



# ARIZONA EDUCATOR PROFICIENCY ASSESSMENTS®



## STUDY GUIDE

### 01 Elementary Education

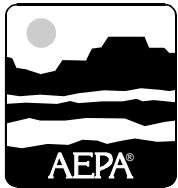
**This AEPA test was replaced by a NES test.  
Examinees may continue to find this study guide useful as they  
prepare for the NES, as the previous AEPA test may have  
covered objectives and content similar to the NES test.**

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## TABLE OF CONTENTS

### Field 01: Elementary Education

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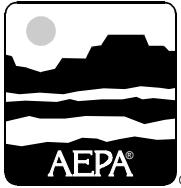
## PART 1: GENERAL INFORMATION ABOUT THE AEPA AND TEST PREPARATION

<b>AN OVERVIEW OF THE AEPA.....</b>	<b>1-1</b>
Test Development Process	
Characteristics of the AEPA	
Test Administration	
How AEPA Test Scores Are Computed and Reported	
<b>HOW TO PREPARE FOR THE TESTS .....</b>	<b>1-3</b>
Study the Test Objectives	
Focus Your Studies	
Identify Resources	
Develop Study Techniques	
Answer the Practice Questions	
Review the Sample Answer Sheet and Written Response Booklet	
Test Directions	
Sample Answer Sheet	
Sample Written Response Booklet	
<b>WHAT TO EXPECT THE DAY OF THE TEST .....</b>	<b>1-12</b>
The Morning of the Administration	
At the Test Site	
<b>SAMPLE TEST OBJECTIVES AND QUESTIONS .....</b>	<b>1-13</b>
Organization of the Test Objectives	
Question Formats and Strategies	
Selected-Response-Question Formats	
Performance Assignment Formats	
Evaluation of the Sample Written Performance Assignment Response	

## PART 2: FIELD-SPECIFIC INFORMATION

<b>INTRODUCTION .....</b>	<b>2-1</b>
<b>TEST OBJECTIVES .....</b>	<b>2-2</b>
<b>PRACTICE QUESTIONS .....</b>	<b>2-10</b>
<b>ANSWER KEY .....</b>	<b>2-49</b>
<b>PREPARATION RESOURCES .....</b>	<b>2-53</b>

## STUDY GUIDE ORDER FORM



## **PART 1: GENERAL INFORMATION ABOUT THE AEPA® AND TEST PREPARATION**

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Part 1 of this study guide is contained in a separate PDF file. Click the link below to view or print this section:

[General Information About the AEPA and Test Preparation](#)



## PART 2: FIELD-SPECIFIC INFORMATION

### Field 01: Elementary Education

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#### INTRODUCTION

This section includes a list of the test objectives, practice questions, an answer key for the selected-response questions, and a list of preparation resources.

**Test objectives.** As noted earlier, the test objectives are broad, conceptual statements that reflect the knowledge, skills, and understanding an entry-level educator needs to practice effectively in Arizona schools. The list of test objectives for each test field is the *only* source of information about what a specific test will cover and therefore should be studied carefully.

**Practice questions.** The practice questions for the selected-response and performance assignment sections included in this section are designed to give you an introduction to the nature of the questions included in the AEPA tests. The practice questions represent the various types of questions you may expect to see on an actual test; however, they are *not* designed to provide diagnostic information to help you identify specific areas of individual strength or weakness or to predict your performance on the test as a whole.

When you answer the practice questions, you may wish to use the sample answer sheet and sample Written Response Booklet provided in Part 1 to acquaint yourself with these materials. Use the answer key located after the practice questions to check your answers. Sample responses are provided immediately following each written performance assignment. The sample responses in this guide are for illustrative purposes only. Your written response should be your original work, written in your own words, and not copied or paraphrased from some other work.

To help you identify how the test objectives are measured, the objective statement to which the question corresponds is listed in the answer key. When you are finished with the practice questions, you may wish to go back and review the entire list of test objectives and descriptive statements for your test field.

**Preparation resources.** The list of preparation resources has been compiled to assist you in finding relevant materials as you prepare to take the Elementary Education test. This list is to be considered not as complete, but as representative of the kinds of resources currently available. There may be other materials that may be helpful to you in preparing to take the test.

You may also wish to consult a representative from an Arizona educator preparation program in your area regarding other potential resources specific to this field. Keep in mind that the use of these materials does not guarantee successful performance on the test.

# TEST OBJECTIVES

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## Field 01: Elementary Education

### SUBAREAS:

Language Arts  
Mathematics  
Science  
Social Studies  
The Arts

### LANGUAGE ARTS

#### 0001 Understand the reading process.

For example:

- demonstrating knowledge of the acquisition of concepts of print
- demonstrating knowledge of phonemic awareness and its relevance to reading development
- demonstrating knowledge of phonics and its relevance to reading development
- identifying decoding and word identification strategies, including spelling patterns, syllabication, and word parts
- recognizing strategies for increasing students' vocabulary knowledge and their ability to apply vocabulary knowledge in new contexts
- recognizing the role of fluency on reading and reading comprehension
- demonstrating knowledge of strategies for facilitating comprehension before, during, and after reading (e.g., predicting, self-monitoring, questioning, rereading)

#### 0002 Understand skills and strategies for reading literary texts.

For example:

- identifying and analyzing the structures and elements of literature (e.g., plot, character, theme)
- recognizing and analyzing historical and/or cultural aspects of U.S., British, and world literature
- identifying common structures and stylistic elements in literature, folklore, and myths from a variety of heritages
- analyzing heritage-based and/or historically significant literary works of U.S., British, and world literature that reflect major literary periods and traditions

#### 0003 Understand skills and strategies for reading informational texts.

For example:

- identifying and analyzing the purpose, structures, and elements of expository text
- identifying and analyzing the purpose, structures, and elements of functional text
- identifying and analyzing the purpose, structures, and elements of persuasive text

**0004 Understand the writing process.**

For example:

- identifying appropriate strategies for generating, planning, and organizing ideas for writing for specific purposes
- demonstrating knowledge of prewriting strategies (e.g., brainstorming, semantic mapping, outlining, reading, research)
- demonstrating knowledge of strategies and skills for creating drafts
- analyzing and revising written work in relation to organization, unity, clarity, and style
- identifying appropriate procedures for formatting and presenting final written products for a variety of audiences and purposes

**0005 Understand the elements of writing, including the six traits of writing.**

For example:

- recognizing writing that is clear and focused with main ideas supported by appropriate details
- applying knowledge of appropriate language to convey meaning through the use of word choice, style, and an appropriate connection with, or distance from, the audience
- recognizing a variety of sentence structures (e.g., simple, compound, complex, compound-complex) and lengths that reinforce relationships among ideas and enhance the flow of writing
- demonstrating knowledge of writing conventions, grammar, and word usage
- demonstrating knowledge of factors to consider when writing for various audiences and purposes and in a variety of forms (e.g., research paper, editorial, memoir) and modes (e.g., expressive, expository, functional, persuasive)

**0006 Understand principles and concepts related to listening, speaking, viewing, and presenting.**

For example:

- recognizing appropriate listening strategies for given contexts and purposes
- analyzing factors that affect the ability to listen effectively and to construct meaning from oral messages in various listening situations (e.g., applying prior knowledge, recognizing transitions, interpreting nonverbal cues, using note taking and outlining)
- identifying methods for organizing and sharing thoughts, feelings, ideas, and information for different audiences and purposes (e.g., giving instructions, telling a story, presenting a report, participating in group discussions, persuading an audience, entertaining)
- identifying effective ways to use graphics to describe data
- analyzing visual media for language use, the influence of subject matter and visual techniques on opinions, effects on decision making, and the presence of heritage-based perceptions
- recognizing the variety of technological resources used to communicate for a given purpose

**MATHEMATICS****0007 Understand principles, concepts, and procedures related to numbers, number sense, and operations.**

For example:

- identifying ways of representing numbers and the relationships between numbers and different number systems
- applying numerical operations and recognizing their relationships to one another
- using reasonable estimation strategies in appropriate situations

**0008 Understand principles and concepts related to data analysis, probability, and discrete mathematics.**

For example:

- recognizing ways to collect, organize, and represent data
- analyzing and sorting different data
- applying the basic concepts of probability
- demonstrating the systematic listing and counting of possible outcomes
- demonstrating knowledge of and applying vertex-edge graphs

**0009 Understand principles, concepts, and procedures related to patterns, algebra, and functions.**

For example:

- identifying patterns and applying pattern recognition to reason mathematically
- recognizing functions and analyzing their relations
- recognizing and analyzing mathematical situations and structures using algebraic representations
- analyzing change in a variable over time and in various contexts

**0010 Understand principles, concepts, and procedures related to geometry and measurement.**

For example:

- analyzing the attributes and properties of two- and three-dimensional shapes and developing mathematical arguments about their relationships
- applying spatial reasoning to create transformations and using symmetry to analyze mathematical situations
- identifying and describing spatial relationships using coordinate geometry and other representational systems
- applying appropriate units, techniques, and formulas to determine measurements

**0011 Understand principles, concepts, and procedures related to mathematical structure and logic.**

For example:

- using reasoning to solve mathematical problems in various situations
- selecting problem-solving strategies, drawing logical conclusions, and developing and describing solutions for mathematical problems
- demonstrating an understanding of methods for constructing arguments and judging the validity or logic of arguments
- demonstrating an understanding of procedures for using a variety of materials, models, and methods to explore concepts and solve problems involving algebra

**SCIENCE**

**0012 Understand scientific inquiry and the principles and processes of scientific investigation.**

For example:

