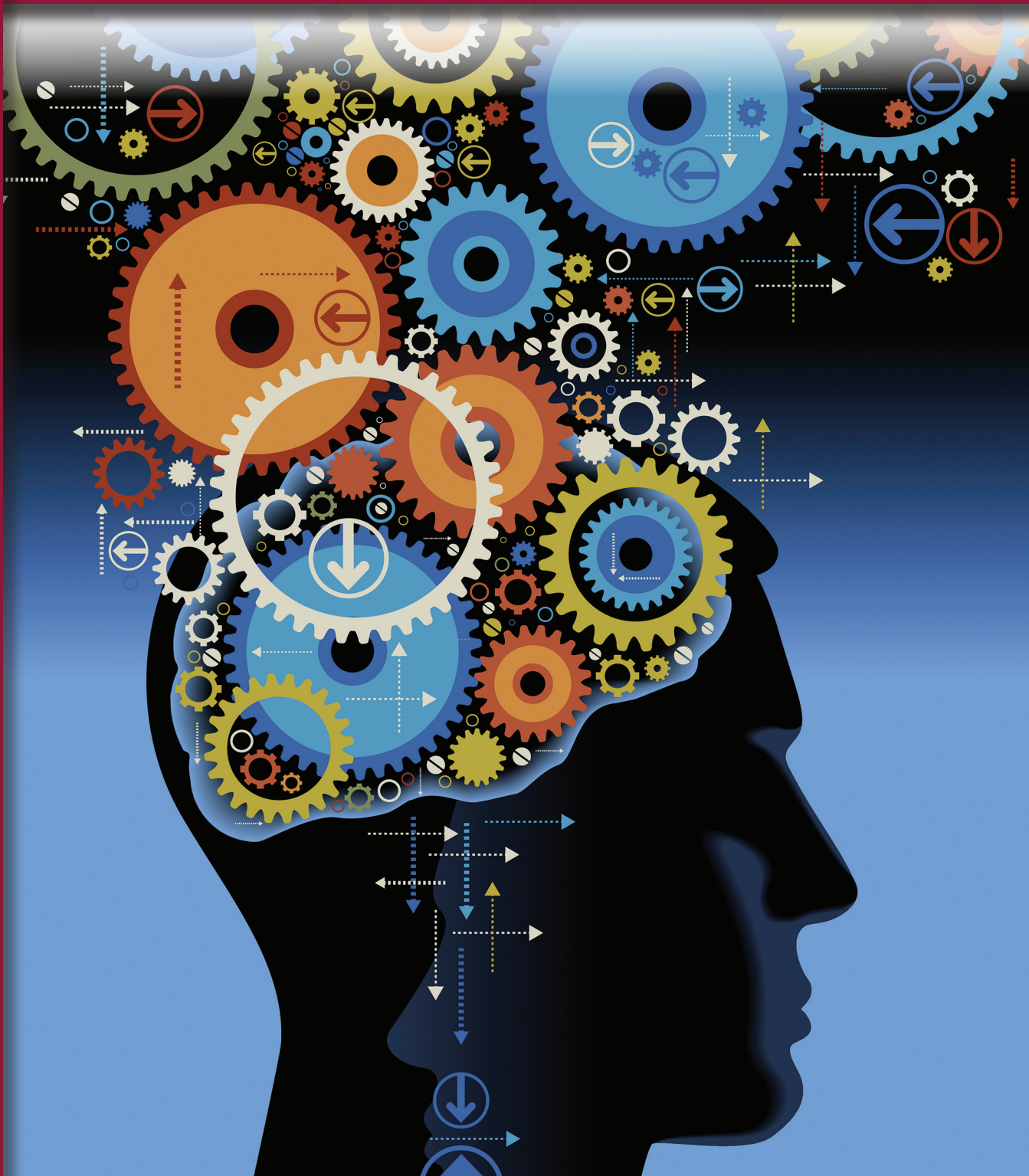
Unit 2

Calling All Minds: How to Think and Create Like an Inventor

By Temple Grandin

Activity Book



GRADE 6 Core Knowledge Language Arts®

Core Knowledge®

Unit 2

Calling All Minds: How to Think and Create Like an Inventor

Activity Book

GRADE 6

Core Knowledge Language Arts®

Core Knowledge®

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Unit 2

Calling All Minds: How to Think and Create Like an Inventor

By Temple Grandin

Activity Book

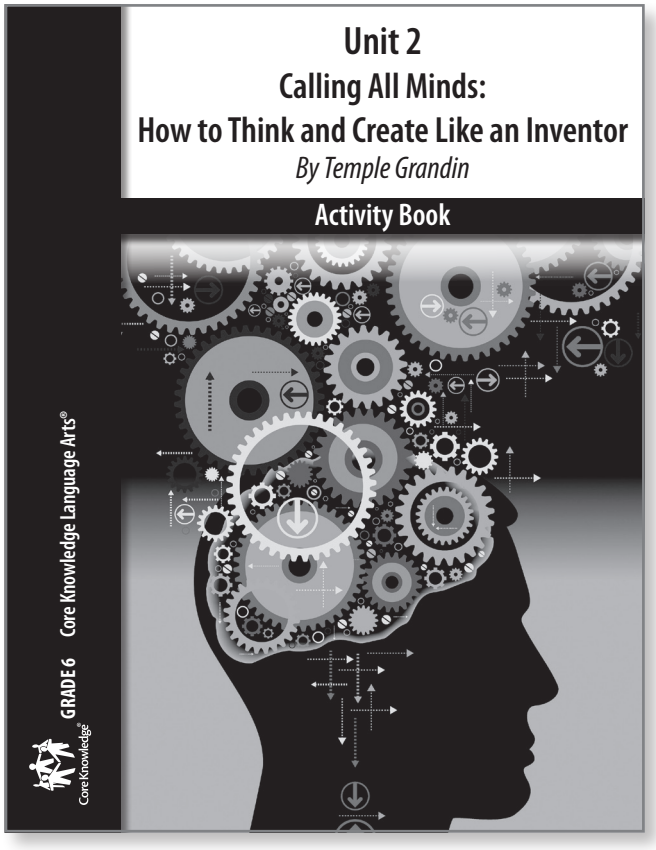
This Activity Book contains Activity Pages that accompany the lessons from the CKLA Grade 6 Unit 2 Teacher Guide. The Activity Pages are organized and numbered according to the lesson number and the order in which they are used within the lesson. For example, if there are two Activity Pages for Lesson 4, the first will be numbered 4.1, and the second 4.2. The Activity Book is a student component, which means each student should have an Activity Book.

NAME: _____

DATE: _____

Letter to Family

Unit 2



Our class will begin a unit in language arts in which students will read selections from the book *Calling All Minds: How to Think and Create Like an Inventor* by Temple Grandin. This unit will give us the opportunity to explore what it means to be an inventor and how science inventions of the past have influenced the world around us today. Through various oral and written activities, as well as their readings, students will explore the specific scientific achievements of various inventors, including those of the author, Temple Grandin. This provides context for how science influences the way people behave and interact, as well as for how one invention can lead to another.

As we read *Calling All Minds*, we will do some of the activities and experiments in the book. Please review the safety guidelines on AP 1.2 with your son or daughter.

The author of *Calling All Minds* is on the autism spectrum, and throughout the book she addresses the challenges and gifts that come with autism. Students will have opportunities to learn and reflect on this topic in an effort to better understand Grandin's perspective and the difficulties she faced.

If you have any questions or concerns, please do not hesitate to contact me.

NAME: _____

DATE: _____

Student Safety Contract

When doing science activities, I will do the following:

- Report accidents, spills, breakages, or injuries to the teacher right away.
- Listen to the teacher for special instructions and safety directions. If I have questions, I will ask the teacher.
- Avoid eating or drinking anything during the activity unless directed by my teacher.
- Review activity directions before I begin. If I have questions, I will ask the teacher.
- Always use safety equipment as directed by my teacher.
- Wear safety goggles when working with anything that can fly into my eyes.
- Be careful when working with scissors and other sharp tools; never point the sharp end toward another person.
- Be careful around electric appliances or tools, and unplug them when a teacher is supervising.
- Keep my hands dry when using tools and devices that use electricity.
- Roll or push up long sleeves, keep my hair tied back, and secure any jewelry.
- Clean up my area after the activity, wash my hands, and return unused materials.
- Treat all living things and the environment with respect.

I have read and agree to the safety rules in this contract.

_____ _____ / _____ / _____

(student signature and date)

List any allergies that your son or daughter has:

_____

_____

I have reviewed these safety rules with my child:

_____ _____ / _____ / _____

(parent signature and date)

NAME: _____

DATE: _____

Envisioning an Invention

Name a problem that needs to be solved.
Describe an invention that could solve that problem.
Draw a picture of what that invention might look like.

NAME: _____

DATE: _____

Vocabulary for "Introduction"

1. **innovation, *n.*** the act or process of making something new (**3**)

2. **social skills**, ***n***. verbal and nonverbal ways that someone uses to communicate and get along with other people (**3**)

3. **monotone, adj.** having a sound without a change in pitch or tone (**3**)

4. **diorama, *n.*** a model representing something in three dimensions **(dioramas)** (**4**)

5. **tinker, *v.*** to change something by trying out different things or ways to do something (**4**)

6. **technology, *n.*** the study and use of scientific knowledge, tools, and machines **(5)**

7. **retractable, *adj.*** able to be pulled back in (**6**)

8. **piston, *n.*** a piece of metal within a cylinder that moves up and down (**pistons**) (**6**)

9. **menial, *adj.*** requiring little skill (**6**)

10. **patent, *n.*** an official paper that gives the creator of an invention the right to be the only person to make and sell that invention for a certain period of time (**7**)

11. **ingenuity, *n.*** inventiveness, originality (**7**)

12. **serendipity, *n.*** achieving a positive result by accident; good luck (**8**)

NAME: _____

DATE: _____

Central Ideas

Write the main details from each page of the introduction. Then use the details to determine the central ideas of the introduction.

Page	Main Details
page 1	
page 2	
page 3	
page 4	
page 5	
page 6	
page 7	
page 8	

Central Ideas

Summary of Central Ideas

NAME: _____

DATE: _____

2.1 ACTIVITY PAGE

Vocabulary for Chapter 1 (pages 9–18)

1. **trade, *n.*** a kind of work or craft **(12)**

2. **type**, ***n.*** metal letters used in printing **(13)**

3. **mold, *n.*** a hollow into which liquid metal is poured to give it shape when it hardens (**molds**) **(12)**

4. **impact, *n.*** the effect of one person or thing on another **(13)**

5. **alloy**, ***n.*** a mixture made of two or more different kinds of metal **(14)**

6. **molten**, ***adj.*** melted by heat **(15)**

7. **type**, ***v.*** to write by pressing letters on a keyboard (**typed**) **(15)**

8. **metallic**, ***adj.*** made of metal **(15)**

9. **slab**, ***n.*** a thick, flat piece of metal, stone, or concrete **(15)**

10. **apprentice, *n.*** a person who is learning a skill or craft by working with an expert **(15)**

11. **stereotype, *n.* 1.** a metal plate used in printing; **2.** an oversimplified idea that a person or group has certain common characteristics **(15)**

12. **indebted**, ***adj.*** owing thanks or gratitude **(17)**

13. **commercial, *adj.*** used for business as opposed to private or personal use **(17)**

14. **continuous, *adj.*** unbroken; without interruption **(17)**

NAME: _____

DATE: _____

Introduce Sentence Types

Identify each sentence. Write simple, compound, complex, or compound-complex on the line.

