists.

### **The Danger Factor**

9 One of the strongest pieces of evidence against the commonly held belief that Franklin's kite was struck by lightning is that he most likely wouldn't have survived. This was proven through an investigation conducted on a popular television program. The analysis showed that the massive amount of electricity in a bolt of lightning could have traveled down a wet piece of twine and charged a metal key at the end. However, the chances that Franklin could have touched the metal and lived to tell others about it are slim to none. Additionally, it's likely the scientist himself would have known the dangers of touching something that had been struck by lightning based on his previous work with electricity.

### **What Current Scientists Believe**

10 Some believe that the experiment never actually took place at all. A more likely explanation based on the information available, though, is that Franklin *did* fly a kite a short time *before* a thunderstorm. The storm clouds would have contained the same static electricity found in lightning, although in much smaller amounts. These charged clouds could have produced the results described by Priestley in his well-known account. The investigation still probably wasn't the wisest idea on Franklin's part, but it is entirely possible that the scientist could have completed this version of the experiment and escaped unharmed.

This question has two parts. First, answer part A. Then, answer part B.

**Part A**

Which inference can you draw from "Did Franklin Really Collect Electric Fire from the Sky?"

- A** The smaller amounts of static electricity in clouds before a storm actually endangered Franklin just as much as real lightning would have.
- B** The idea of a death-defying experiment is thrilling, but the reality is that Franklin likely would not have risked his life for science.
- C** Because he focused neither on the difficulties nor dangers of flying a kite indoors, Priestley's account is weakened.
- D** Franklin was probably more interested in making an exciting scientific story than in harnessing the true power of electricity.

**Part B**

Which of the following sentences from the passage **best** supports your answer to part A?

- A** "The analysis showed that the massive amount of electricity in a bolt of lightning could have traveled down a wet piece of twine and charged a metal key at the end."
- B** "Additionally, It's likely the scientist himself would have known the dangers of touching something that had been struck by lightning based on his previous work with electricity."
- C** "The storm clouds would have contained the same static electricity found in lightning, although in much smaller amounts."
- D** "A more likely explanation based on the information available, though, is that Franklin did fly a kite a short time before a thunderstorm."

**Go On**

**13**

Based on the information in the passage, how did Priestley's account influence some modern scientists?

- A** It led them to look for an alternate meaning for a term used to describe the experiment.
- B** It inspired them to seek the truth by watching the experiment on a television show.
- C** It drove them to question, in general, the way that experiments are set up.
- D** It convinced them that there was, in fact, no witness at all to the experiment.

**14**

How do the four sections with headings support the main ideas in the passage?

- A** Each section offers a problem with the lightning story and an alternative solution for what might have happened.
- B** Two of the sections focus on different causes for the writer's doubt, while the other two show how it might have happened.
- C** Three sections describe why the experiment probably did not occur, while the other offers a possible alternative.
- D** Each section compares and contrasts different accounts of the experiment, including those of people in the past and present.

**15**

The author states that it is quite unlikely that Franklin's kite experiment happened as we think. Which **two** sentences from the passage provide evidence for the author's belief?

- A** "The story of Benjamin Franklin and his kite experiment is one that captivates people of all ages."
- B** "However, the chances that Franklin could have touched the metal and lived to tell others about it are slim to none."
- C** "Some believe that the experiment never actually took place at all."
- D** "There are several details about the setup that would make actually performing the experiment impractical."
- E** "These charged clouds could have produced the results described by Priestley in his well-known account."

**16**

This question has two parts. First, answer part A. Then, answer part B.

Below are three claims that one might make based on the passage.

Claims	
	The story of Franklin's experiment has interested people since Franklin first described it.
	Records of the lightning experiment are not reliable.
	Franklin was a scientist who knew lightning strikes were dangerous.

**Part A**

Draw an X by the claim that is supported by the most relevant and sufficient evidence within "Did Franklin Really Collect Electric Fire from the Sky?"

**Part B**

Write down **two** sentences from the passage that best provide evidence to support the claim selected in part A.