- demonstrating knowledge of processes involved in observing phenomena, asking questions, and making predictions
- identifying appropriate methods for planning and conducting investigations and recording data
- organizing and analyzing data and comparing collected data to predictions
- identifying processes involved in communicating the results of investigations

**0013 Understand the nature and historical development of scientific thought and the relationships between science, technology, and human activities.**

For example:

- identifying contributions from individuals and heritage groups to scientific knowledge
- recognizing ways in which science is a process for generating knowledge
- recognizing relationships between the sciences (e.g., life science, physical science, Earth and space science) and between the sciences and other disciplines
- applying scientific themes (e.g., patterns, change, models, systems) to help explain and make connections among seemingly natural phenomena
- recognizing the interactions between human populations, natural hazards, and the environment
- evaluating ways in which given scientific advances (e.g., genetic research, computers) have affected human populations
- analyzing the effects of human activities (e.g., consumption of natural resources, pollution) on the environment and identifying scientific factors that affect human populations

**0014 Understand the basic principles and concepts of life science.**

For example:

- demonstrating knowledge of the basic structures and functions of cells
- demonstrating knowledge of the life cycles of common organisms
- demonstrating an understanding of the relationships among various organisms and their environments
- identifying plant and animal adaptations and applying the principles of heredity and genetics to understand how organisms change over time
- demonstrating knowledge of the organization of living systems and the role of energy within those systems

**0015 Understand the basic principles and concepts of physical science.**

For example:

- recognizing methods for classifying objects and materials based on their observable properties
- demonstrating knowledge of types of forces (e.g., gravity, friction) and basic concepts related to the motion of objects
- demonstrating knowledge of the properties of different forms of energy
- demonstrating knowledge of relationships between reactants and products in chemical reactions
- analyzing situations involving interactions between matter and energy in a system

**0016 Understand the basic principles and concepts of Earth and space science.**

For example:

- identifying the basic properties of Earth's materials
- demonstrating knowledge of objects in the sky and the interactions of those objects with Earth systems
- demonstrating an understanding of the relationships between Earth's land masses, oceans, and atmosphere
- identifying characteristics of weather conditions and climate
- recognizing the relationships between Earth and other objects in the solar system
- analyzing the factors used to explain the history, composition, and formative processes of Earth and the universe

**SOCIAL STUDIES**

**0017 Understand major developments in American history and analyze their significance.**

For example:

- recognizing the geographic, political, economic, and cultural characteristics of early civilizations and the significant contributions of early civilizations to the development of the United States
- demonstrating knowledge of the reasons for exploration and colonization and recognizing the interactions between and the different perspectives of indigenous peoples and European settlers
- demonstrating knowledge of the people and events responsible for the evolution of the thirteen colonies into a nation
- demonstrating knowledge of the social, economic, and political structures; the people; and the events of the Civil War and Reconstruction
- recognizing and analyzing various perspectives and interpretations of the economic, social, and cultural changes that influenced the emergence of the United States as a world power

**0018 Understand major developments in world history and analyze their significance.**

For example:

- demonstrating knowledge of skills and strategies for locating and using a variety of sources for the study of world history
- recognizing ways in which the government, mythologies, art, architecture, and philosophies of early civilizations contributed to their development and the development of later civilizations
- recognizing the origin and influence of ideas, individuals, movement, and groups on history and social change
- demonstrating knowledge of the major issues, people, events, ideas, and cause-and-effect relationships of historical periods and their influence on the present and the future
- recognizing the causes and consequences of major world conflicts

**0019 Understand various political systems and the structures, functions, and principles of local, state, and national governments, including the roles, rights, and responsibilities of citizenship.**

For example:

- demonstrating knowledge of the basic purposes and concepts of government
- recognizing the significant features of different political systems and forms of government
- demonstrating knowledge of the basic functions of the legislative, executive, and judicial branches of government at the national, state, and local levels
- demonstrating knowledge of the principles of democratic civic involvement and the roles, rights, and responsibilities of citizenship at the federal, state, local, and neighborhood levels
- recognizing the organization of politics in the world, characteristics of different forms of government, and factors that affect international relationships and foreign policy

**0020 Understand major principles, concepts, and phenomena of geography and the interactions among people, the environment, and culture.**

For example:

- identifying significant geographic features of Arizona, the United States, and the world
- recognizing how to use maps, charts, and other geographic tools to derive information
- demonstrating knowledge of major geographic concepts and themes (i.e., place, region, location, movement, and interaction)
- analyzing the nature and implications of various types of interactions between people and the environment, the effects of human activities on the environment, and the effects of the environment and environmental changes on people
- recognizing the influence of geographic features on human settlement patterns and historical events

**0021 Understand principles and concepts related to economics.**

For example:

- recognizing basic terminology and concepts related to economics, characteristics of economic systems, and the costs and consequences of economic choices (e.g., supply and demand, globalization)
- analyzing patterns and results of trade, exchange, and interdependence among individuals, businesses, and governments
- demonstrating knowledge of ways in which competition, markets, and prices influence personal financial behavior (e.g., saving, using credit)
- demonstrating knowledge of the use of economic information to make personal decisions as consumers, workers, investors, and effective participants in society

**THE ARTS****0022 Understand basic principles and skills related to creating, viewing, and responding to works of visual art.**

For example:

- demonstrating knowledge of the creative process, issues, and the variety of perspectives with which individuals approach works of visual art
- recognizing types and characteristics of materials, tools, and techniques used to create a variety of visual art (e.g., painting, drawing, sculpting)
- recognizing basic principles and elements of design in visual art
- demonstrating knowledge of the roles and functions of the visual arts in various cultures and historical periods
- evaluating procedures for viewing and responding to works of visual art

**0023 Understand basic principles and skills related to music.**

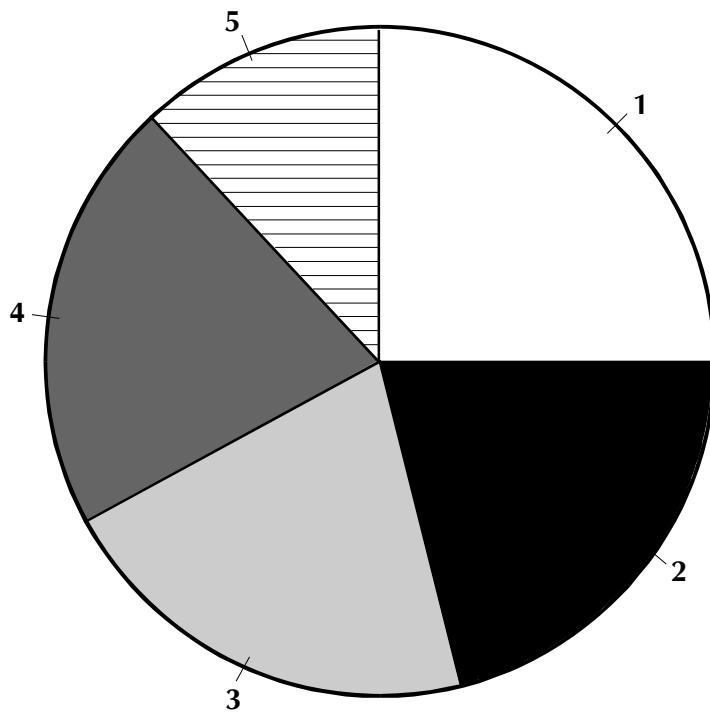
For example:

- demonstrating knowledge of the creative process, issues, and the variety of perspectives with which individuals approach musical works
- recognizing types and characteristics of musical instruments
- recognizing common musical terms and concepts
- demonstrating knowledge of ways in which music can be used as a form of communication, self-expression, and social expression
- evaluating procedures for listening and responding to musical works

**0024 Understand basic principles and skills related to theatre and dance.**

For example:

- demonstrating knowledge of the creative process, issues, and the variety of perspectives with which individuals approach theatre and dance works
- recognizing various forms (e.g., puppet theatre, sociodrama, expressive dance) associated with theatre and dance
- recognizing common terms related to theatre and dance
- demonstrating an understanding of ways in which drama and dance can be used as forms of communication, self-expression, and social expression
- evaluating procedures for viewing and responding to theatrical and dance works

**DISTRIBUTION OF SELECTED-RESPONSE ITEMS ON THE TEST FORM**

**Approximate Percentage  
of Selected-Response  
Items on Test Form**

**Subarea**

<input type="checkbox"/>	1. Language Arts	25%
<input type="checkbox"/>	2. Mathematics	21%
<input type="checkbox"/>	3. Science	21%
<input type="checkbox"/>	4. Social Studies	21%
<input type="checkbox"/>	5. The Arts	12%

## PRACTICE QUESTIONS

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### Field 01: Elementary Education

1. Use the excerpt below from a passage read to a first-grade class to answer the question that follows.  
Note: the teacher's discussion of the reading passage is italicized.

When Eldon looked across outside, he saw wind and rain—*Wow, that looks just like last week when we were on the playground*—He thought a storm was coming—I *wonder how long it will rain and if the wind will blow things over*.

The teacher's use of a read-aloud strategy model is typically most effective for promoting students':

- A. understanding of words that have multiple meanings.
- B. ability to explore and clarify the content they are reading.
- C. willingness to seek assistance from peers or adults to understand a new text.
- D. appreciation of books that are more difficult than those they typically read.

2. While reading aloud to a kindergarten class, the teacher asks students to call out any words that sound the same. This practice would be most effective as a way to promote the students' awareness of:
  - A. phonemic patterns.
  - B. decoding strategies.
  - C. word identification strategies.
  - D. letter-sound correspondences.