1. I really want to go to the movie, but I'm too busy.

   _____

2. The network cancelled Mason's favorite television show.

   _____

3. Although Mitch was not in the mood for company, his friend dropped by, and they had a good time.

   _____

4. Indigo forgot that it was Sunday, but she remembered when she got halfway to the library.

   _____

5. Although the fishermen went out early, they caught no fish.

   _____

6. Alisha and her cousin went hiking.

   _____

7. As soon as he had the chance, John called Lindsay, and he told her the news.

   _____

8. I was out of orange juice, so I made some tea.

   _____

9. Once she had done her homework, she took a nap.

_____

10. We got to the store early, and the bargains were still in effect.

_____

11. Last winter was unusually mild.

_____

12. After the circus left town, the kids started complaining.

_____

NAME: _____

DATE: _____

2.3 ACTIVITY PAGE

Brainstorm

Complete these items to help you brainstorm ideas for the invention you will write about.

1. Name of Invention:

_____

2. Problem the Invention Solves:

_____

_____

3. Ways the Invention Solves the Problem:

_____

_____

_____

4. Description of the Invention:

_____

_____

_____

_____

_____

5. How the Invention Works:

NAME: _____

DATE: _____

3.1 ACTIVITY PAGE

Vocabulary for Chapter 2 (pages 39–42; 50–51)

1. **engineer, *n*.** a person who designs or builds complicated machines, structures, or other systems (**39**)

2. **atmosphere, *n*.** the layer of gases surrounding a planet (**39**)

3. **abstract, *adj*.** existing as a thought or idea without having a physical form (**40**)

4. **mathematician, *n*.** a specialist or expert in the field of mathematics (**mathematicians**) (**40**)

5. **musical notation, *n*.** a system of written symbols that represent sounds (**musical notations**) (**40**)

6. **biographer, n.** a person who writes about someone else's life (**40**)

7. **perception, *n*.** the process of becoming aware of something using the senses (**41**)

8. **stimulate, *v*.** to encourage an interest or activity in something **(stimulated)** (**41**)

9. **genetic link, *n*.** traits caused by genes that were likely inherited from an ancestor (**41**)

10. **originator, *n*.** a person who starts, or originates, something new (**42**)

11. **file, *v*.** to make something a part of the official record (**42**)

NAME: _____

DATE: _____

Introduce Greek and Latin Roots in Number Words

Fill in this chart with the origin and meaning of each root.

Root	Meaning
unus	
bi	
duo	
tri	
decem	
centum	

Write a definition for each word. Use the meaning of the root to help you. You can check the meaning in a dictionary.

Word	Definition
united	
tricycle	
centipede	
decimal	
unit	
triathlon	
duplex	
centennial	
decade	
biweekly	

NAME: _____

DATE: _____

3.3 ACTIVITY PAGE

Practice Problem-and-Solution Text Structure

Problem-and-Solution Words and Phrases			
if … then	the question is	as a result	so that
because	one solution is	in order to	since
thus	one reason for	due to	therefore
			consequently

Practice using problem-and-solution text structure by completing the phrases in this chart. Your sentences should be about your invention.

Problem statements:

_____ is a problem because

_____

_____.

The reasons for this problem include

_____

_____.

This problem affects _____ because

_____

_____.

Solution statements:

One solution/answer/recommendation is

_____

_____

_____

_____

_____

_____.

This will solve the problem by

_____

_____

_____

_____

_____

_____.

It will help

_____

_____

_____

_____

_____

_____.

NAME: _____

DATE: _____

4.1 ACTIVITY PAGE

Vocabulary for Chapter 2 (pages 79–83)

1. **petri dish, *n*.** a small, clear dish with a lid, used to grow microorganisms such as viruses and bacteria (**79**)

2. **property, *n*.** a quality or characteristic belonging to a person or thing **(properties)** (**79**)

3. **secretion**, ***n*.** a discharge such as tears or sweat produced by a cell, gland, or organ in the body **(secretions)** (**79**)

4. **microscope, *n*.** an instrument used for viewing objects too small to see with the human eye (**79**)

5. **fungus, *n*.** a spore-producing organism such as mushrooms or mold that feeds on organic matter (**79**)

6. **penicillin, *n*.** a group of antibiotics made from mold (**79**)

7. **Nobel Prize, *n*.** any one of six prizes awarded for outstanding achievement in a scientific, literary, or economic field (**79**)

8. **chemist, *n*.** a scientist who studies characteristics of and changes in substances (**chemists**) (**80**)

9. **fiber-optic cable, *n*.** a cable that uses light to transmit high-speed data **(fiber-optic cables)** (**81**)

10. **psychologist, *n*.** a person who studies the way humans think and behave and why (**83**)

11. **millwright, *n*.** a person who designs, builds, or maintains a mill or mill machinery (**millwrights**) (**83**)

12. **welder, *n*.** a person who molds or fuses metal (**welders**) (**83**)

NAME: _____

DATE: _____

"Accidents Waiting to Happen"

As you read "Accidents Waiting to Happen," answer these questions.

1. By what name do we know Alexander Fleming's "mold juice" today? (page 79)

_____

2. How did Fleming describe his most famous discovery? (page 80)

_____

_____

3. What job did Stephanie Kwolek find that combined her curiosity about nature with her love of fabric and sewing? (page 80)

_____

_____

4. What is Kwolek remembered for discovering, and what is remarkable about that discovery? (page 81)

_____

_____

_____

5. What gave George de Mestral the idea for Velcro? (page 81)

_____

_____

6. What do the illustrations on page 82 represent? (page 82)

_____

_____

7. What kinds of specialists does Temple Grandin think are most needed for scientific progress? (page 83)

_____

_____

NAME: _____

DATE: _____

Practice Different Sentence Types

First, identify each type of sentence: simple; compound; complex; compound-complex. Then, rewrite the sentence to change it into the specified sentence type. You can add, take away, or change parts of the sentence in order to change it.

Example: John walked his dog. (This is a simple sentence.)

Rewrite as a compound sentence: John walked his dog, and then he went home.

1. Even when she caught up on her sleep, Darlene dozed off at the movies, so she didn't go very often.

   (This is a _____ sentence.)

   Rewrite as a compound sentence.

   _____

   _____

2. The crowd cheered, and the band played two more songs.

   (This is a _____ sentence.)

   Rewrite as a complex sentence.

   _____

   _____

3. The neighbor's dog came running because he smelled the cookout.

   (This is a _____ sentence.)

   Rewrite as a simple sentence.

   _____

   _____

4. Cynthia was the tallest girl on the squad.

(This is a _____ sentence.)

Rewrite as a compound-complex sentence.

_____

_____

5. We didn't find a gas station, and we'll be walking.

(This is a _____ sentence.)

Rewrite as a complex sentence.

_____

_____

NAME: _____

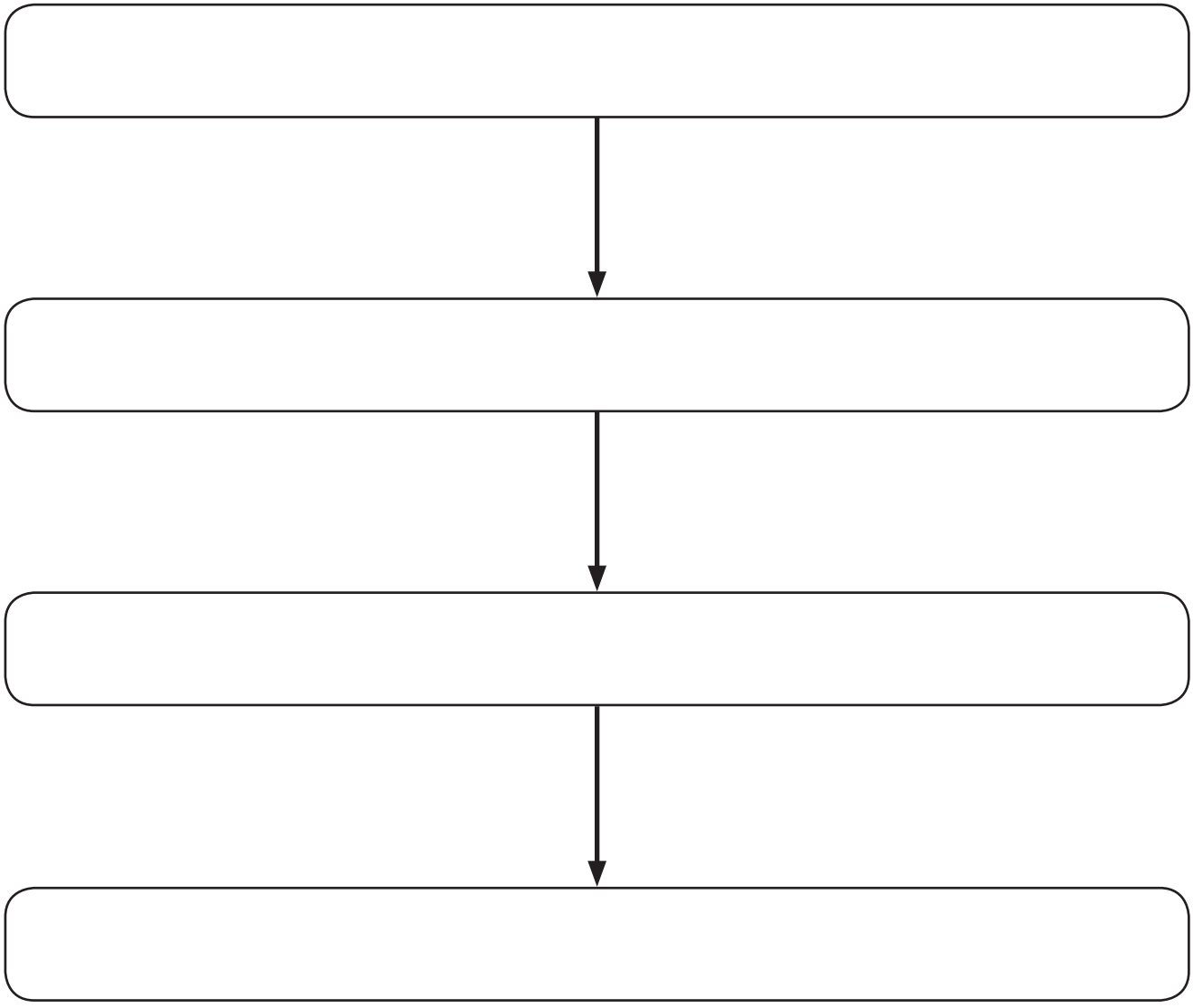
DATE: _____

4.4 ACTIVITY PAGE

Sequencing Text Structure

Use the graphic organizer to map out your text structure. Write four events or steps that you will use in your explanatory text. You can use the sequence words and phrases from the box or choose some of your own.