First sentence: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Second sentence: \_\_\_\_\_


\_\_\_\_\_

\_\_\_\_\_

**Go On**

# Lesson 11

## Using Context Clues

 **Introduction** When you come across an unfamiliar word, look for **context clues**— nearby words that hint at the meaning of the word. Study these four types of context clues.

Context Clue	Signal Words	Example
Restatement	<i>or, in other words, that is to say</i>	Women's rights advocates, or supporters, met in Seneca Falls, New York, in 1848.
Example	<i>like, such as, for example, for instance</i>	Leaders often faced fierce <u>opposition</u> such as name-calling, disrespect, and even threats of harm.
Cause and Effect	<i>as a result of, because, and thanks to</i>	Because of those leaders' efforts to gain equal rights, women <u>secured</u> the right to vote in 1920.
Contrast and Contrast	<i>also, like, as well, but, yet, however, although</i>	Proponents of women's rights, <u>like</u> those who support other causes, are committed to their beliefs.


Other clues to a word's meaning are the word's position in the sentence and its part of speech.

- Below, the position of *cause* after *can* shows it is a verb, "to make something happen."

Stirring speeches can cause people to change their minds about an issue.

- Below, the position of *cause* after *the* shows it is a noun, meaning "a goal or issue."

Elizabeth Cady Stanton dedicated herself to the cause of women's rights.

 **Guided Practice** Underline a context clue that helps you understand each underlined word. Draw a line from the clue to the word. With a partner, identify each type of clue you used.

Read

When you come across an unfamiliar word in a sentence, don't just look in the same sentence for clues. Also look in sentences that come before and after the word.

Until 1920, suffrage, or the right to vote, was denied to women.

Some prominent figures supported the cause. For example, the famous reformer Frederick Douglass spoke out for women's rights.

Many small meetings took place, but a convention held in Seneca Falls in 1848 helped the movement grow. Thanks to their persistence, women won the right to vote more than seventy years later.





## Independent Practice

For numbers 1–4, use context clues to figure out the meaning of each underlined word.

### Answer Form

1 (A) (B) (C) (D)

2 (A) (B) (C) (D)

3 (A) (B) (C) (D)

4 (A) (B) (C) (D)

Number  
Correct

4

Women's suffrage organizations faced determined resistance from groups who argued that a woman's place was in the home, not in the political arena. Plenty of women strongly agreed that they deserved more rights. Yet many of them still deplored the idea of women having a voice in the government.

**1** What does the word resistance mean in the paragraph?

- A opposition
- B agreement
- C questions
- D approval

**2** Which words provide a clue to the meaning of resistance?

- A "in the political arena"
- B "in the home"
- C "groups who argued"
- D "in the government"

**3** What does the word deplored mean in the paragraph?

- A failed to understand
- B disapproved of
- C agreed with
- D investigated

**4** Which words provide a contrast clue to the meaning of deplored?

- A "Plenty of women"
- B "strongly agreed"
- C "deserved more rights"
- D "having a voice"

# Tools for Instruction

## Central Idea and Supporting Ideas

Proficient readers identify the central and supporting ideas of a text, as well as how the author elaborates on those ideas by providing supporting details. It can be difficult for students to understand the hierarchy of these relationships, especially in content-area reading, which can be conceptually and textually dense. Students often need to infer multiple main ideas, and they may need to work a little harder to distinguish supporting details. To provide support, focus on the processes involved in determining the importance of ideas and details and understanding how different information is related.