3. The most effective way to introduce first-grade readers to a new book is to:

- read the first few pages aloud to familiarize them with it.
- invite them to choose a page to read aloud and discuss.
- have them make predictions about the book's ending.
- describe the content of the book and ask them what it reminds them of.

4. When reading aloud to a class, a teacher who reads fluently in short phrases that sound like natural spoken language will most clearly demonstrate which of the following to the students?

- the value of expression and varied intonation in reading
- the need to be familiar with high-frequency sight words
- a way to remember more of the content in their reading
- the importance of correct grammar and punctuation

5. Works of Anglo-Saxon epic poetry tend to share which of the following characteristics?

- dramatic narratives dealing with the lives of saints
- regular people coping with everyday life
- romantic narratives permeating with courtly love
- legendary heroes struggling against evil

6. Which of the following elements of literature is characterized by the ordering of events and actions to achieve a particular artistic effect?

- setting
- point of view
- theme
- plot

7. Which of the following instructional strategies represents the most effective use of literature to promote students' respect and appreciation for various backgrounds?

- A. response option under development
- B. including texts by and about people from various backgrounds throughout the general language arts program
- C. encouraging the reading of classic Western texts to emphasize students' shared heritage
- D. allowing students to select texts from a classroom library with a number of books about various characters

8. A sixth-grade teacher gives students an article titled, "Exploring Saguaro National Park." The teacher wants to assign a pre-reading activity that will enhance students' understanding and learning while they read the article. To address this goal most effectively, the teacher should have students:

- A. break down lengthier words in the article into syllables.
- B. discuss headings and illustrations to get a sense of what they will read.
- C. research any questions they have about the park on the Internet.
- D. write down which parks they have visited.

9. Which of the following functional texts would be most effective for finding information about the etymology of a particular word?

- A. an encyclopedia
- B. a thesaurus
- C. a dictionary
- D. an atlas

10. Which of the following introductions would be most appropriate for a persuasive essay?

- A. Dr. Diaz does not allow any talking at all in any of her lecture hall classes.
- B. Dr. Diaz may not be the most popular professor in the department, but she has two qualities that make her a very effective teacher.
- C. Get through one test successfully in Dr. Diaz's class and you will really earn her respect.
- D. I'm not sure what Dr. Diaz did before she became a professor, but I bet it was something having to do with the military.

11. As a prewriting strategy, semantic mapping is likely to be most effective as a strategy for facilitating students' ability to:

- A. activate prior knowledge and pre-existing vocabulary in relation to a topic.
- B. decide what research they need to do to expand their ideas in a draft of a paper.
- C. choose a writing style that is appropriate for the intended audience.
- D. incorporate awareness of grammar and mechanics into all stages of the writing process.

12. A fifth-grade class is beginning to work on individual reports on self-selected science topics. The teacher would like to reinforce the research skills of students as they work on their reports. Which of the following would be the most effective way for the teacher to address this goal?

- A. Have students write questions about their topics and make notes as they find the answer to each question.
- B. Pair students with a partner to discuss appropriate reference sources for their reports.
- C. Give students photocopies of reference materials and markers for highlighting information as they read.
- D. Have students write out the topic sentences of paragraphs in various books that are relevant to their topics.

Use the passage below to answer the two questions that follow.

<sup>1</sup>The sled dogs were bearing the brunt of the burden, but they were rewarded for their efforts with a fine feast each evening. <sup>2</sup>And, as the journey across the tundra progressed, the packs on their sleds grew lighter. <sup>3</sup>In the evenings, the dogs lay next to one another in a furry mass to keep warm. <sup>4</sup>Sometimes they joined in the howling of the wolf packs encircling the camp in the distance, making the humans extremely edgy. <sup>5</sup>The wolves seemed fearful of the campfires. <sup>6</sup>In the mornings, the dogs will have scrambled to their feet and shook themselves off, sometimes creating momentary rainbow bursts as the early morning rays of sun filtered through the spraying snow and ice droplets.

13. Which of the following revisions would best improve the overall unity of this text?

- A. Delete the second part of Sentence 1.
- B. Switch the order of Sentences 2 and 3.
- C. Delete Sentence 5.
- D. Move Sentence 6 to the beginning of the text.

14. Which of the following changes in verb form should be made to this passage?

- A. Sentence 1: Change "were rewarded" to "have been rewarded."
- B. Sentence 2: Change "grew" to "would grow."
- C. Sentence 4: Change "encircling" to "having encircled."
- D. Sentence 6: Change "will have scrambled" to "scrambled."

15. **Read the sentence below, which contains a spelling error; then answer the question that follows.**

With every passing day, scientists get closer to mapping the human genome and to decoding the genetic information that effects our health.

Which of the following words is misspelled in this sentence?

- A. scientists
- B. mapping
- C. decoding
- D. effects

16. An elementary teacher has recently delivered a paper at a conference on reading pedagogy and would like to share her work at an upcoming faculty meeting. When revising her paper for this new, less formal context, she should plan to:

- A. increase the paper's level of detail, nuance, and complexity.
- B. add examples of both supporting and conflicting scholarship.
- C. modify the paper's vocabulary, syntax, and organizational structure.
- D. eliminate the illustrations and other visual aids.

17. To ensure that she is interpreting her group leader's remarks correctly, a listener in a small group can ask a question that:

- A. addresses the leader's nonverbal communication style.
- B. paraphrases the leader's main points.
- C. analyzes the leader's introduction.
- D. considers the leader's interactions with the group.

18. A school board member is planning a speech outlining a plan to change the elementary reading program. Which of the following types of organizational arrangement would focus listeners' attention most effectively on the board member's plan?

- A. topical arrangement
- B. cause-effect arrangement
- C. problem-solution arrangement
- D. chronological arrangement

19. Which of the following visual aids could a teacher use most effectively to support a discussion about food prices during the past decade?

- A. a line graph representing trends over time
- B. a pie chart showing proportions of a whole
- C. a bar graph comparing individual points of information
- D. an organizational chart showing relationships in a hierarchy

20. A television commercial for a toy truck shows close-up action shots of a group of the trucks racing over rugged terrain, accompanied by a popular song and the sounds of roaring engines. The design of this commercial was most likely based on the idea of influencing children's opinions and values by:

- A. prompting children to associate trucks with fun and excitement.
- B. arousing children's curiosity about how trucks work.
- C. appealing to children's interest in unconventional ideas.
- D. stimulating children's desire for acceptance by their peers.

21. Which of the following must be true of any number that is divisible by 6?

- A. It is divisible by 3 and the sum of its digits is 6.
- B. It is an even number and it is divisible by 3.
- C. It is divisible by 3 and its units digit is 6.
- D. It is an even number and the sum of its digits is 6.

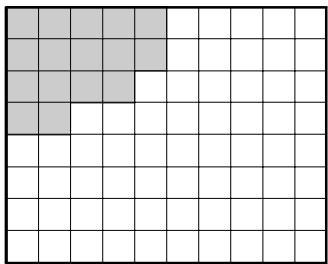
22. Use the table below to answer the question that follows.

Member Name	Portion of Flyers Distributed
Yvonne	$\frac{1}{4}$
Justin	$\frac{3}{18}$
Naomi	$\frac{2}{9}$
Sen	$\frac{1}{3}$

The table above shows the portion of the total flyers for an upcoming performance distributed by each member of a community theater group. Which member distributed the greatest number of flyers?

- A. Yvonne
- B. Justin
- C. Naomi
- D. Sen

23. Use the diagram below to answer the question that follows.



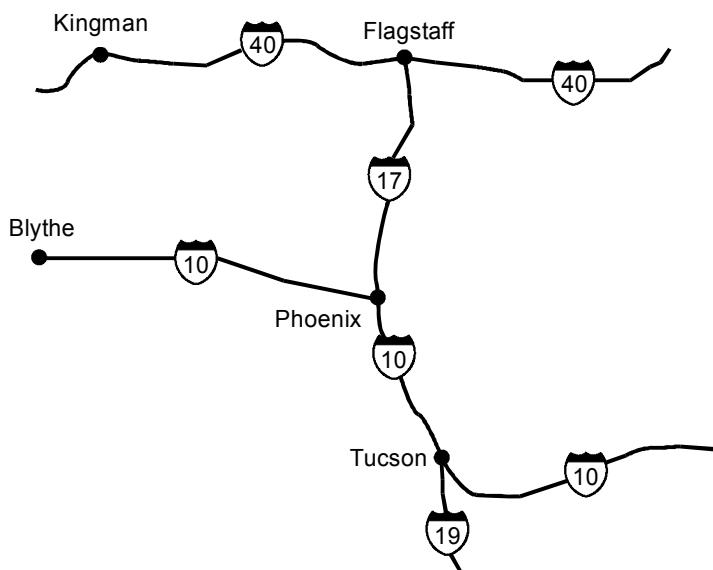
The shaded portion of the rectangle shown in the diagram above can be used to represent which of the following decimals?

- A. 0.15
- B. 0.16
- C. 0.20
- D. 0.25

24. Which of the following expressions correctly orders the numbers from smallest to largest?

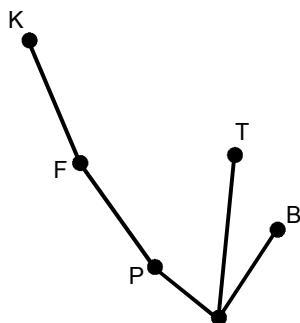
- A.  $2^3 < 3^4 < 7^2 < 11^1$
- B.  $11^1 < 7^2 < 2^3 < 3^4$
- C.  $2^3 < 11^1 < 3^4 < 7^2$
- D.  $2^3 < 11^1 < 7^2 < 3^4$

25. Use the map below to answer the question that follows.

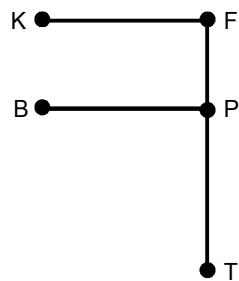


The map above shows the major highways passing through five cities. Given that each city is represented by the initial letter of its name, which of the following is a vertex-edge graph representing just the major highway connections between the five cities?