Sequence Words and Phrases			
first, second, third, etc.	finally	later	after
before	last	next	then



NAME: _____

DATE: _____

5.1 ACTIVITY PAGE

Vocabulary for Chapter 4 (pages 123–132)

1. **fishtail, *v.*** (of the rear end of a moving vehicle) to move back and forth from one side to another **(fishtailing) (123)**

2. **evacuate, *v.*** to remove a person or group of people from a dangerous place or situation **(123)**

3. **flex, *v*.** to bend or move (**124**)

4. **cockpit**, ***n.*** the part of the plane that houses the flight instruments and pilot(s) (1**24**)

5. **fuselage, *n.*** the part of the plane that houses the flight attendants and passengers (**124**)

6. **prop plane, *n.*** a plane that is powered by a propeller (**124**)

7. **aerodynamic, *adj.*** relating to the branch of mechanics that deals with flying and moving through air (**125**)

8. **phenomenon, *n.*** an observable event or fact (**130**)

9. **perpendicular, *adj.*** having two lines that intersect at a right angle, such as the lines that make the uppercase letters T and L (**130**)

10. **aeronautical, *adj.*** having to do with the science of building or flying aircraft (**130**)

11. **taper, *v.*** to make narrower toward one end (**tapering**) (**131**)

12. **tenacity, *n.*** determination (**131**)

13. **perseverance, *n.*** steady persistence to achieve a goal (**132**)

NAME: _____

DATE: _____

Practice Greek and Latin Roots in Number Words

Use your knowledge of the roots you've learned to match each term with its definition by writing the letter of the correct definition next to each word. If you are unsure, you can check the meaning in a dictionary.

1. united	_____	**A.** one one hundredth of a meter
2. tricycle	_____	**B.** one item or thing
3. centimeter	_____	**C.** a race with three parts
4. decimal	_____	**D.** a hundred-year period
5. unit	_____	**E.** a vehicle with three wheels
6. triathlon	_____	**F.** a period of ten years
7. duplex	_____	**G.** joined as one
8. centennial	_____	**H.** every two weeks
9. decade	_____	**I.** a house for two families to live in
10. biweekly	_____	**J.** based on the number ten

NAME: _____

DATE: _____

5.3 ACTIVITY PAGE

Domain-Specific Vocabulary

The table below shows examples of domain-specific vocabulary in different subject areas. For the last row, add some domain-specific vocabulary for Construction and Engineering. You can use the Unit 2 Glossary or a print or online dictionary provided by your teacher for reference. Then, write down the field related to your invention in the third box on that row, along with three domain-specific vocabulary words for that field.

Literature	History	Economics
characters plot symbols	chronology timeline era	goods services supply
Environment	**Space**	**Government**
precipitation conservation habitat	planet galaxy black hole	executive legislative judicial
Construction	**Engineering**	**Your Invention**

NAME: _____

DATE: _____

6.1 ACTIVITY PAGE

Vocabulary for Chapter 3 (pages 89–93, 119–122)

1. **mascot,** ***n***. a person or thing that acts as a symbol for an event, organization, or team (**89**)

2. **companion**, ***n***. a person or thing often in the company of another person or thing (**89**)

3. **hygienic,** ***adj.*** clean and/or healthy (**90**)

4. **efficient,** ***adj.*** productive (**90**)

5. **automated,** ***adj.*** carried out by machines (**90**)

6. **revolution,** ***n.*** one turn around a fixed course (**90**)

7. **dispense,** ***v.*** to distribute or provide (**dispenses**) (**91**)

8. **contestant,** ***n.*** a person who takes part in a contest or competition (**contestants**) (**92**)

9. **evolve,** ***v.*** to change over time (**evolved**) (**119**)

10. **insignia,** ***n.*** a mark of membership or rank in an organization (**120**)

11. **cinch,** ***v.*** to secure (**120**)

12. **modification,** ***n.*** a change in something, usually to improve it (**121**)

NAME: _____

DATE: _____

"A Short History of Glue"

Read "A Short History of Glue" on pages 89–93, and answer the following questions about text structure.

1. Read the following events about the invention of glue. Write the numbers 1–4 on the lines to indicate the **sequence of events**, with 1 being the first event.

   _____ Borden first made glue in 1932 from a by-product of milk called casein.

   _____ Later, researchers found a formula for synthetic resins used in glue today.

   _____ The Borden Company was originally a milk delivery company.

   _____ Gail Borden invented a new process in 1856 to make condensed milk.

2. Complete the sentence to show the **cause-and-effect** relationships.

   When cyanoacrylate is exposed to air, _____.

   Because Harry Coover and Fred Joyner realized the supersticky qualities of cyanoacrylate, _____.

   _____

NAME: _____

DATE: _____

"Paper Chase"

Read "Paper Chase" on pages 119–122, and answer the following questions about text structure.

1. Fill in the **causes and effects** to complete the chart.

Cause	Effect
Paper was invented.	
	Many more new inventions are created as a result.

2. Fill in the **problems and solutions** to complete the chart.

Problem	Solution
King Louis XV needed to secure his court documents.	
	Jack Linsky improved how staples were loaded into a stapler.

3. Number the events below from "Paper Chase" 1 through 4 in the order in which they actually happened.

____ Jack Linsky made a stapler that loaded staples top-down.

____ George McGill made the first commercially successful stapler.

____ Eli Hotchkiss introduced the strip of staples wired together.

____ Henry R. Heyl improved the stapler so that it could bend the staple.

NAME: _____

DATE: _____

Introduce Spelling Words

Write the correct word to complete each sentence. Words will not be used more than once; some words will not be used.

amateur	analyze	answer	teacher
December	develop	inventor	triangle
philosopher	similar	sophomore	universe

1. Alexander Graham Bell is famed as the _____ of the telephone.

2. _____ is the twelfth month of the year.

3. Madeline plays chess as a(n) _____ but hopes to become a professional when she gets better at the game.

4. Not even the best astronomers know how many stars are in the _____.

5. The _____ year of high school is the one between the freshman and junior years.

6. Cameron worked on the algebra problem for several minutes before finding the _____.

7. Socrates was an ancient Greek _____ who thought deeply about how people should behave.

8. Janice felt that she learned more from her history _____ than any of her others.

9. Frogs and toads are _____, but they are easy to tell apart.

10. An equilateral _____ has three sides of equal length.

Write two sentences using spelling words that were not used in the first ten sentences. Be sure to use correct capitalization and punctuation.

11. _____

_____

_____

12. _____

_____

_____

NAME: _____

DATE: _____

Informal and Formal Language

Write a formal expression for each informal expression.

Informal	Formal
down in the dumps	
went to bat for	
called it a night	
pulled it off	
slim chance	
had their hands full	
gave them a hand	
ended up with	
kept an eye out for	
crunched the numbers	

NAME: _____

DATE: _____

Vocabulary for Chapter 4 (pages 142–150)

1. **crease, *n.*** the line that is created when something is folded (**143**)

2. **sleekness, *n*.** the quality of being straight and smooth in design, without any parts sticking out (**145**)

3. **balsa wood**, ***n.*** a lightweight wood used for making models (**146**)

4. **transatlantic, *adj.*** crossing the Atlantic Ocean (**146**)

5. **glider, *n.*** a light aircraft or toy that glides on air (**146**)

6. **rudder, *n.*** a mechanism used to steer a ship, boat, submarine, or aircraft (**146**)

7. **stabilizer, *n.*** a device used to keep something steady, or stable (**146**)

8. **clockwise**, ***adj.*** the direction in which the hands of a clock move (**147**)

9. **trial, *n.*** a test of the performance, qualities, or suitability of something; an experiment (**147**)

10. **malleable, *adj.*** able to be pressed into a different shape (**147**)

11. **molecular structure, *n.*** the location of atoms and groups of ions and how they relate to each other in a molecule (**147**)

12. **sulfur, *n.*** a nonmetallic chemical (**148**)

13. **lead, *n.*** a metal that is denser than most but also malleable (**148**)

14. **airplane simulator, *n.*** a training device that replicates an airplane's flight mechanisms; also known as a flight simulator (**airplane simulators**) (**150**)

15. **navigate, *v.*** to plan, direct, or sail a route or course, usually in a form of transportation such as a car, ship, or airplane (**navigating**) (**150**)

NAME: _____

DATE: _____

Introduce Prefixes *uni–*, *di–*; Suffixes *–er*, *–or*

Review the information on these two charts.

PREFIX	MEANING	EXAMPLE	MEANING
uni–	one	unicycle	a vehicle with one wheel
di–	two	dichotomy	a division into two categories

SUFFIX	MEANING	EXAMPLE	MEANING
(adjective) + er	more	warm + er warmer	more warm
(verb) + er	one who	teach + er teacher	one who teaches
(verb) + or	one who	invent + or inventor	one who invents

Research the words below. Write a definition for each based on a meaning from the chart above.