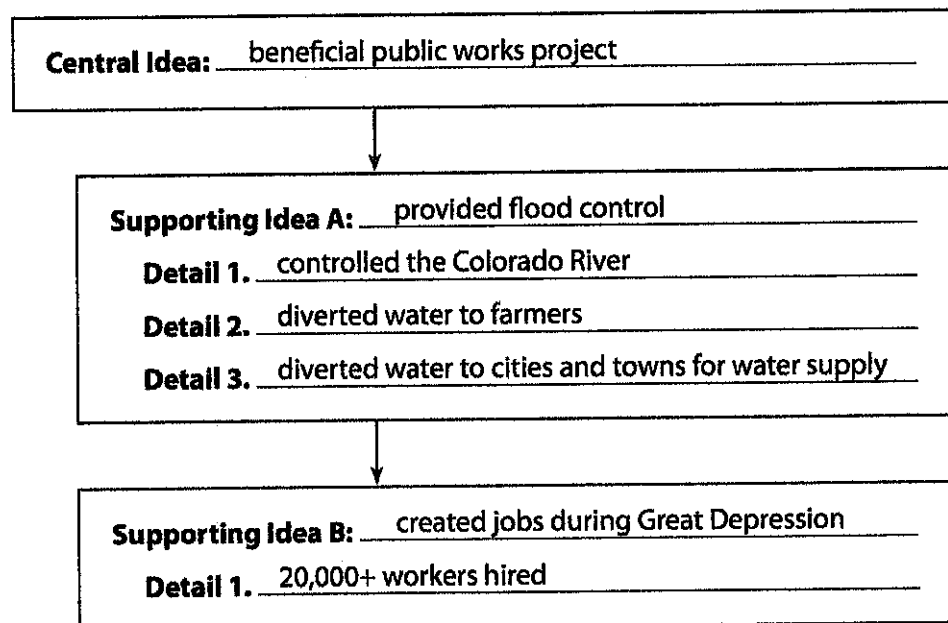
### Two Ways to Teach

#### Use Outlines to Organize Information 30–45 minutes

Help students understand that in longer texts, multiple supporting ideas tell more about one central idea. Teach them to record information in a graphic organizer that visually represents hierarchical relationships.

- Say, *Central idea is the one idea in a passage that all the other details or ideas tell about. Supporting ideas tell more about a central idea. There are often several supporting ideas for one central idea. Similarly, supporting details tell more about each supporting idea. There are often several supporting details for each supporting idea.*
- Distribute and display **Central Idea and Supporting Ideas Chart** (page 3). Then choose a section of informational text to read together with students, and model how to fill in the outline. The example below is about a chapter on the Hoover Dam.

Title:     The Hoover Dam    



- Work with students to add information to the chart. Then have students work in groups to practice independently with another informational text. Discuss how these charts can help students understand the way an author develops ideas in a text.

**Write a Recap** 30-45 minutes

**Connect to Writing** Summarizing is a useful way for students to practice identifying a central idea and supporting ideas.

- Explain that a recap is a very short summary of something that happened or something you learned. Give an example such as the following.

*At the end of a baseball inning, the announcers give a quick recap of what happened during the inning. This is to quickly catch up to speed anyone who was not watching. A recap is a brief, concise summary that states only the main idea and the most important supporting details. This would include the score and any important plays. It would not include plays that did not affect the game.*

- Have students choose a recent chapter from a science or social studies text and write a recap for a student who was absent from school. Emphasize that recaps are very short, so students should not write more than a half page.
- Have students exchange papers and discuss whether their partner’s recap contained too many details or left out important information.

**Check for Understanding**

If you observe...	Then try...
difficulty identifying relevant information	turning the main idea of a paragraph into a question. <b>Main idea</b> Jackie Robinson made baseball history. <b>Question</b> How did Jackie Robinson make baseball history? Have students examine the text to locate the answers.
difficulty stating the central idea	providing choices. To help students learn to avoid common mistakes, include distractors that are overly broad and too narrow.

# Central Idea and Supporting Ideas Chart

Title: \_\_\_\_\_

Central Idea: \_\_\_\_\_



Supporting Idea A: \_\_\_\_\_  
Detail 1. \_\_\_\_\_  
Detail 2. \_\_\_\_\_  
Detail 3. \_\_\_\_\_



Supporting Idea B: \_\_\_\_\_  
Detail 1. \_\_\_\_\_  
Detail 2. \_\_\_\_\_  
Detail 3. \_\_\_\_\_



Supporting Idea C: \_\_\_\_\_  
Detail 1. \_\_\_\_\_  
Detail 2. \_\_\_\_\_  
Detail 3. \_\_\_\_\_



Supporting Idea D: \_\_\_\_\_  
Detail 1. \_\_\_\_\_  
Detail 2. \_\_\_\_\_  
Detail 3. \_\_\_\_\_