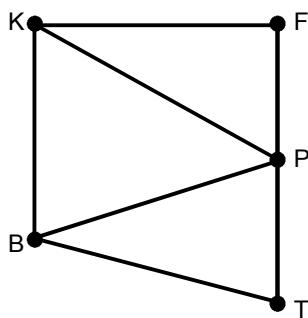
A.



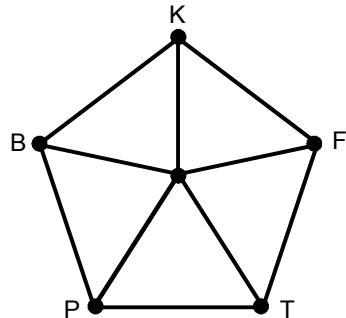
B.



C.



D.



26. A computer selects a number from the set  $\{1, 2, 3\}$ . The computer has been programmed so that the number 3 is twice as likely to be selected as the number 1, and the numbers 1 and 2 have an equal chance of being selected. What is the probability that 3 is the number selected by the computer?

A.  $\frac{1}{4}$

B.  $\frac{1}{3}$

C.  $\frac{1}{2}$

D.  $\frac{2}{3}$

27. Use the table below to answer the question that follows.

<b><math>x</math></b>	<b>Probability of <math>x</math></b>
1	0.08
2	0.15
3	0.23
4	0.24
5	0.14
6	0.09
7 or more	0.07

The table above shows the probability distribution of the number of offspring,  $x$ , in a single rabbit litter. What is the probability that a rabbit doe will give birth to more than 4 rabbits in a single litter?

A. 0.14

B. 0.30

C. 0.54

D. 0.70

28. Use the sequence of numbers below to answer the question that follows.

0, 1, 3, 6, 10, 15, 21, 28, . . .

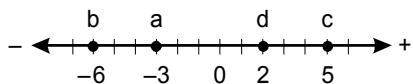
If the pattern in the sequence above continues, what number will come after 28?

- A. 34
- B. 35
- C. 36
- D. 37

29. Which of the following ordered pairs is on the graph that represents the algebraic function  $y = 2x - 1$ ?

- A.  $(-2, -5)$
- B.  $(-4, -7)$
- C.  $(0, 1)$
- D.  $(3, 4)$

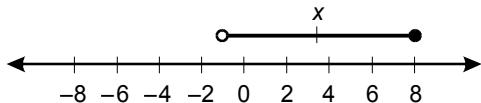
30. Use the diagram below to answer the question that follows.



Using the points marked on the graph of the real number line above, which of the following is true?

- A.  $c - b > d - a$
- B.  $a + b = d + c$
- C.  $c - d = b - a$
- D.  $d - c > a - b$

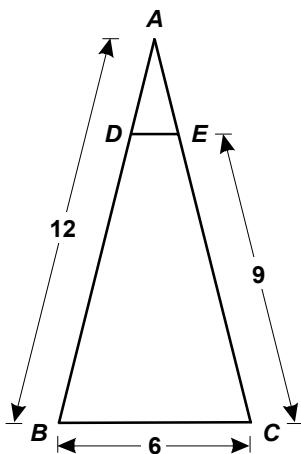
31. Use the diagram below to answer the question that follows.



The diagram above shows a number line. Which of the following best describes the value of  $x$ ?

A.  $-1 > x \leq 8$   
B.  $-1 \geq x \leq 8$   
C.  $8 \geq x \geq -1$   
D.  $8 \geq x > -1$

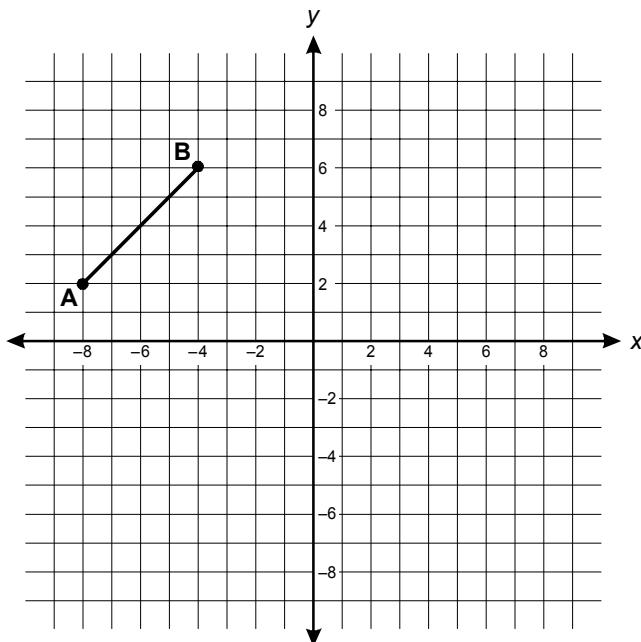
32. Use the diagram below to answer the question that follows.



In the diagram above, isosceles  $\triangle ABC$  is similar to  $\triangle ADE$ . What is the length of  $\overline{DE}$ ?

A. 2  
B.  $\frac{3}{2}$   
C. 1  
D.  $\frac{3}{4}$

33. Use the graph below to answer the question that follows.



If  $\overline{AB}$  is reflected over the y axis to form  $\overline{A'B'}$ , what are the coordinates of points A' and B'?

- A. A'(8, 2) and B'(4, 6)
- B. A'(8, 2) and B'(12, 6)
- C. A'(-2, -8) and B'(-4, -6)
- D. A'(2, -8) and B'(6, -4)

34. A landscaper has an empty 1,000-gallon fish pond to fill. His hose delivers one quart of water every thirty seconds. He turns on the hose at 7:00 A.M. and leaves. When he returns at the same time the next day, the pond is:

- A. approximately one half full.
- B. about three quarters full.
- C. almost full.
- D. overflowing.

35. In a pet store there are at least as many cats as dogs and at least as many dogs as birds. Which of the following statements must be true?

- A. There could be the same number of cats and birds.
- B. There are fewer dogs than birds.
- C. There could be more dogs than cats.
- D. There are more birds than cats.

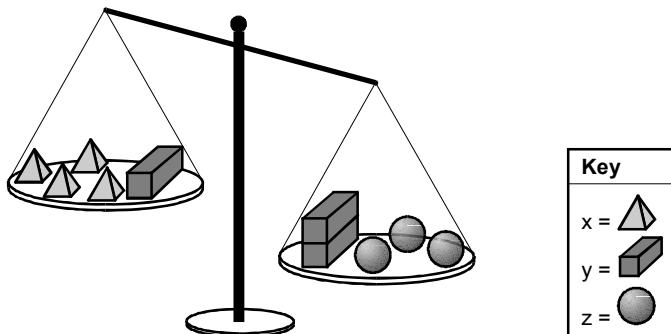
36. **Use the problem below to answer the question that follows.**

A carpenter is covering a floor that measures 10 feet by 12 feet. The flooring boards are 3 inches wide and 8 feet long. How many boards will the carpenter need to cover the floor?

What is a step in solving this problem?

- A. Add the length and width of the room together to get the perimeter.
- B. Multiply 3 times 8 to get the area of each board.
- C. Divide the length of the room's short side by the length of a board.
- D. Divide the width of the boards by 12 to convert to feet.

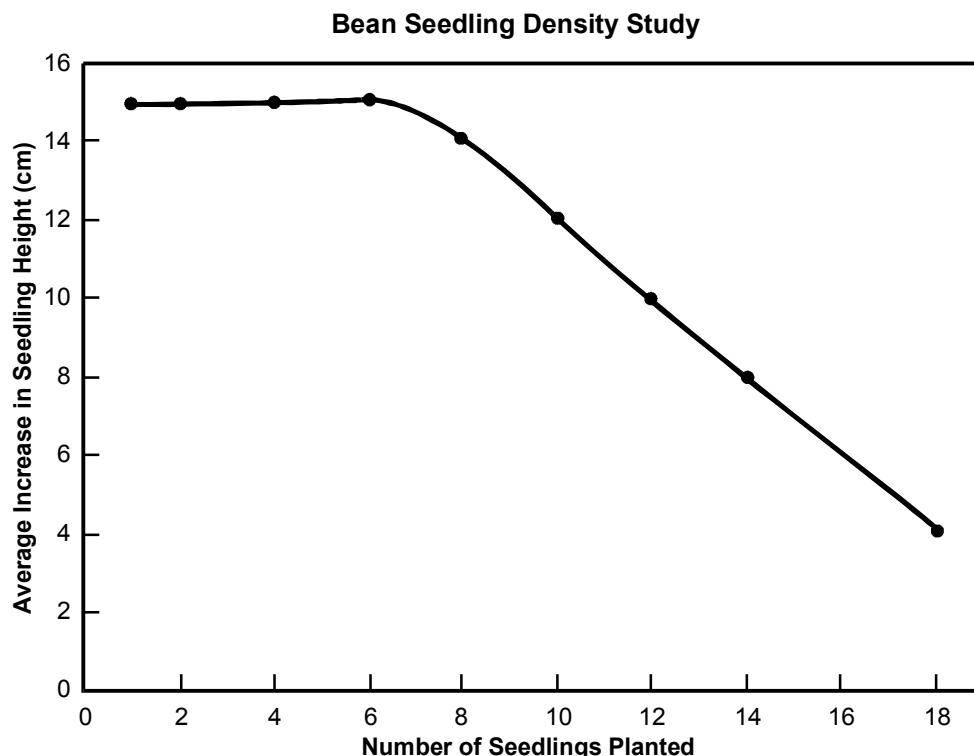
37. Use the diagram below to answer the question that follows.