WORD	DEFINITION
unique	
unicorn	
diverge	
divide	
calmer	
later	
illustrator	
aviator	

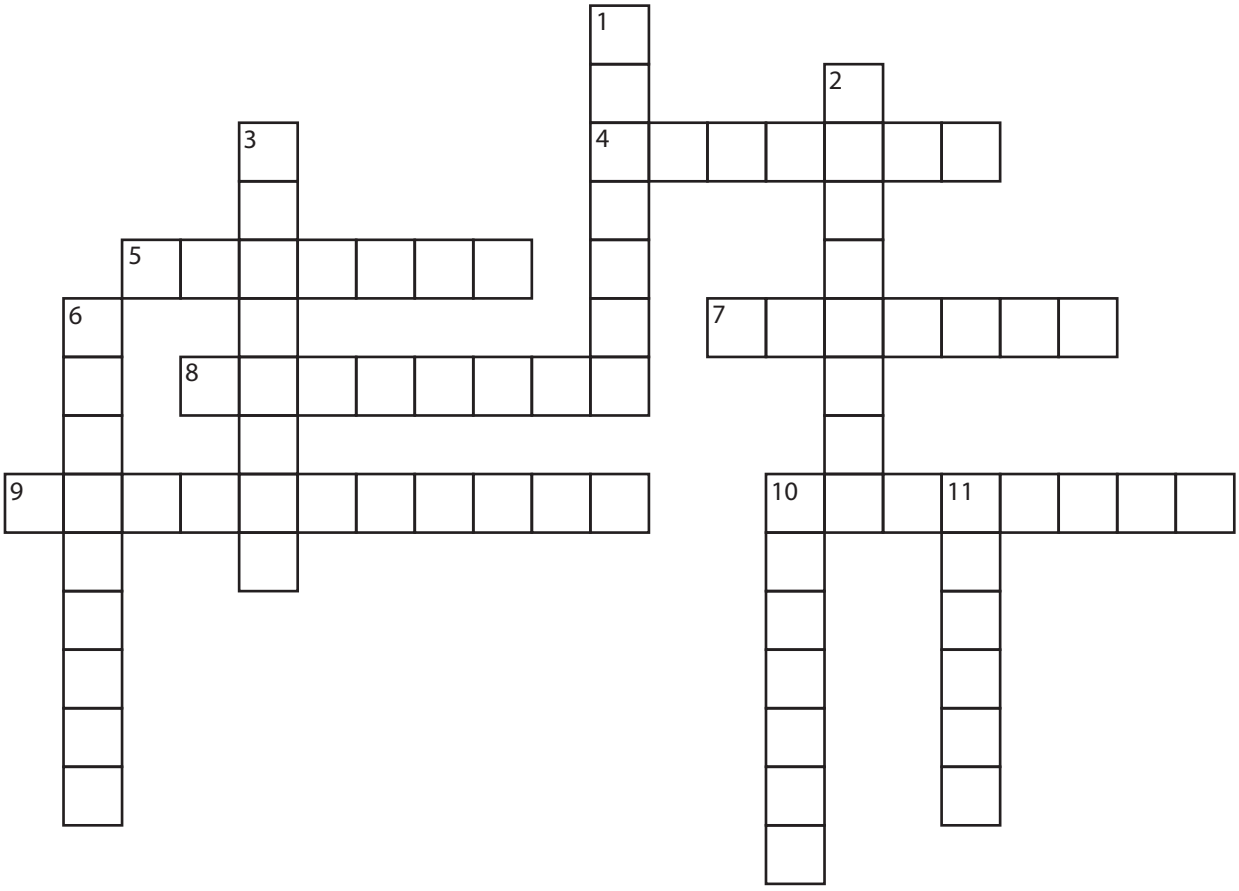
NAME: _____

DATE: _____

7.3 ACTIVITY PAGE

Practice Spelling Words

Complete the crossword puzzle by writing the correct spelling word on each line.



Down:

1. to study or examine something
2. the twelfth month of the year
3. a person who comes up with a new device or process
6. a person in their second year of high school
10. a person who instructs others
11. the solution to a problem

Across:

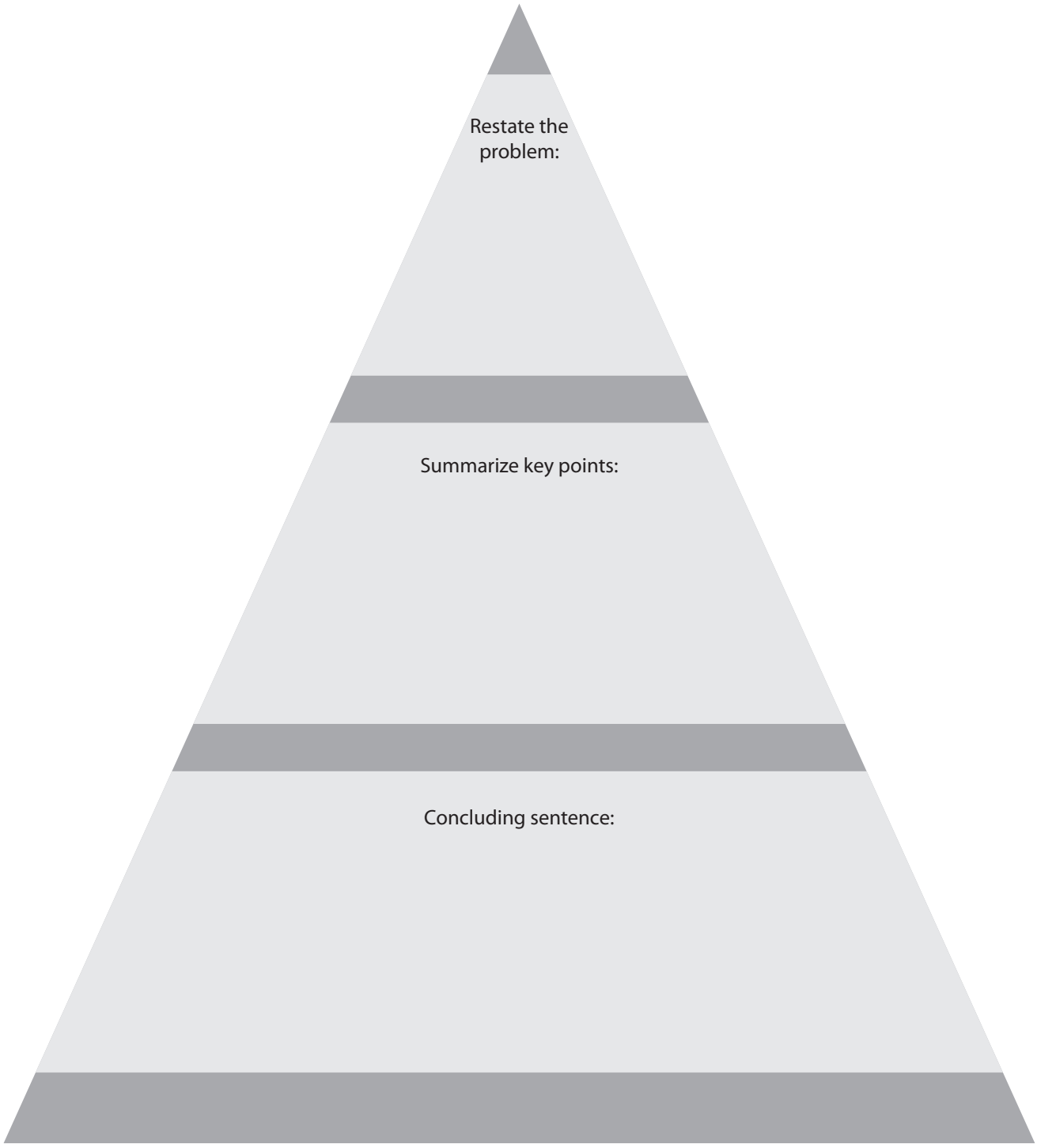
4. a nonprofessional who pursues a hobby or sport as a pastime
5. to create or make something more advanced
7. having many of the same or closely related traits
8. all of space and the matter it contains
9. a person who thinks deeply about ideas
10. a geometrical shape having three sides

NAME: _____

DATE: _____

Concluding Statement Pyramid

Fill in the Concluding Statement Pyramid. Then use the information to draft your concluding statement on the back of this page.



Use the information in the graphic organizer to draft your concluding statement on the lines below.

NAME: _____

DATE: _____

8.1 ACTIVITY PAGE

Vocabulary for Chapter 4 (pages 152–157)

1. **survivable,** ***adj***. not fatal; able to be survived (**153**)

2. **steerable**, ***adj***. able to be mechanically controlled or guided (**153**)

3. **dirigible,** ***n.*** an aircraft with a rigid structure that is filled with lighter-than-air gas or hot air to make it float (**153**)

4. **propulsion,** ***n.*** the action of being pushed forward (**154**)

5. **aviator,** ***n.*** a person who flies aircraft; a pilot (**aviators**) (**154**)

6. **Smithsonian,** ***n.*** a national collection of museums (**154**)

7. **diagnose,** ***v.*** to recognize as having a disease or medical condition (**diagnosed**) (**156**)

NAME: _____

DATE: _____

8.2 ACTIVITY PAGE

Questions for Small Groups

Complete the following sentences.

1. A(n) _____ is a statement that can be proven or disproven.

2. A(n) _____ is a statement about one's thoughts or feelings that cannot be proved.

Examine each excerpt from the text, and determine whether it is a fact or an opinion.

Text Excerpt	Fact or Opinion?
They are often credited for inventing the first airplane, but that's not entirely accurate. *(page 152)*	
The Wright brothers were helped by Cayley's ideas. *(page 154)*	
Pitch is when the nose of the plane moves up and down. Roll is when the wings move left to right. And yaw is when the plane moves like the second hand of a clock to the right or left. *(page 156)*	
I think the main ways we might be similar are in terms of intensity, drive and focus about work, and perhaps a preference for work over socializing. *(page 157)*	
I attribute it to bottom-up thinking. *(page 157)*	

NAME: _____

DATE: _____

Introduce Frequently Confused Words: *fewer/less; affect/effect*

Fill in each definition with a word from the box. Use each word once.

fewer	less	affect	effect

1. A(n) _____ is something that results from an action.
2. The word _____ means "not as much."
3. The word _____ means "not as many."
4. To _____ something means to change it.

Complete each sentence with one of these words: fewer, less, affect, effect.

1. Michael has _____ comic books in his collection than Alexandra does.
2. Lack of sleep seems to have little _____ on Leo's ability to concentrate.
3. The best way to _____ a bad situation is to work to improve it.
4. The farmer worried about how the heavy rain would _____ his wheat crop.
5. Sebastian has _____ than an hour to finish his report.
6. What is the _____ of hot water on a sheet of ice?
7. It takes _____ time to buy a bicycle than to build one.
8. Dewayne has _____ baseball caps than he used to have.

NAME: _____

DATE: _____

Practice Spelling Words

Arrange the words in alphabetical order.

universe	analyze	develop
triangle	similar	inventor
amateur	teacher	sophomore
December	answer	philosopher

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____

NAME: _____

DATE: _____

Explanatory Text Rubric

	Exemplary	Strong	Developing	Beginning
Introduction	Topic is introduced with clear focus.	Topic is introduced with some focus.	Topic is introduced with little focus.	Topic is not introduced.
Style	A formal style is maintained consistently throughout the text.	A formal style is mostly maintained throughout the text.	A formal style is inconsistently used throughout the text.	A formal style is not used throughout the text.
Body	All sentences/ information/ words and phrases are clearly and effectively presented.	Most sentences/ information/ words and phrases are clearly and effectively presented.	Some sentences/ information/ words and phrases are clearly and effectively presented.	Few or no sentences/ information/ words and phrases are clearly and effectively presented.
Structure	Text structure is effective and presents content clearly.	Text structure is mostly effective and presents content in an understandable way.	Text structure is poorly applied and presents content mostly ineffectively.	There is little or no discernable text structure, and content is not effectively presented.
Conclusion	Conclusion effectively summarizes content.	Conclusion acceptably summarizes content.	Conclusion insufficiently summarizes content.	Conclusion fails to summarize content.