In the balance scale shown above, each shape has a different weight and is represented by x, y, or z. Which of the following best describes the relationship among the weights of the objects?

- A.  $4x < y + 3z$
- B.  $3x + y > 2y + 4z$
- C.  $3y < 5x + z$
- D.  $4y + 5z > 3x + y$

38. Use the graph below to answer the question that follows.



The graph above shows the relationship between planting density and bean plant growth. In this experiment, different amounts of bean seedlings were planted in trays with a volume of  $20\text{ cm}^3$  and grown for 14 days under the same temperature, lighting, and watering conditions. After the 14-day growing period, the average increase in plant height was determined. Which of the following conclusions is best supported by the results of this experiment?

- A. Bean plants are more productive if planted in groups of 10 or more.
- B. Bean plants reach their maximum height two weeks after planting.
- C. Bean plants should be planted a minimum of 20 cm apart.
- D. Bean plant growth is reduced by overcrowding.

39. Use the experiment described below to answer the question that follows.

1. Fill each of four beakers with 250 mL of water.
2. Maintain each beaker at a different temperature: 10°C, 20°C, 40°C, and 80°C.
3. Place a 5-gram sugar cube into each beaker and stir.
4. Record the amount of time it takes for each of the sugar cubes to dissolve completely.

In the experiment described above, which of the following is the independent variable?

- A. the temperature of the water
- B. the time it takes for the sugar cube to dissolve
- C. the mass of the sugar cube
- D. the volume of water added to each beaker

40. For which of the following experimental data would a line graph be the best way to represent the relationship among the variables?

- A. the portion of cream by mass that solidifies to become butter when the cream is shaken thoroughly
- B. the number of pennies it takes to sink clay boats of the same mass but of different shapes and volumes
- C. the distance different paper airplanes can fly depending on their wing designs
- D. the height to which an object is launched depending on the amount of force applied in launching it

41. Which of the following water conservation measures provides the greatest savings of Arizona's freshwater resources?

- A. watering plants with rainwater collected from downspouts
- B. covering swimming pools to minimize evaporation
- C. using treated reclaimed wastewater
- D. aerating lawns to increase water absorption

42. Which of the following is believed to be a major cause of global warming?

- A. the discharge of sulfur dioxide from the processing of metal ores
- B. the release of nitric oxides from the burning of coal
- C. the production of ozone from automobile exhaust
- D. the emission of carbon dioxide from power plants

43. Which of the following is the best explanation of how pesticides both solve and create problems?

- A. Pesticides decrease insect populations in agricultural areas but can cause a migration of these pests to urban and suburban areas.
- B. Pesticides enable the production of more marketable produce but also make the cost of raising that produce extremely expensive.
- C. Pesticides allow farmers to obtain better yields from their crops but can also have negative effects on nonpest species.
- D. Pesticides help plants survive attacks by invasive pest species but cause native pest populations to increase in later years.

44. The technology that allows surgical tools to be manipulated over an Internet connection benefits patients by providing:

- A. surgery options without being admitted into a hospital.
- B. access to surgical specialists without the need to travel great distances.
- C. a greater number of hospitals with which a surgeon may be affiliated.
- D. less expensive ways of accomplishing a specialized surgery.

45. Use the table below to answer the question that follows.

Line	Cell Structure	Primary Function
1	cell wall	DNA storage
2	mitochondrion	structural support
3	nucleus	ATP production
4	chloroplast	absorbing energy from sunlight

Which line in the table above correctly matches a plant cell structure with its primary function in plant cells?

A. Line 1

B. Line 2

C. Line 3

D. Line 4

46. Which of the following statements best describes the first stage of photosynthesis?

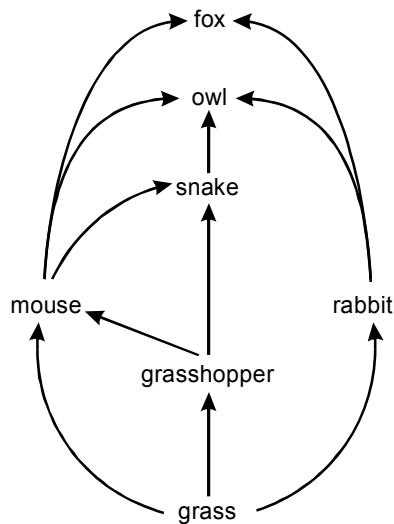
A. Light energy from the sun is converted into chemical energy.

B. Carbon dioxide and water are converted into sugar molecules and oxygen.

C. The chemical energy in sugar molecules is converted into heat energy.

D. Oxygen and water are converted into carbon dioxide.

47. Use the food web below to answer the question that follows.



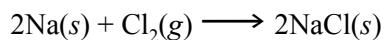
Which of the following organisms in the simplified food web shown above stores the greatest percentage of the total energy entering this food web?

- A. the fox
- B. the grass
- C. the snake
- D. the grasshopper

48. Which of the following is an example of a parasitic relationship between two organisms?

- A. a snake consuming a mouse
- B. bacteria decomposing the body of a dead bird
- C. a honeybee gathering nectar from a flower
- D. a flea feeding on the blood of a dog

49. Use the information below to answer the question that follows.



Sodium (Na) is a shiny, reactive metal and chlorine (Cl<sub>2</sub>) is a noxious, pale yellow gas. When these two elements are combined as shown in the chemical reaction above, they produce sodium chloride (NaCl), the colorless, crystalline solid known as table salt.

The information above illustrates which of the following about the relationship between reactants and products in chemical reactions?

- A. Products can be converted back into reactants using physical means.
- B. During a chemical reaction, products having distinct chemical and physical properties are formed.
- C. Products are in a different physical state than their reactants.
- D. During a chemical reaction, matter is lost as reactants are transformed into products.

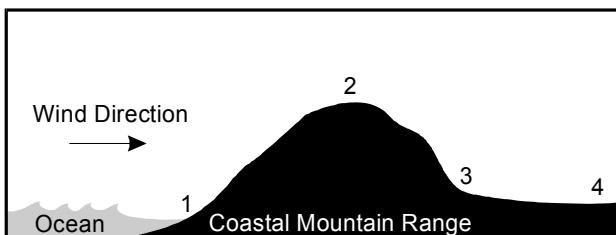
50. Which of the following statements best explains why attempts to create a perfectly energy-efficient machine have been unsuccessful?

- A. Matter is neither created nor destroyed in a system.
- B. For every physical action, there is an equal and opposite reaction.
- C. Energy is constant within a closed system.
- D. In every energy transfer, some energy is given off as heat.

51. Which of the following procedures would provide the most conclusive evidence for identifying an unknown liquid as water?

- A. evaluating its ability to conduct electricity
- B. comparing its color to a known sample of water
- C. determining its boiling point under controlled conditions
- D. mixing it with solids known to dissolve in water

52. Use the diagram below to answer the question that follows.



The diagram above represents a cross section of a coastal mountain range. If the prevailing wind direction is from left to right, which of the following regions will receive the most precipitation over the course of a year?

- A. region 1
- B. region 2
- C. region 3
- D. region 4

53. A high-pressure system has moved into an area. Which of the following weather conditions can be expected?

- A. strong winds
- B. steady precipitation
- C. clear skies
- D. low cloud cover

54. Which of the following is a major function of plants in the cycling of water through the environment?

- A. preventing evaporation of water from the ground by shading the surface
- B. breaking water vapor into its constituent elements during photosynthesis
- C. minimizing the quantity of water that reaches and is stored in underground aquifers
- D. absorbing water from the ground and releasing it into the atmosphere as vapor

55. Abraham Lincoln issued the Emancipation Proclamation in response to which of the following actions by the southern states?

- A. the surrender of the combined military forces of the Confederacy
- B. the refusal of the Confederacy to lay down arms and rejoin the Union
- C. the attack by confederate forces on Fort Sumter at the start of the war
- D. the refusal of the Confederacy to grant rights of citizenship to slaves

56. The 1857 Dred Scott decision by the U.S. Supreme Court lead most directly to which of the following events in U.S. history?

- A. Emancipation Proclamation
- B. Civil War
- C. Trail of Tears
- D. Industrial Revolution

57. Which of the following best describes a major consequence of the adoption of mass production techniques by U.S. manufacturers during the late nineteenth century?

- A. an increase in the variety of manufactured goods
- B. a reduction of the length of the workday for industrial workers
- C. a reduction of the cost of manufactured goods
- D. an increase in the skill requirements of industrial workers

**Read the excerpt below from an 1836 letter by Angelina Grimké; then answer the two questions that follow.**

I have found the Anti-slavery cause to be the high school of morals in our land—the school in which *human rights* are more fully investigated, and better understood and taught, than in any other. Here a great fundamental principle is uplifted and illuminated, and from this central light, rays innumerable stream all around. Human beings have *rights*, because they are *moral* beings: the rights of all men grow out of their moral nature; and as *all* men have the same moral nature, they have essentially the same rights. . . . Now if rights are founded in the nature of our moral being, then the *mere circumstance of sex* does not give to man higher rights than to woman.

58. The excerpt best illustrates how the struggle against slavery led women to:

- A. examine their position in society.
- B. assume a more active role in religious affairs.
- C. question the moral values of men.
- D. challenge the nation's founding principles.