You may correct capitalization, punctuation, and grammar errors while you are revising. However, if you create a final copy of your writing to publish, you will use an editing checklist to address those types of mistakes after you revise.

NAME: _____

DATE: _____

Explanatory Text Peer Review Checklist

Complete this checklist as you read the draft of the explanatory text written by a classmate.
Y = *yes* N = *no* SW = *somewhat*

Author _____ Reviewer _____

_____ The explanatory text includes an introduction that clearly states the topic/subject of the text.

_____ The explanatory text includes three or four detail sentences that clearly explain the topic.

_____ The explanatory text is well-organized and uses an effective text structure.

_____ The explanatory text uses appropriate content-area vocabulary and clearly explains new terms as needed.

_____ The explanatory text ends with a conclusion that restates the main points in the text.

Ways in Which Your Essay Meets the Requirements of the Assignment	Ways in Which You Can Better Meet the Requirements of the Assignment

NAME: _____

DATE: _____

8.7 ACTIVITY PAGE

Clarifying Questions

As you read your text to your partner, write your partner's clarifying questions (and your answers to them) below.

Questions	Answers

NAME: _____

DATE: _____

9.1 ACTIVITY PAGE

Vocabulary for Chapter 5 (pages 208–212)

1. **blueprint,** ***n***. a plan for where things go; a technical drawing or model of a structure (**208**)

2. **facility**, ***n.*** a structure or building used for a specific purpose (**facilities**) (**208**)

3. **carbon,** ***n.*** a chemical element used for fuel or to help build things (**210**)

4. **filament,** ***n.*** a thin wire or thread that conducts heat or electricity (**210**)

5. **prodigious,** ***adj.*** impressive or remarkable (**210**)

6. **draftsman,** ***n.*** a person who makes detailed drawings or plans that are technical in nature (**210**)

7. **installation,** ***n.*** the process of putting something in place (**210**)

8. **illuminate,** ***v.*** to make something bright or visible; to make something clear or understandable (**210**)

9. **T square,** ***n.*** a technical drawing instrument used for horizontal lines or right angles (**T squares**) (**212**)

10. **colleague,** ***n.*** a person who is a coworker (**212**)

NAME: _____

DATE: _____

Practice Frequently Confused Words: *fewer/less; affect/effect*

*Read each sentence. If the **bold** word is used correctly, write "correct" on the line. If not, cross it out, and write the correct word on the line that follows the sentence*

1. The music had a soothing **affect** on the children.

   _____

2. Janine has **less** detail in her painting than Jamal does.

   _____

3. There are **less** people attending the Saturday night dances.

   _____

4. The **effect** of drinking too much water is not widely understood.

   _____

5. John told his little sister that she should eat **fewer** jelly beans.

   _____

6. Exercise is known to **affect** one's general health in a positive way.

   _____

7. He hoped that their disagreement wouldn't **effect** their relationship.

   _____

8. The cook was advised to put **fewer** salt in his beef stew.

   _____

NAME: _____

DATE: _____

Practice Prefixes: *uni–*, *di–*; Suffixes: *–er*, *–or*

Use your knowledge of the prefixes and suffixes you've learned to match each term with its definition by writing the letter of the correct definition next to each word. You can check your definitions in a dictionary.

1. unify _____

2. sicker _____

3. calmer _____

4. dilemma _____

5. supervisor _____

6. fresher _____

7. unilateral _____

8. dichromatic _____

9. in unison _____

A. people doing the same thing at once

B. a difficult choice between two options

C. having two colors

D. more peaceful

E. more ill

F. more fresh

G. an action taken by one person or party

H. bring together as one

I. someone who manages others

NAME: _____

DATE: _____

Explanatory Text Editing Checklist

Explanatory Text Editing Checklist	After reviewing for each type of edit, place a check mark here.
Vocabulary	
• I have used academic and domain-specific vocabulary correctly. • I have provided my readers with context clues to help them understand the meaning of potentially unfamiliar content-area vocabulary.	
Format	
• I have used text features correctly and as needed. • I have used the text structure to effectively present my information. • I have titled my writing. • I have included the proper heading, including my name, my teacher's name, the class title, and the date.	
Grammar	
• I have used simple, compound, complex, and compound-complex sentences correctly and effectively. • I have correctly used frequently confused words such as *affect/effect* and *fewer/less*.	

Explanatory Text Editing Checklist	After reviewing for each type of edit, place a check mark here.
Spelling	
• I have correctly spelled academic and domain-specific vocabulary. • I have correctly spelled words with the roots *unus, bi, duo, tri, decem, centum*. • I have correctly spelled words with the prefixes *uni–* and *di–*. • I have correctly spelled words with the suffixes *–er* and *–or*.	
Punctuation	
• I have punctuated simple, compound, complex, and compound-complex sentences correctly. • I have correctly used semicolons/commas with *and, but, so,* or other coordinating conjunctions in compound sentences. • I have used commas, parentheses, or dashes to set off nonrestrictive/parenthetical elements.	

NAME: _____

DATE: _____

Vocabulary for "Epilogue"

1. **psychological,** ***adj***. having to do with the mind (**213**)

2. **physician,** ***n.*** a person qualified to practice medicine; a doctor (**physicians**) (**213**)

3. **biological,** ***adj.*** physical; having to do with the body or life (**213**)

4. **component,** ***n.*** a part of a larger body, object, or system (**components**) (**213**)

5. **sensory sensitivity,** ***n.*** an awareness of the information being received through one's senses; a characteristic of autism (**sensory sensitivities**) (**213**)

6. **oversensitivity,** ***n.*** a condition related to having more than the usual awareness of one's environment and surroundings; a tendency to become easily upset by something in the external environment (**213**)

7. **vaccine,** ***n.*** a substance used to protect people or animals against diseases (**vaccines**) (**213**)

8. **headmaster,** ***n.*** the person in charge of a private school; the principal (**214**)

9. **journal,** ***n.*** a magazine or newspaper that focuses on a particular subject or profession (**215**)

NAME: _____

DATE: _____

Spelling Assessment

Write the spelling words as your teacher calls them out.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____

Unit Assessment—*Calling All Minds: How to Think and Create Like an Inventor*

Today you will read two selections. After reading the first selection, you will answer several questions based on it. Then, you will read the second selection and answer several questions based on it. Some of the questions have two parts. You should answer Part A of the question before you answer Part B.

"Hedy Lamarr: Mother of Wi-Fi"

1. At the age of five, Austrian-born Hedy Lamarr took apart a music box she had been given—and then put it back together again. Understanding the way mechanical objects work was one of her many gifts as a child. She could also play piano, dance ballet, and act. At first, her interest in science was pushed aside as her beauty and artistic talents brought her to the attention of others. At the age of sixteen, she was "discovered" by fellow Austrian Max Reinhardt, a noted theater director who also worked in the movies. In 1930, he cast her in a small role in a German film, launching her career as an actress.

2. In 1933, Lamarr married an Austrian weapons dealer, Fritz Mandl. This was the decade before World War II, and Lamarr was able to learn about wartime weaponry from dinner conversations with Mandl's business colleagues and friends. However, Mandl was not interested in helping Lamarr pursue her intellectual interests. In addition, Lamarr was Jewish, and some of Mandl's colleagues were associated with the Nazi Party. In 1937, Lamarr left her husband and went to London. There, she met movie mogul Louis B. Mayer, the head of MGM Studios, an American film company that dominated cinema during the 1930s and '40s. That meeting marked the beginning of her career as a movie star. Between the years 1938 and 1948, she appeared in almost thirty films, yet Lamarr's interest in technology never faded.

3. Through her acting career, Lamarr met film producer, aviator, and inventor Howard Hughes, and she shared with him her interest in mechanics. Hughes bought her some scientific equipment, which she set up in her trailer on the movie studio lot. Between filming scenes, she often sat in her trailer and worked on scientific concepts. She also had an inventing table at home, where she would continue her work often late into the night.

4. Hughes wanted to develop a new type of sleeker, faster airplane that he could sell to the U.S. military. After studying what types of fins and wings made fish and birds move faster in their natural environments, Lamarr invented a new type of airplane wing. She also improved the design of the traffic light and invented tablets that, when dissolved in water, became soda pop. Lamarr proved to be an exceptional inventor. Hughes called Lamarr "a genius." Lamarr said, "Improving things comes naturally to me."

5. In the 1940s, Lamarr made her most significant invention. She met musician and scientist George Antheil at a dinner party, and they began working together. With the United States about to enter World War II, Lamarr and Antheil developed a communication system for guiding torpedoes to their target. They called this technology "frequency hopping." Frequency hopping allowed a missile to avoid radio interference from the enemy as it made its way to its target. The two inventors got a patent for their system, but the U.S. military rejected their work. Their patent expired, and Lamarr returned to acting full time. However, years later, the technology of frequency hopping provided the basis for today's Wi-Fi, Bluetooth, and GPS technologies. Called by some "the mother of Wi-Fi," Lamarr was inducted into the National Inventors Hall of Fame in 2014.

Questions

1. PART A: Circle the main text structure in "Hedy Lamarr: Mother of Wi-Fi."

   problem and solution cause and effect sequence

   PART B: Which sentence from the passage is an example of the text structure you chose in Part A?

   A. "She could also play piano, dance ballet, and act."

   B. "Between the years 1938 and 1948, she appeared in almost thirty films."

   C. "Lamarr said, 'Improving things comes naturally to me.'"

   D. "The two inventors got a patent for their system, but the U.S. military rejected their work."

2. PART A: Which choice best describes the central idea in the passage?

   A. Hedy Lamarr was both a movie star and an inventor.

   B. Hedy Lamarr was married to Fritz Mandl in 1933.

   C. Hedy Lamarr developed a new type of airplane with Howard Hughes.

   D. Hedy Lamarr is a member of the National Inventors Hall of Fame.

   PART B: What are some details that support the central idea you chose in Part A?

   _____

   _____

   _____

   _____

   _____

3. Is the statement "Lamarr proved to be an exceptional inventor" a fact or the author's opinion? Explain your answer.

_____

_____

_____

4. Using information from the text, explain "frequency hopping."

_____

_____

_____

5. How does the author's inclusion of frequency hopping help to support the idea that Lamarr became known as "the mother of Wi-Fi"?

_____

_____

_____

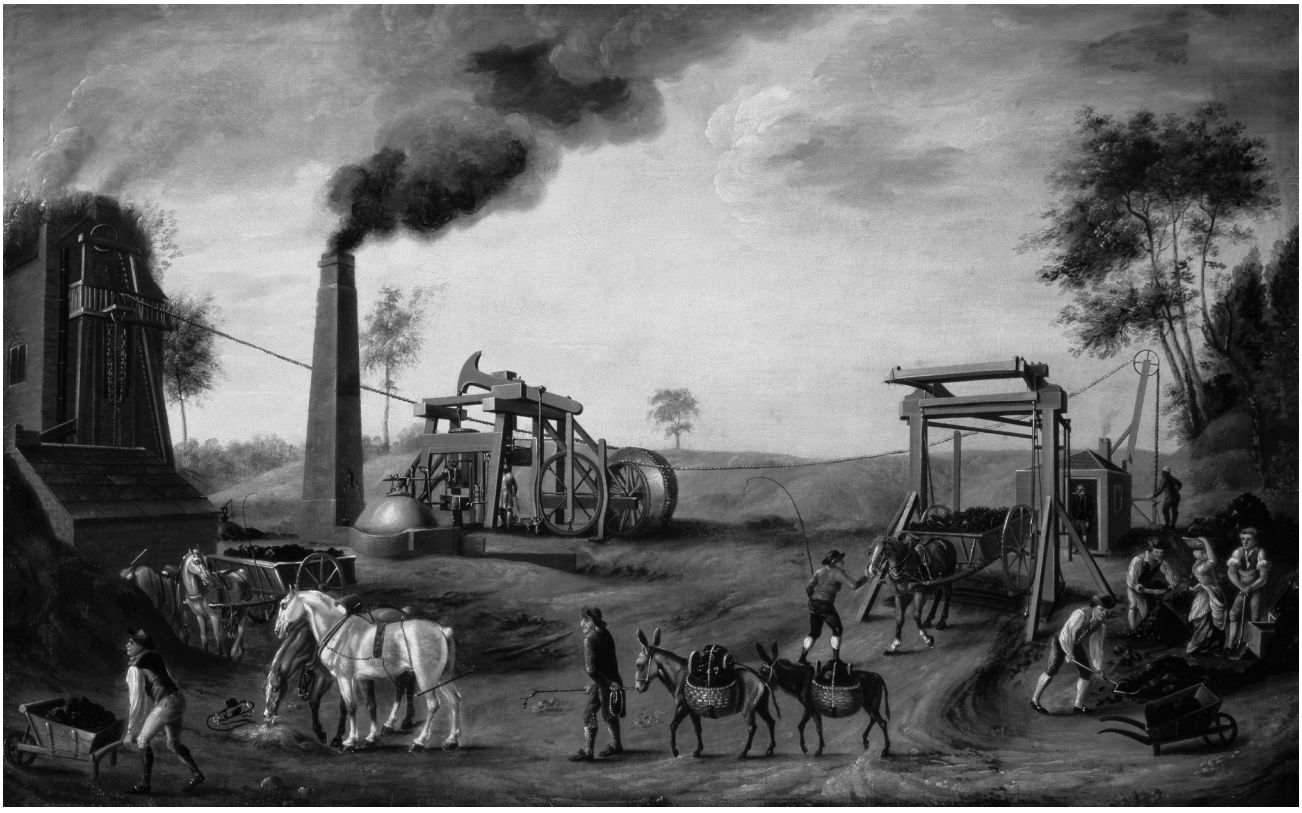
"New Ways of Mining"

1. By 1700, timber and firewood were scarce in England, and coal became an important source of energy. Coal could burn hot enough to soften iron. Iron was used to make new, stronger farm tools. It could also be used for strong bridges and for machinery that would help dig canals and deepen harbors. Many wealthy English landowners began investing some of their profits in coal and iron mines.

2. Soon, the easy-to-mine coal and iron deposits that were close to the surface of the ground were used up. Miners dug shafts—deep tunnels—down underground to follow the minerals wherever they could. Quite often, these mines flooded with groundwater.

3. Working underground in the mines was dangerous enough. But no one could work in a flooded mine. Something needed to be done to pump out the water. The power of steam was known to the ancient Greeks and Romans. They knew that when boiling water was confined in a sealed pot or drum, it could explode if the steam pressure were high enough. If, however, the steam was allowed to escape through a hole or a small tube, it produced a great force.

4. This is the principle behind a steam engine. By the early 1700s, several people began to devise steam pumps powered by coal fires. The early steam pumps were not very efficient. They were slow and too large to move around easily. Then, an observant and resourceful Scotsman named James Watt decided to improve on existing engines. The steam engine that Watt built in 1768 was smaller, more powerful, and more moveable than older engines. It was useful for pumping water out of mines. With improvements, by the 1780s Watt's engine also could run other machines through a system of gears, pulleys, and belts.



The steam engine pumped water out of coal mines, making it easier, safer, and quicker to dig for coal.

Questions

6. What is the central idea in "New Ways of Mining"?
   A. Coal became a main source of energy by 1700 when timber grew scarce.
   B. Working in underground mines was extremely dangerous in the 1700s.
   C. James Watt made innovative improvements to steam engine technology.
   D. Challenges in the mining industry led to new steam engine technology .

7. What is another word that means almost the same as *shafts* in paragraph 2?
   A. mines
   B. tunnels
   C. minerals
   D. miners

8. Read each sentence from the text. Circle the text structure that the sentence uses.

   "Something needed to be done to pump out the water."

   problem and solution cause and effect sequence

   "If, however, the steam was allowed to escape through a hole or a small tube, it produced a great force."

   problem and solution cause and effect sequence

   "By the early 1700s, several people began to devise steam pumps powered by coal fires."

   problem and solution cause and effect sequence

9. What main problem led to the development of the steam engine?

_____

10. PART A: Look at the image, and read the caption. What part of the text does the image illustrate?

_____

PART B: How do the image and caption add to your understanding of the text?

_____

_____

_____

Reading Comprehension Score: _____ of 10 points

Writing Prompt: Choose one of the following topics, and write a procedural text about it:

Topic Option 1: *Explain how to make something, such as your favorite sandwich.*

Topic Option 2: *Explain how to fix something that you know how to fix, such as a flat bike tire.*

- Include a list of any materials your readers would need.
- Provide steps that explain the procedure in the correct order.
- Use a text structure such as sequence, cause and effect, or problem and solution.
- Use a formal style.
- Include a conclusion that wraps up the text.
- Use at least two different sentence types in your writing: simple, compound, complex, or compound-complex.
- Proofread your writing to correct mistakes in grammar, spelling, and punctuation.

Writing Prompt Score: _____ of 4 points.

Grammar

Read each sentence. Circle the sentence type.

1. Temple Grandin is a well-known inventor.

   simple compound complex compound-complex

2. Although Grandin struggled with communication as a child, her skill at visualizing how things worked was excellent.

   simple compound complex compound-complex

3. Grandin first visualizes what she wants to make, and then she tries to build it.

   simple compound complex compound-complex

4. Grandin believes hands-on experience is important because it helps people learn how things work, and she thinks building things can teach valuable skills.

   simple compound complex compound-complex

Circle fewer *or* less *to complete each sentence correctly.*

5. I suspected my brother had been snacking when I noticed fewer / less crackers in the box.

6. Because winter days are shorter, there is fewer / less daylight time for outdoor activities than in the summer.

7. There are fewer / less cars on the road after rush hour is over.

Circle affect *or* effect *to complete each sentence correctly.*

8. Scientists have studied the affect / effect of sunlight on people's moods.

9. More sunlight exposure can affect / effect people by causing them to be happier.

10. There are other environmental factors that affect / effect mood as well.

Grammar Score: _____ of 10 points.

Morphology

Match each word with its meaning. Use what you know about roots, prefixes, and suffixes in number words.

1. _____ *united*	A. a molecule containing two oxygen atoms
2. _____ *biped*	B. a period of ten years
3. _____ *duo*	C. a period of one hundred years
4. _____ *trident*	D. an animal that walks on two legs
5. _____ *decade*	E. a spear with three points
6. _____ *century*	F. having one common purpose
7. _____ *dioxide*	G. a two-person musical group

Complete each sentence to show the meaning of the underlined word. Use what you know about the meaning of the suffixes –er *and* –or *to help you.*

8. My sister is a great organizer because _____

_____ .

9. I prefer the brighter lamp because _____

_____ .

10. The tow truck operator _____

_____ .

Morphology Score: _____ *of 10 points.*
Total Score for Unit Assessment: _____ *of 40 points.*

NAME: _____

DATE: _____

Unit Feedback Survey
Unit 2: *Calling All Minds: How to Think and Create Like an Inventor*

Please use a scale of 1–5, with 1 being "Not at All," 3 being "OK," and 5 being "Very Much." Circle the number that best describes your opinion. Then answer the remaining questions.

How much did you like reading the selections in *Calling All Minds: How to Think and Create Like an Inventor*?

1 2 3 4 5

What, if anything, did you like about the selections that you read?

_____

_____

What, if anything, did you not like about the selections that you read?

_____

_____

Were you able to read and understand these selections on your own, or did you have difficulty?

_____

Would you recommend this book to your friends or other students? YES NO

In your opinion, how well did your teacher teach this unit?

1 2 3 4 5

What kinds of activities did you like best?

What kind of activities did you like least?

What could your teacher have done differently in teaching the unit to improve your experience with this unit?

NAME: _____

DATE: _____

Mid-Unit Comprehension Check—*Calling All Minds: How to Think and Create Like an Inventor*

1. Describe two ways in which Temple Grandin was influenced to become an inventor.

_____

_____

_____

_____

_____

2. What is a visual thinker?
   A. a person who organizes the world through words
   B. a person who organizes the world through numbers
   C. a person who organizes the world through books
   D. a person who organizes the world through pictures

3. According to Grandin, what is the *autism spectrum*?
   A. the range of abilities and challenges an autistic person may have
   B. a way of describing successful careers in the arts or tech industry
   C. the ability to make things by first visualizing them
   D. the different ways in which humans' brains work

4. What word is most similar in meaning to the word *instructions*? Circle the correct answer.

   guidelines patents activities

5. According to Grandin, what is something a person needs to be able to do before they can become an inventor?

_____

_____

_____

6. How does filing a patent protect your invention?

_____

_____

_____

7. Before the invention of the printing press, how were books published? Circle two correct answers.

   A. They were made by woodblock.

   B. They were made by hand.

   C. They were made by computers.

   D. They were made by machines.

8. Who was Johannes Gutenberg, and how did he change printing?

_____

_____

_____

_____

_____

9. Which came first, the stereotype or the typewriter? Write the correct answer on the line.

_____

10. Which of the following best describes the way Temple Grandin learned?
    A. She learned in words first, then expressed her ideas in images.
    B. She learned in images first, then expressed her ideas in words.
    C. She learned in patterns and sequences, then expressed her ideas in words.
    D. She learned in words, then expressed her ideas in patterns and sequences.

11. What did the nation's Founding Fathers do to help protect inventors' work?
    A. They made patents illegal for everyone.
    B. They made patents legal for only some people.
    C. They refused to pass any kind of patent act.
    D. They passed the nation's first patent act.