59. The writer's argument in the excerpt is based primarily on which of the following beliefs?

- A. Rights can best be defined as the absence of prohibitions.
- B. Individual rights are products of an evolutionary process.
- C. Rights imply duties but are superior to them.
- D. Individual rights are grounded in the natural order of the universe.

60. Which of the following ancient civilizations used the arch as a major component in the engineering of infrastructure and the building of monumental structures?

- A. Aztec
- B. Roman
- C. Inca
- D. Egyptian

61. Which of the following was a major cause of the First World War?

- A. the rise of nationalist movements in the Austro-Hungarian empire
- B. the growth of fascist political parties in Italy and Germany
- C. the establishment of a communist government in Russia
- D. the onset of economic depressions in France and Great Britain

62. Which of the following best describes how Confucianism established both commonalities and differences within traditional Chinese society?

- A. It promoted cultural uniformity while providing a rationale for social differentiation.
- B. It promoted political unity while encouraging intergroup competition.
- C. It promoted religious uniformity while providing a rationale for the distribution of wealth.
- D. It promoted economic cooperation while encouraging similarities and differences.

63. Which of the following best illustrates a violation of human rights under international law?

- A. A student wishing to travel to his parents' country of origin is denied a visa.
- B. Demonstrators blocking the entrance to a military base are arrested and charged with criminal trespass.
- C. A refugee is unable to obtain permission to work in the host country.
- D. A prisoner arrested for political agitation is prohibited from communicating with family members.

64. In which of the following areas do democratic and authoritarian governments operate most differently?

- A. the enactment of laws and regulations
- B. the collection of revenues
- C. the prosecution of suspected criminals
- D. the selection of government leaders

65. Which of the following best describes the principle of government underlying the system of checks and balances established by the U.S. Constitution?

- A. No single branch of government is sovereign over the other branches.
- B. Political authority is divided between the federal government and the various state governments.
- C. No single branch of government is able to take action without the consent of the other branches.
- D. The judicial branch is independent of all other branches of government.

66. Which of the following is the best example of absolute location?

- A. Tucson is in Pima County, south of the  $34^{\circ}$  parallel.
- B. Phoenix is located at longitude  $112^{\circ}$  west, latitude  $33^{\circ}$  north.
- C. The Grand Canyon spans more than 100 miles, east to west.
- D. Graham County is northeast of Pima County.

67. Local communities can most influence worldwide resource availability through the decisions they make concerning which of the following?

- A. the construction of roads
- B. the siting of shopping malls
- C. the taxation of land
- D. the disposal of solid wastes

68. Which of the following statements best describes the relationship between human societies and the physical environment in which they are located?

- A. Human activities are largely determined and limited by the physical environment, which is not significantly altered by those activities.
- B. The physical environment both limits and provides opportunities for human activities, which in turn influence and shape the environment.
- C. Although environmental factors largely dictated human activities in pre-industrial societies, people in industrial societies shape the environment to suit their needs.
- D. The activities of human societies have a considerably greater effect on the physical environment than the environment has on human activities.

69. Use the chart below, which provides a hypothetical portrait of the consequences of trade in olives and sugar beets between the United States and Spain, to answer the question that follows.

	Output (tons) Before Specialization	Output (tons) After Specialization	Trade (tons)		Final Position (tons)
			Export	Import	
United States	10 olives 50 sugar beets	0 olives 100 sugar beets	36 sugar beets	12 olives	12 olives 64 sugar beets
Spain	25 olives 30 sugar beets	40 olives 0 sugar beets	12 olives	36 sugar beets	28 olives 36 sugar beets

The chart above best illustrates how trade enables nations to:

- A. diversify their economies.
- B. expand the available amount of goods and services.
- C. create new jobs.
- D. increase the purchasing power of consumers.

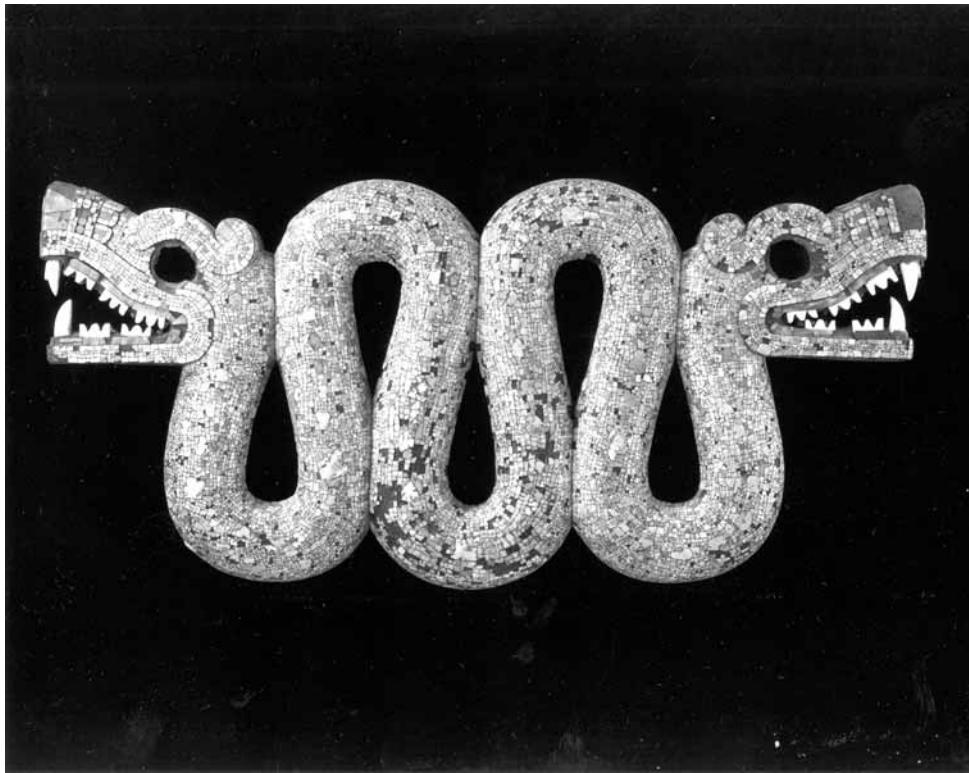
70. The most significant way in which societies based on socialist economic principles differ from societies with capitalist economies is that in socialist societies:

- A. individual political rights are guaranteed by written constitutions.
- B. major industries and services are owned and operated by the state.
- C. social mobility is based primarily on individual merit and initiative.
- D. the state has the primary responsibility for education.

71. The migration of people from rural to urban areas in the United States between 1880 and 1920 most influenced which of the following developments in U.S. history?

- A. the reform of municipal governments
- B. the resurgence of U.S. expansionism
- C. the industrialization of the U.S. economy
- D. the growth of the suburbs

72. Use the reproduction below of a double-headed serpent mosaic from the Aztec/Mixtec culture of southern Mexico to answer the question that follows.



This mosaic best exemplifies the design principle of:

- A. emphasis.
- B. contrast.
- C. balance.
- D. variety.

73. In many tribal cultures of sub-Saharan Africa, Oceania, and the Americas, masks have primarily been made for use in:

- A. theatrical productions.
- B. children's games.
- C. spiritual rites.
- D. commercial exchanges.

74. The musical terms *tempo*, *beat*, and *meter* all refer to which of the following elements of music?

- A. dynamics
- B. harmony
- C. melody
- D. rhythm

75. When a national anthem is played before a sporting event, it primarily represents the use of music for which of the following purposes?

- A. interpersonal communication
- B. social expression
- C. religious observance
- D. self-expression

76. In music, the term *tempo* is typically used to indicate a song's:

- A. length.
- B. structure.
- C. speed.
- D. volume.

77. **Use the staff below to answer the question that follows.**



Songwriters position notes on the lines and spaces of a staff like the one above to indicate which of the following concepts of music?

- A. timbre
- B. meter
- C. dynamics
- D. pitch

78. A group of dancers who perform the same movement at the same time are considered to be dancing in:

- A. transition.
- B. rhythm.
- C. symmetry.
- D. unison.

79. Which of the following dramatic forms is typically recognized as the most effective vehicle for a performer's self-expression?

- A. a classical opera
- B. a Kabuki play
- C. a Broadway musical
- D. an improvised monologue

80. To foster skills in analyzing a dramatic work, which of the following would be the most effective question a teacher could use to begin a class discussion of a tragedy?

- A. Why do the characters speak the way they do?
- B. What are the main conflicts in this story?
- C. Which character is most like you?
- D. What do you think about the ending?



Below are the directions for the Elementary Education performance assignment.

### **DIRECTIONS FOR THE PERFORMANCE ASSIGNMENT**

This section of the test consists of a performance assignment. **The assignment can be found on the next page.** You are asked to prepare a written response of approximately 2–3 pages on the assigned topic. You should use your time to plan, write, review, and edit your response for the assignment.

Read the assignment carefully before you begin to work. Think about how you will organize your response. You may use any blank space in this test booklet to make notes, write an outline, or otherwise prepare your response. **However, your score will be based solely on the version of your response written in Written Response Booklet B.**

As a whole, your response must demonstrate an understanding of the knowledge and skills of the field. In your response to the assignment, you are expected to demonstrate the depth of your understanding of the content area through your ability to apply your knowledge and skills rather than merely to recite factual information.

Your response will be evaluated based on the following criteria.