12. Why was it rare for women to be recognized as inventors in the 1800s?

_____

_____

13. How did Margaret Knight defeat Charles F. Annan's attempt to steal her invention?

_____

_____

14. Which statement is associated with Alexander Fleming's discovery of penicillin?

A. Some kinds of mold can have healing properties.

B. Burdock burrs have threads with tiny hooks on them.

C. Kevlar is both fire-resistant and stronger than steel.

D. A milky solution led to the discovery of a new fiber.

15. Which of the following can Kevlar be used for? Circle the correct answers.

body armor	suspension bridges	rope	paper bags
fiber-optic cables	medicine	safety helmets	food

16. Why might more than one kind of thinker be needed to design and build a structure?

_____

_____

_____

_____

_____

17. Describe a way a person can get over their fear of flying.

_____

_____

_____

_____

_____

18. What is aerodynamics the study of?
    A. things that float
    B. things that go fast
    C. things that fly
    D. things that make noise

19. Does drag cause a plane to move more quickly or more slowly?

    _____

20. What role do wingtips play in airplanes? Circle two correct answers.
    A. They cause drag on the plane.
    B. They generate lift for the plane.
    C. They make planes faster.
    D. They make planes slower.

Mid-Unit Comprehension Check Score: _____ of 20 points.

NAME: _____

DATE: _____

End-of-Unit Comprehension Check—*Calling All Minds: How to Think and Create Like an Inventor*

1. How is milk related to the invention of glue?

_____

_____

2. How might the invention of Super Glue be considered an accident?

_____

_____

_____

_____

_____

3. How is the invention of paper related to the invention of the staple?

_____

_____

4. One problem with the stapler was that each staple had to be loaded one at a time. How did Eli Hotchkiss solve this problem?

_____

_____

5. How was Jack Linsky's Swingline stapler an improvement on earlier staplers?
   A. It could punch an individual staple through paper.
   B. It could automatically bend the wire staple to cinch it.
   C. It used connected staples to enable continuous stapling.
   D. It allowed for an easier way to load the staples.

6. What is trial and error, and how does it apply to science inventions?

_____

_____

_____

_____

7. How did the discovery of rubber change the industrial world?

_____

_____

_____

_____

_____

8. What is bottom-up planning? Circle the correct answers.
   A. start with a hypothesis
   B. gather data first
   C. gather data second
   D. arrive at a hypothesis

9. Which flying inventions led to the invention of the airplane?

hot-air balloons rockets dirigibles helicopters

10. Who invented the first airplane with a gasoline engine and propeller?
    A. Sir George Cayley
    B. Joseph-Michel Montgolfier
    C. the Wright brothers
    D. Count Ferdinand

11. Why did the Wright brothers make so many flights before patenting their "flying machine"?

_____

_____

_____

12. According to Grandin, what are three key traits of what Grandin refers to as the Asperger's spectrum? Circle the correct answers.

lack of interest obsessive interest awkward social skills

strong social skills good communication communication challenges

13. What does Grandin believe will happen to autistic people as they age if they are able to get out and experience the world?

_____

_____

_____

_____

_____

14. What two inventions was Lewis Latimer instrumental in developing? Circle two correct answers.

A. the airplane

B. the telephone

C. the typewriter

D. the stapler

E. the light bulb

15. What is a blueprint? Circle two correct answers.

A. a diagram showing how something works

B. a drawing completed for a patent

C. a plan for where things go

D. a technical drawing or model of a structure

16. Why are schematics an important part of building a structure?

_____

_____

_____

_____

_____

17. In Grandin's view, what is the best way to become good at drafting?

_____

_____

_____

18. What did Grandin invent to help lessen anxiety in people with autism?

a bird kite a squeeze machine a pulley

19. Why does Grandin encourage her students to write and publish papers on their work?
    A. It is a way to store their knowledge.
    B. It is a way to patent their knowledge.
    C. It is a way to protect their knowledge.
    D. It is a way to improve their knowledge.

20. How does Grandin demonstrate that being on the autism spectrum is both a challenge and a gift? Provide examples to support your answer.

End-of-Unit Comprehension Check Score: _____ of 20 points.

NAME: _____

DATE: _____

Grammar: Sentence Types

Identify each sentence as simple, compound, complex, *or* compound-complex.

1. The house was cold.

   _____

2. Graham went home, but Gina stayed late.

   _____

3. When Jamie heard the phone ring, she rushed to answer it.

   _____

4. The dinosaur ate the plant.

   _____

5. On the way home, Gina went to meet Phil, but Phil wasn't there.

   _____

6. The girl liked fruit but did not like vegetables.

   _____

7. The mail carrier rang the doorbell.

   _____

8. The alarm went off at 7 a.m., but Michele did not wake up.

   _____

9. The cat ran, and the dog followed.

   _____

NAME: _____

DATE: _____

Morphology: Greek and Latin Roots in Number Words

Complete the sentences to identify each root word's meaning. Then write one word that uses that root.

1. The root word *unus* means _____.

   _____

2. The root word *bi* means _____.

   _____

3. The root word *duo* means _____.

   _____

4. The root word *tri* means _____.

   _____

5. The root word *decem* means _____.

   _____

6. The root word *centum* means _____.

   _____

NAME: _____

DATE: _____

Grammar: Frequently Confused Words *fewer/less* and *affect/effect*

Circle the word that correctly completes each sentence.

1. There were (fewer/less) people in the auditorium after the band left.
2. The concussion (affected/effected) Dominic's memory.
3. The new rules went into (affect/effect) the following week.
4. After we ate the leftovers, there was (fewer/less) food in the fridge.
5. (Fewer/Less) animals lived in the area after the wildfire.
6. What (affect/effect) does diet have on kids' health?
7. Do you want more or (fewer/less) milk for your cereal?
8. The temperature outside (affected/effected) the temperature inside.
9. Did the sad movie (affect/effect) your feelings?
10. There were (fewer/less) cars on the road today than yesterday.

NAME: _____

DATE: _____

PP.6 ACTIVITY PAGE

Morphology: Prefixes *uni–*, *di–*; Suffixes *–er*, *–or*

Complete each sentence to identify a prefix or suffix's function and meaning. Then write a sentence with a word containing that prefix or suffix.

1. The prefix *uni–* means _____.

_____

_____

2. The prefix *di–* means _____.

_____

_____

3. The suffix *–or* means _____.

_____

_____

4. One meaning of the suffix *–er* is _____.

_____

_____

5. A second meaning of the suffix *–er* is _____.

_____

_____

NAME: _____

DATE: _____

Publish: Create a How-To Video

Follow the steps below to complete and publish your writing using a video format.

1. INTRODUCTION

Hook: The first 15 seconds of a video is when viewers decide whether they want to continue watching or not. Be sure to start with an interesting summary, visual, teaser, or other attention grabber. Write your ideas:

_____

_____

_____

Topic: Introduce the subject, and explain what you are going to teach viewers to do.

_____

_____

_____

2. CONTENT

Setup: List, show, or describe any materials or setup viewers will need.

_____

_____

_____

How-To Steps: Explain and demonstrate the steps. Be clear, but do not include too many details.

_____

_____

_____

_____

3. CONCLUSION

Results: Show an example of your finished product, or explain what the end results of the how-to process should be.

_____

_____

What do you want viewers to do? For instance, you might ask them to comment, subscribe, like, follow, post photos or videos of their own attempts at following your how-to process? _____

_____

_____

_____

_____

_____

_____

_____

NAME: _____

DATE: _____

Research an Exceptional Person

Use the steps below to research and prepare a presentation about a famous or exceptional individual from the present or the past who is or may have been on the autism spectrum, who is a "different" kind of thinker, or who has a disability or an exceptional ability.

1. Name: _____

2. Where was/is this person from? _____

3. What makes this person unique?

_____

_____

_____

_____

_____

4. What are this person's achievements? How did thinking differently help this person accomplish these things?

_____

_____

_____

_____

_____

5. If the person is from the past, why is this person believed to have been on the autism spectrum or exceptional?

6. Decide what you plan to do with your research:
   - ☐ Write an article or essay.
   - ☐ Give a presentation to the class.
   - ☐ Record a video presentation.
   - ☐ Create an online slideshow or other multimedia presentation.

Student Resources

In this section, you will find:

- SR.1—Glossary
- SR.2—Writing Process Diagram
- SR.3—Proofreading Symbols
- SR.4—Individual Code Chart

NAME: _____

DATE: _____

Glossary for *Calling All Minds: How to Think and Create Like an Inventor*

A

abstract, ***adj***. existing as a thought or idea without having a physical form

aerodynamic, ***adj.*** relating to the branch of mechanics that deals with flying and moving through air

aeronautical, ***adj.*** having to do with the science of building or flying aircraft

airplane simulator, ***n.*** a training device that replicates an airplane's flight mechanisms; also known as a flight simulator (**airplane simulators**)

alloy, ***n.*** a mixture made of two or more different kinds of metal

apprentice, ***n.*** a person who is learning a skill or craft by working with an expert

atmosphere, ***n***. the layer of gases surrounding a planet

automated, ***adj.*** carried out by machines

aviator, ***n.*** a person who flies aircraft; a pilot (**aviators**)

B

balsa wood, ***n.*** a lightweight wood used for making models

biographer, ***n.*** a person who writes about someone else's life

biological, ***adj.*** physical; having to do with the body or life

blueprint, ***n***. a plan for where things go; a technical drawing or model of a structure

C

carbon, ***n.*** a chemical element used for fuel or to help build things

chemist, ***n.*** a scientist who studies characteristics of and changes in substances (**chemists**)

cinch, ***v.*** to secure

clockwise, ***adj.*** the direction in which the hands of a clock move

cockpit, ***n.*** the part of the plane that houses the flight instruments and pilot(s)

colleague, ***n.*** a person who is a coworker

commercial, ***adj.*** used for business as opposed to private or personal use

companion, ***n***. a person or thing often in the company of another person or thing

component, ***n.*** a part of a larger body, object, or system (**components**)

contestant, ***n.*** a person who takes part in a contest or competition (**contestants**)

continuous, ***adj.*** unbroken; without interruption

crease, ***n.*** the line that is created when something is folded

D

diagnose, ***v.*** to recognize as having a disease or medical condition (**diagnosed**)

diorama, ***n.*** a model representing something in three dimensions (**dioramas**)

dirigible, ***n.*** an aircraft with a rigid structure that is filled with lighter-than-air gas or hot air to make it float

dispense, ***v.*** to distribute or provide (**dispenses**)

draftsman, ***n.*** a person who makes detailed drawings or plans that are technical in nature

drag, ***n.*** the force that resists the movement of air

E

efficient, ***adj.*** productive

engineer, ***n***. a person who designs or builds complicated machines, structures, or other systems

evacuate, ***v.*** to remove a person or group of people from a dangerous place or situation

evolve, ***v.*** to change over time (**evolved**)