- **PURPOSE:** the extent to which the response achieves the purpose of the assignment
- **SUBJECT MATTER KNOWLEDGE:** accuracy and appropriateness in the application of subject matter knowledge
- **SUPPORT:** quality and relevance of supporting details
- **RATIONALE:** soundness of argument and degree of understanding of the subject matter

The performance assignment is intended to assess subject knowledge content and skills, not writing ability. However, your response must be communicated clearly enough to permit scorers to make a valid evaluation of your response according to the criteria listed above. Your response should be written for an audience of educators in this field. The final version of your response should conform to the conventions of edited American English. This should be your original work, written in your own words, and not copied or paraphrased from some other work.

Be sure to write about the assigned topic. Please write legibly. You may not use any reference materials during the test. Remember to review your work and make any changes you think will improve your response.

Below is the scoring scale for the Elementary Education performance assignment.

**SUBJECT TESTS—PERFORMANCE ASSIGNMENT SCORING SCALE**

Score Point	Score Point Description
4	<p><b>The "4" response reflects a thorough knowledge and understanding of the subject matter.</b></p> <ul style="list-style-type: none"> <li>• The purpose of the assignment is fully achieved.</li> <li>• There is a substantial, accurate, and appropriate application of subject matter knowledge.</li> <li>• The supporting evidence is sound; there are high-quality, relevant examples.</li> <li>• The response reflects an ably reasoned, comprehensive understanding of the topic.</li> </ul>
3	<p><b>The "3" response reflects an adequate knowledge and understanding of the subject matter.</b></p> <ul style="list-style-type: none"> <li>• The purpose of the assignment is largely achieved.</li> <li>• There is a generally accurate and appropriate application of subject matter knowledge.</li> <li>• The supporting evidence is adequate; there are some acceptable, relevant examples.</li> <li>• The response reflects an adequately reasoned understanding of the topic.</li> </ul>
2	<p><b>The "2" response reflects a limited knowledge and understanding of the subject matter.</b></p> <ul style="list-style-type: none"> <li>• The purpose of the assignment is partially achieved.</li> <li>• There is a limited, possibly inaccurate or inappropriate, application of subject matter knowledge.</li> <li>• The supporting evidence is limited; there are few relevant examples.</li> <li>• The response reflects a limited, poorly reasoned understanding of the topic.</li> </ul>
1	<p><b>The "1" response reflects a weak knowledge and understanding of the subject matter.</b></p> <ul style="list-style-type: none"> <li>• The purpose of the assignment is not achieved.</li> <li>• There is little or no appropriate or accurate application of subject matter knowledge.</li> <li>• The supporting evidence, if present, is weak; there are few or no relevant examples.</li> <li>• The response reflects little or no reasoning about or understanding of the topic.</li> </ul>
U	<p><b>The response is unrelated to the assigned topic, illegible, primarily in a language other than English, not of sufficient length to score, or merely a repetition of the assignment.</b></p>
B	<p><b>There is no response to the assignment.</b></p>

## Practice Performance Assignment

81. **Read the information below; then complete the exercise that follows.**

A fifth-grade class has been given the following assignment: "Write a short biography, to be read by your teacher, about a famous author." Hector has good control of English writing conventions and grammar but is still developing his skills in the rhetorical elements of writing (e.g., focus and unity, organization, supporting detail, clarity, appropriateness for the audience). He has chosen to write about Beverly Cleary. Hector submitted the following draft for the teacher's review.

Beverly Cleary is my favorite author. She was born in McMinnville, Oregon and lived on a farm in a town with the funny name of Yamhill. She loved reading, and she wanted to write books she would like to read. She has won many writing awards. She writes books with really great characters that people can relate to very easily. Her books are very funny and use humor that we use in every day life in school and at home.

My favorite book by Beverly Cleary is *The Mouse and the Motorcycle*. This is a story about a mouse that has human qualities. The mouse is able to play with toys as if they are real. He can ride a toy motorcycle all around the house. I liked this the best because I could picture myself in place of Ralph the mouse doing the same things in my own room.

This is why Beverly Cleary is so good. She is able to make her characters, even a mouse, realistic and very human. I really do think that she is the best writer there is. This is why I think Beverly Cleary is the best writer.

Using your knowledge of the rhetorical elements of writing, and of analyzing and revising written work by elementary students, write a response in which you discuss revisions that Hector could make to improve his draft. In your response:

- identify one rhetorical element in Hector's draft that needs improvement, citing specific examples;
- explain why the rhetorical element that you have identified is important for the effectiveness of Hector's work; and
- describe a revision strategy that Hector could use in the writing process to improve the effectiveness of the rhetorical element you have identified.

## Sample Performance Assignment Response: Score Point 4

The rhetorical element of focus should be improved in order for Hector to write a successful biography. A biography should focus on the life of the author, not on the author's writings. Hector begins his draft well enough by introducing the author, Beverly Cleary, and some introductory information about her life. For instance, he tells us that she lived in Oregon, that she "loved reading," and "she won many writing awards." By the middle of the first paragraph, however, the essay drifts away from the life of Beverly Cleary and focuses instead on her books.

The focus of Hector's draft never returns to the life of Beverly Cleary, but stays on her books. The second paragraph describes Cleary's famous work, *The Mouse and the Motorcycle*. The third paragraph says that Cleary's characters are the reason that she is "the best writer there is," a point that is repeated. There should be mention of Cleary's writing in a biography, but Cleary's life should be the emphasis.

The rhetorical element of focus centers the writer's and the reader's attention on the topic that is being explored. Focus should be maintained in a piece of writing in order for the discussion to be unified and complete. When the focus shifts, then the topic that was supposed to be discussed does not get developed. This is what happens in Hector's case. We don't know much more about Cleary's life at the end of the essay than we did when we started. Also, when the focus is not maintained, organization can be affected because the ideas don't necessarily follow a logical order. Because Hector's first paragraph tries to talk about two topics instead of one, ideas within this paragraph lack order.

The first revision strategy that Hector could use in the writing process to improve his writing would be to re-read his essay, sentence by sentence and paragraph by paragraph, to determine where his draft loses focus. To make a game of this activity, Hector could fold a piece of paper length-wise into two halves. The left half could have the heading of "Point for me: details on Cleary's life events," and the right half could have the heading of "Lost focus: details that stray." Then Hector could read his essay to himself (or to the teacher). Whenever a sentence relates to the proper focus, he could give himself a point under the "point for me" column; whenever a detail seems to drift away from Cleary's life events, he has to give the "lost focus" column a point. After he completes this exercise, he will see that his draft started straying in the first paragraph. This little exercise teaches students to self-monitor their writing as they attempt to improve focus in their essays.

After Hector understands his problem with focus, he will need to read a few quality resources about the life of Beverly Cleary. Perhaps when he wrote his draft, he did not know enough about her life to develop major points about it. Now, he should take some notes, using his own words, on the major events of her life, and then use some graphic organizers, such as a web or an outline, to sort these events into broad categories of "childhood, young adult years, later adult years." Again, any mention of Cleary's books should be brief. As he rewrites his draft, he will need to rely on his organizational plan, always asking himself, "am I still staying with my focus?"

## Acknowledgments

### Practice Question

72. Mesoamerica, Aztec/Mixtec, double-headed serpent mosaic, British Museum. Reprinted with permission.

# ANSWER KEY

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## Field 01: Elementary Education

Question Number	Correct Response	Objective
1.	B	Understand the reading process.
2.	A	Understand the reading process.
3.	D	Understand the reading process.
4.	A	Understand the reading process.
5.	D	Understand skills and strategies for reading literary texts.
6.	D	Understand skills and strategies for reading literary texts.
7.	B	Understand skills and strategies for reading literary texts.
8.	B	Understand skills and strategies for reading informational texts.
9.	C	Understand skills and strategies for reading informational texts.
10.	B	Understand skills and strategies for reading informational texts.
11.	A	Understand the writing process.
12.	A	Understand the writing process.
13.	C	Understand the writing process.
14.	D	Understand the elements of writing, including the six traits of writing.
15.	D	Understand the elements of writing, including the six traits of writing.
16.	C	Understand the elements of writing, including the six traits of writing.
17.	B	Understand principles and concepts related to listening, speaking, viewing, and presenting.
18.	C	Understand principles and concepts related to listening, speaking, viewing, and presenting.
19.	A	Understand principles and concepts related to listening, speaking, viewing, and presenting.
20.	A	Understand principles and concepts related to listening, speaking, viewing, and presenting.
21.	B	Understand principles and concepts related to numbers, number sense, and operations.
22.	D	Understand principles and concepts related to numbers, number sense, and operations.
23.	C	Understand principles and concepts related to numbers, number sense, and operations.
24.	D	Understand principles and concepts related to numbers, number sense, and operations.
25.	B	Understand principles and concepts related to data analysis, probability, and discrete mathematics.

*(continued on next page)*

<b>Question Number</b>	<b>Correct Response</b>	<b>Objective</b>
26.	<b>C</b>	Understand principles and concepts related to data analysis, probability, and discrete mathematics.
27.	<b>B</b>	Understand principles and concepts related to data analysis, probability, and discrete mathematics.
28.	<b>C</b>	Understand principles, concepts, and procedures related to patterns, algebra, and functions.
29.	<b>A</b>	Understand principles, concepts, and procedures related to patterns, algebra, and functions.
30.	<b>A</b>	Understand principles, concepts, and procedures related to patterns, algebra, and functions.
31.	<b>D</b>	Understand principles, concepts, and procedures related to patterns, algebra, and functions.
32.	<b>B</b>	Understand principles, concepts and procedures related to geometry and measurement.
33.	<b>A</b>	Understand principles, concepts and procedures related to geometry and measurement.
34.	<b>B</b>	Understand principles, concepts and procedures related to geometry and measurement.
35.	<b>A</b>	Understand principles, concepts, and procedures related to mathematical structure and logic.
36.	<b>D</b>	Understand principles, concepts, and procedures related to mathematical structure and logic.
37.	<b>A</b>	Understand principles, concepts, and procedures related to mathematical structure and logic.
38.	<b>D</b>	Understand scientific inquiry and the principles and processes of scientific investigation.
39.	<b>A</b>	Understand scientific inquiry and the principles and processes of scientific investigation.
40.	<b>D</b>	Understand scientific inquiry and the principles and processes of scientific investigation.
41.	<b>C</b>	Understand the nature and historical development of scientific thought and the relationships between science, technology, and human activities.
42.	<b>D</b>	Understand the nature and historical development of scientific thought and the relationships between science, technology, and human activities.
43.	<b>C</b>	Understand the nature and historical development of scientific thought and the relationships between science, technology, and human activities.
44.	<b>B</b>	Understand the nature and historical development of scientific thought and the relationships between science, technology, and human activities.
45.	<b>D</b>	Understand the basic principles and concepts of life science.
46.	<b>A</b>	Understand the basic principles and concepts of life science.

*(continued on next page)*

Question Number	Correct Response	Objective
47.	<b>B</b>	Understand the basic principles and concepts of life science.
48.	<b>D</b>	Understand the basic principles and concepts of life science.
49.	<b>B</b>	Understand the basic principles and concepts of physical science.
50.	<b>D</b>	Understand the basic principles and concepts of physical science.
51.	<b>C</b>	Understand the basic principles and concepts of physical science.
52.	<b>A</b>	Understand the basic principles and concepts of Earth and space science.
53.	<b>C</b>	Understand the basic principles and concepts of Earth and space science.
54.	<b>D</b>	Understand the basic principles and concepts of Earth and space science.
55.	<b>B</b>	Understand major developments in American history and analyze their significance.
56.	<b>B</b>	Understand major developments in American history and analyze their significance.
57.	<b>C</b>	Understand major developments in American history and analyze their significance.
58.	<b>A</b>	Understand major developments in American history and analyze their significance.
59.	<b>D</b>	Understand various political systems and the structures, functions, and principles of local, state, and national governments, including the roles, rights, and responsibilities of citizenship.
60.	<b>B</b>	Understand major developments in world history and analyze their significance.
61.	<b>A</b>	Understand major developments in world history and analyze their significance.
62.	<b>A</b>	Understand major developments in world history and analyze their significance.
63.	<b>D</b>	Understand various political systems and the structures, functions, and principles of local, state, and national governments, including the roles, rights, and responsibilities of citizenship.
64.	<b>D</b>	Understand various political systems and the structures, functions, and principles of local, state, and national governments, including the roles, rights, and responsibilities of citizenship.
65.	<b>A</b>	Understand various political systems and the structures, functions, and principles of local, state, and national governments, including the roles, rights, and responsibilities of citizenship.
66.	<b>B</b>	Understand major principles, concepts, and phenomena of geography and the interactions among people, the environment, and culture.
67.	<b>D</b>	Understand major principles, concepts, and phenomena of geography and the interactions among people, the environment, and culture.
68.	<b>B</b>	Understand major principles, concepts, and phenomena of geography and the interactions among people, the environment, and culture.
69.	<b>B</b>	Understand principles and concepts related to economics.
70.	<b>B</b>	Understand principles and concepts related to economics.

*(continued on next page)*

<b>Question Number</b>	<b>Correct Response</b>	<b>Objective</b>
71.	<b>C</b>	Understand principles and concepts related to economics.
72.	<b>C</b>	Understand basic principles and skills related to creating, viewing, and responding to works of visual art.
73.	<b>C</b>	Understand basic principles and skills related to creating, viewing, and responding to works of visual art.
74.	<b>D</b>	Understand basic principles and skills related to music.
75.	<b>B</b>	Understand basic principles and skills related to music.
76.	<b>C</b>	Understand basic principles and skills related to music.
77.	<b>D</b>	Understand basic principles and skills related to music.
78.	<b>D</b>	Understand basic principles and skills related to theatre and dance.
79.	<b>D</b>	Understand basic principles and skills related to theatre and dance.
80.	<b>B</b>	Understand basic principles and skills related to theatre and dance.

# PREPARATION RESOURCES

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## Field 01: Elementary Education

### LANGUAGE ARTS

#### Journals:

*Language Arts*, National Council of Teachers of English

*The Reading Teacher*, International Reading Association

#### Other Sources:

**Bear, D. R., Invernizzi, M., Templeton, S., & Johnston, F.** (2003). *Words their way: Word study for phonics, vocabulary, and spelling instruction* (3<sup>rd</sup> ed). Upper Saddle River, NJ: Prentice Hall.

**Christenson, T. A.** (2002). *Supporting struggling writers in the elementary classroom*. Newark, DE: International Reading Association.

**Lapp, D., Flood, J., & Farnan, N. (Eds.)**. (2004). *Content area reading and learning: Instructional strategies* (3<sup>rd</sup> ed.). Mahwah, NJ: Lawrence Erlbaum.

**Ruddell, R. B., & Ruddell, M. R.** (2001). *Teaching children to read and write: Becoming an influential teacher* (3<sup>rd</sup> ed.). Boston: Allyn & Bacon.

**Tierney, R. J., & Readence, J. E.** (2005). *Reading strategies and practices* (6<sup>th</sup> ed.). Boston: Allyn & Bacon.

**Tompkins, G. E.** (2001). *Language arts: Content and teaching strategies* (5<sup>th</sup> ed.). Upper Saddle River, NJ: Prentice Hall.

### MATHEMATICS

#### Journals:

*Mathematics Teacher*, National Council of Teachers of Mathematics

#### Other Sources:

**Billstein, R., Libeskind, S., & Lott, J. W.** (2004). *A problem solving approach to mathematics for elementary school teachers* (8<sup>th</sup> ed.). Boston: Addison Wesley.

**Blitzer, R.** (2006). *Introductory algebra* (4<sup>th</sup> ed.). Upper Saddle River, NJ: Prentice Hall.

**Charles, R. I., Crown, W., & Fennell, F.** (2005). *Scott Foresman-Addison Wesley Mathematics: Grade 6*. Glenview, IL: Scott Foresman.

**Musser, G. L., Burger, W. F., & Peterson, B. E.** (2003). *Essentials of mathematics for elementary teachers: A contemporary approach* (6<sup>th</sup> ed.). Hoboken, NJ: John Wiley.

**Musser, G. L., Burger, W. F., & Peterson, B. E.** (2006). *Mathematics for elementary teachers: A contemporary approach* (7<sup>th</sup> ed.). Hoboken, NJ: John Wiley and Sons, Inc.

**Parker, T. H., & Baldridge, S. J.** (2004). *Elementary mathematics for teachers*. Okemos, MI: Sefton-Ash Publishers.

## **SOCIAL STUDIES**

### **Journals:**

*Social Education*, National Council for the Social Studies

### **Other Sources:**

**Boyes, W., & Melvin, M.** (2004). *Economics* (6<sup>th</sup> ed.). Boston: Houghton Mifflin.

**Brinkley, A., Current, R. N., Freidel, F., & Williams, T. H.** (2002). *American history: A survey*. Boston: McGraw Hill.

**Clawson, D. L., & Fisher, J. S. (Eds.).** (2000). *World regional geography: A developmental approach* (6<sup>th</sup> ed.). Upper Saddle River, NJ: Prentice Hall.

**Faragher, J. M., Buhle, M. J., Czitrom, D., & Armitage, S. H.** (2000). *Out of many: A history of the American people* (3<sup>rd</sup> ed.). Upper Saddle River, NJ: Prentice Hall.

**Kagan, D., Ozment, S., & Turner, F.** (2001). *The western heritage* (7<sup>th</sup> ed.). Upper Saddle River, NJ: Prentice Hall.

**Janda, K., Berry, J. M., & Goldman, J.** (2002). *The challenge of democracy: Government in America* (7<sup>th</sup> ed.). Boston: Houghton Mifflin.

**McKay, J. P., Hill, B. D., & Buckler, J.** (2003). *A history of western society* (7<sup>th</sup> ed.). Boston: Houghton Mifflin.

**Magleby, D. B., O'Brien, D. M., Light, P. C., Peltason, J. W., & Cronin, T. E.** (2008). *Government by the people* (22<sup>nd</sup> ed.). Upper Saddle River, NJ: Pearson Prentice Hall.

## **Science**

### **Journals:**

*Science and Children*, National Science Teachers Association

*The Science Teacher*, National Science Teachers Association

**Other Sources:**

**Chang, R.** (2001). *Chemistry* (7<sup>th</sup> ed.). New York: McGraw Hill.

**Cunningham, W. P., & Saigo, B. W.** (2004). *Environmental science: A global concern* (8<sup>th</sup> ed.). Dubuque, IA: McGraw Hill.

**Hewitt, P., Suchocki, J. A., & Hewett, L.** (2003). *Conceptual physical science* (3<sup>rd</sup> ed.). Boston: Addison Wesley.

**Shipman, J. T., Wilson, J. D., & Todd, A. W.** (2001). *An introduction to physical science* (9<sup>th</sup> ed.). Boston: Houghton Mifflin.

**Starr, C., & Taggart, R.** (2001). *Biology: The unity and diversity of life* (9<sup>th</sup> ed.). New York: Wadsworth.

**Tarbuck, E. J., & Lutgens, F. K.** (2000). *Earth science* (9<sup>th</sup> ed.). Upper Saddle River, NJ: Prentice Hall.

**Trefil, J., Gaudin, A. J., & Hazen, R. M.** (2000). *The sciences: An integrated approach* (3<sup>rd</sup> ed.). New York: John Wiley.