F

facility, ***n.*** a structure or building used for a specific purpose (**facilities**)

fiber-optic cable, ***n.*** a cable that uses light to transmit high-speed data (**fiber-optic cables**)

filament, ***n.*** a thin wire or thread that conducts heat or electricity

file, ***v.*** to make something a part of the official record

fishtail, ***v.*** (of the rear end of a moving vehicle) to move back and forth from one side to another **(fishtailing)**

flex, ***v***. to bend or move

fungus, ***n.*** a spore-producing organism such as mushrooms and mold that feeds on organic matter

fuselage, ***n.*** the part of the plane that houses the flight attendants and passengers

G

genetic link, ***n.*** traits caused by genes that were likely inherited from an ancestor

glider, ***n.*** a light aircraft or toy that glides on air

H

headmaster, ***n.*** the person in charge of a private school; the principal

hygienic, ***adj.*** clean and/or healthy

I

illuminate, ***v.*** to make something bright or visible; to make something clear or understandable

impact, ***n.*** the effect of one person or thing on another

indebted, ***adj.*** owing thanks or gratitude

ingenuity, ***n.*** inventiveness, originality

innovation, ***n.*** the act or process of making something new

insignia, ***n.*** a mark of membership or rank in an organization

installation, ***n.*** the process of putting something in place

J

journal, ***n.*** a magazine or newspaper that focuses on a particular subject or profession

L

lead, ***n.*** a metal that is denser than most but also malleable

lift, ***n.*** an upward force acting on a wing in relation to the movement of air

M

malleable, ***adj.*** able to be pressed into a different shape

mascot, ***n.*** a person or thing that acts as a symbol for an event, organization, or team

mathematician, ***n.*** a specialist or expert in the field of mathematics (**mathematicians**)

menial, ***adj.*** requiring little skill

metallic, ***adj.*** made of metal

microscope, ***n.*** an instrument used for viewing objects too small to see with the human eye

millwright, ***n.*** a person who designs, builds, or maintains a mill or mill machinery (**millwrights**)

modification, ***n.*** a change in something, usually to improve it

mold, ***n.*** a hollow into which liquid metal is poured to give it shape when it hardens (**molds**)

molecular structure, ***n.*** the location of atoms and groups of ions and how they relate to each other in a molecule

molten, ***adj.*** melted by heat

monotone, ***adj.*** having a sound without a change in pitch or tone

musical notation, ***n.*** a system of written symbols that represent sounds (**musical notations**)

N

navigate, ***v.*** to plan, direct, or sail a route or course, usually in a form of transportation such as a car, ship, or airplane (**navigating**)

Nobel Prize, ***n.*** any one of six prizes awarded for outstanding achievement in a scientific, literary, or economic field

O

originator, ***n.*** a person who starts, or originates, something new

oversensitivity, ***n.*** a condition related to having more than the usual awareness of one's environment and surroundings; a tendency to become easily upset by something in the external environment

P

patent, ***n.*** an official paper that gives the creator of an invention the right to be the only person to make and sell that invention for a certain period of time

penicillin, ***n.*** a group of antibiotics made from mold

perception, ***n.*** the process of becoming aware of something using the senses

perpendicular, ***adj.*** having two lines that intersect at a right angle, such as the lines that make the uppercase letters T and L

perseverance, ***n.*** steady persistence to achieve a goal

petri dish, ***n.*** a small, clear dish with a lid, used to grow microorganisms such as viruses and bacteria

phenomenon, ***n.*** an observable event or fact

physician, ***n.*** a person qualified to practice medicine; a doctor (**physicians**)

piston, ***n.*** a piece of metal within a cylinder that moves up and down (**pistons**)

prodigious, ***adj.*** impressive or remarkable

property, ***n.*** a quality or characteristic belonging to a person or thing **(properties)**

propulsion, ***n.*** the action of being pushed forward

psychological, ***adj.*** having to do with the mind

psychologist, *n.* a person who studies the way humans think and behave and why

R

retractable, *adj.* able to be pulled back in

revolution, *n.* one turn around a fixed course

rudder, *n.* a mechanism used to steer a ship, boat, submarine, or aircraft

S

secretion, ***n***. a discharge such as tears or sweat produced by a cell, gland, or organ in the body (**secretions**)

sensory sensitivity, *n.* an awareness of the information being received through one's senses; a characteristic of autism (**sensory sensitivities**)

serendipity, *n.* achieving a positive result by accident; good luck

slab, ***n.*** a thick, flat piece of metal, stone, or concrete

sleekness, *n*. the quality of being straight and smooth in design, without any parts sticking out

Smithsonian, *n.* a national collection of museums

social skills, *n.* verbal and nonverbal ways that someone uses to communicate and get along with other people

stabilizer, *n.* a device used to keep something steady, or stable (**146**)

steerable, ***adj***. able to be mechanically controlled or guided

stereotype, *n.* 1. a metal plate used in printing; **2.** an oversimplified idea that a person or group has certain common characteristics

stimulate, *v.* to encourage an interest or activity in something (**stimulated**)

sulfur, *n.* a nonmetallic chemical

survivable, *adj*. not fatal; able to be survived

T

taper, *v.* to make narrower toward one end (**tapering**)

technology, *n.* the study and use of scientific knowledge, tools, and machines

tenacity, *n.* determination

tinker, *v.* to change something by trying out different things or ways to do something

trade, *n.* a kind of work or craft

transatlantic, *adj.* crossing the Atlantic ocean

trial, *n.* a test of the performance, qualities, or suitability of something; an experiment

T square, *n.* a technical drawing instrument used for horizontal lines or right angles (**T squares**)

type, ***n.*** metal letters used in printing

type, ***v.*** to write by pressing letters on a keyboard (**typed**)

V

vaccine, *n.* a substance used to protect people or animals against diseases (**vaccines**)

W

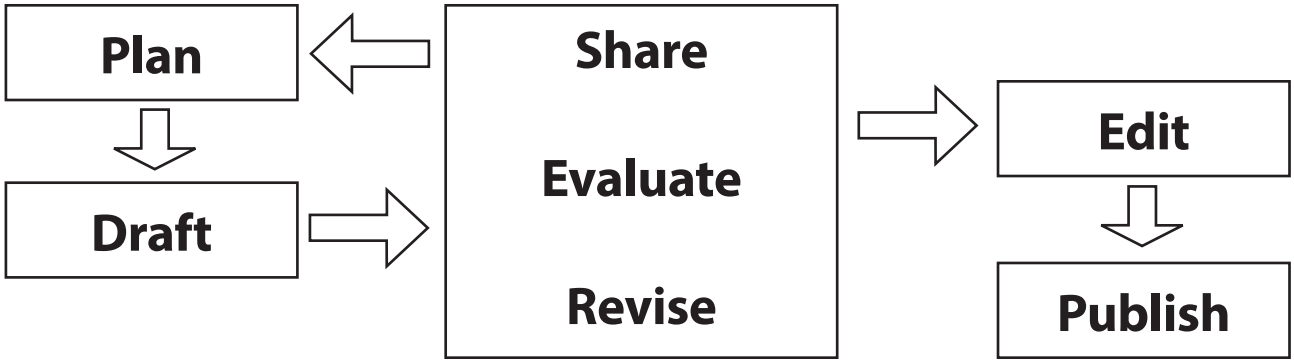
welder, *n.* a person who molds or fuses metal (**welders**)

NAME: _____

DATE: _____

SR.2 RESOURCE

The Writing Process



NAME: _____

DATE: _____

Proofreading Symbols

∧	Insert
⊙	Insert period
∧,	Insert comma
∨'	Insert apostrophe
#	Insert space
¶	New paragraph
no ¶	No new paragraph
⌒	Close up the space
b cap	Capitalize
B lc	Make lowercase (small letter)
ℯ	Delete
rwd.	Reword
←	Move according to arrow direction
ℯ i ∪ tr	Transpose
[	Move to the left
]	Move to the right
a	Add a letter

NAME: _____

DATE: _____

Individual Code Chart

/p/	p	pp			
	pot	napping			
/b/	b	bb			
	bat	rubbing			
/t/	t	tt	ed		
	top	sitting	asked		
/d/	d	ed	dd		
	dot	filled	add		
/k/	c	k	ck	ch	cc
	cat	kid	black	school	hiccup
/g/	g	gg	gu	gh	
	gift	egg	guess	ghost	
/ch/	ch	tch			
	chin	itch			

/j/	g	j	ge	dge	dg
	gem	jump	fringe	judge	judging
/f/	f	ff	ph	gh	
	fit	stuff	phone	tough	
/v/	v	ve			
	vet	twelve			
/s/	s	c	ss	ce	se
	sun	cent	dress	prince	rinse
	st	sc			
	whistle	scent			
/z/	s	z	se	zz	ze
	dogs	zip	pause	buzz	bronze
/th/	th				
	thin				

NAME: _____

DATE: _____

/th/	th			
	them			
/m/	m	mm	mb	
	mad	swimming	thumb	
/n/	n	nn	kn	gn
	nut	running	knock	sign
/ng/	ng	n		
	sing	pink		
/r/	r	rr	wr	
	red	ferret	wrist	
/l/	l	ll		
	lip	bell		
/h/	h			
	hot			

/w/	w wet	wh when
/y/	y yes	
/x/	x tax	
/sh/	sh shop	ch chef
/qu/	qu quit	

NAME: _____

DATE: _____

SR.4 CONTINUED

RESOURCE

/a/	a				
	hat				
/i/	i	y			
	it	myth			
/e/	e	ea			
	pet	head			
/u/	u	o	o_e	ou	
	but	son	come	touch	
/o/	o	a			
	hop	lava			
/ə/	a	e			
	about	debate			
/ə/ + /l/	al	le	el	ul	il
	animal	apple	travel	awful	pencil

/ae/	a	a_e	ai	ay	ey
	paper	cake	wait	day	hey
	eigh	ea			
	weight	great			
/ee/	y	e	i	ea	ee
	funny	me	ski	beach	bee
	ie	ey	e_e		
	cookie	key	Pete		
/ie/	i	i_e	y	ie	igh
	biting	bite	try	tie	night
/oe/	o	o_e	ow	oa	oe
	open	home	snow	boat	toe
/ue/	u	u_e	ue		
	unit	cute	cue		

NAME: _____

DATE: _____

SR.4 CONTINUED

RESOURCE

/oo/

oo	u	u_e	ew	ue
soon	student	tune	new	blue

ou	ui	o	o_e
soup	fruit	do	move

/oo/

oo	u
look	push

/ou/

ou	ow
shout	now

/oi/

oi	oy
oil	toy

/aw/

au	aw	al	ough	augh
Paul	paw	wall	bought	caught

/ar/

ar
car

/er/

er	or	ur	ar	ir
her	work	hurt	dollar	bird

ear
earth

/or/

or	ore	ar	our	oar
for	more	war	four	roar

oor
door

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