





Modern Milestones

Symbol-Coded Answer Key



A Demme Learning Publication

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Suffix		Prefix	
Base Words		Compound Words	

1A:

Jan van Eyck is considered the father of oil painting. He was not the first to use oils, but he was unusually skillful with them. The way that he painted showed the true richness of colors and the effects of light. He painted mostly religious pictures and portraits. He was a serious painter, but some people think he had a humorous side. At times, he hid tiny self-portraits in his work. In the middle of one famous painting, he wrote, “Jan van Eyck was here.”

1B:

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1C-E:

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Workshop 1C: 1. done 2. un + skillful = unskillful 3. un + true = untrue

4. unknown 5. unpleasant 6. unhappy 7. unable unlock 8. unpack 9. unsafe

2A–E:

Books had been printed in China for hundreds of years. In Europe, books were still carefully made by hand. Around 1439, Johann Gutenberg began to build a new kind of printing press. He made separate letters from wood or metal. The letters were put in a wooden form that held them tightly. Then ink was rolled over the letters. The form was pressed against a sheet of paper. Many sheets were printed. Then the letters were repositioned, and a different page was printed. As books became less costly, ideas could be passed from one person to another more quickly.

Workshop 2C: 1. reprinted 2. reprinting 3. rebuild 4. remade
5. repositioned 6. redirected 7. reacquainted 8. regain

3A–E:

It is thought that Botticelli first worked for a goldsmith. Then he went to work for a famous artist. He did tasks such as washing brushes and readying canvases. The artist also gave him classes in painting. Botticelli became a successful painter while still quite young. Many of his pictures had themes from Greek and Roman myths. Other paintings showed scenes from the Bible. He was renowned for his subtle colors and graceful figures. Later, his fame was overshadowed by other artists. More than 400 years after his death, his work began to be honored again. Now his reputation matches that of many other artists.

Workshop 3C: 1. dishes 2. arches 3. wishes 4. compasses 5. foxes
6. benches 7. marches 8. grasses 9. patches 10. taxes

4A-E:

Leonardo da Vinci was trained as a painter. His most famous painting is of a woman called Mona Lisa. Many people have just one special talent, but da Vinci was not content to be only an artist. He was also a scientist and an inventor. His notebooks are full of studies of the human body and sketches of his ideas. These ideas include a flying machine and a submarine. Other men of this era also had a wide variety of interests. Today a man with many talents is called a Renaissance man.

Workshop 4C: 1. done 2. done 3. key + s = keys 4. cherryⁱ + es = cherries
5. valley + s = valleys 6. historyⁱ + es = histories 7. ponyⁱ + es = ponies
8. colonyⁱ + es = colonies

5A:

When Copernicus began to study the sky, most people believed that the earth was the center of the universe. Most scholars said so, and it seemed reasonable to them. Copernicus was not convinced. He examined past records. He made repeated observations of the skies. He tracked his findings and rechecked his figures. Finally, he came to a conclusion. Earth is not the center of the universe. Along with all the other planets, it travels around the sun. For his bold ideas, Copernicus is honored as the father of modern astronomy.

5B:

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Workshop 5C: 1. escaped 2. skated 3. smiled 4. baked 5. nibbled 6. hiked
7. retired 8. ignored 9. arrived 10. rattled

6A:

Michelangelo began studying painting when he was twelve. Soon he was apprenticed to a sculptor. Working with stone became his passion. One of his most famous pieces is *David*. The statue of David shows him preparing for his battle with the giant. The sculpture portrays the artist's amazing knowledge of the human body. Michelangelo was asked to paint the ceiling of the Sistine Chapel. He was unsure about accepting the job. He had to climb sixty feet above the floor and paint with his arms raised above his head. The project was exhausting, but the result is magnificent.

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Workshop 6C: 1. done 2. D (painter) 3. A (inventor) 4. F (printer)
5. G (actor) 6. B (worker) 7. E (editor)

7A–E:

A man named Andrea Amati made the first violin in the 1500s. Some people thought it was unsuitable for serious music. They preferred the lute or the viol. A lute was strummed or picked. A viol was played with a bow like a violin. Finally, music began to be written for the violin. It became respected rather than disliked. Today the violin usually carries the melody for an orchestra. Other members of the violin family are the viola, the cello, and the double bass.

Workshop 7C: 1. one 2. two 3. three 4. two 5. four 6. two 7. three
8. one 9. three 10. three

8A–E:

Andreas Vesalius was interested in the human body. He believed that some old writings were inaccurate. He found that one man had studied the bodies of animals to learn about humans. As a student and as a teacher, Vesalius dissected human bodies. He soon spotted mistakes in the old texts. He wrote and published a set of seven books. These books were popular because of their detailed pictures. Many other students used them.

Workshop 8C: 1. dropped/dropping 2. hugged/hugging 3. trapped/trapping
4. hopped/hopping 5. skipped/skipping 6. napped/napping
7. drummed/drumming 8. jogged/jogging

9A–E:

Elizabeth I became Queen of England when she was 25 years old. It was a troubled time. There had been several rulers in just ten years. Elizabeth tried to make her country peaceful. However, she was unable to avoid war with Spain. When Spanish ships failed to conquer England's navy, many people were encouraged. During her reign, people enjoyed attending the theater to see plays by Shakespeare and others. Adventurers sailed to explore new lands. Not all of the country's problems were fixed. Still, some people called this time England's Golden Age.

Workshop 9C: 1. chewed/chewing 2. slipped/slipping 3. rubbed/rubbing
4. snowed/snowing 5. fixed/fixing 6. stopped/stopping 7. sewed/sewing
8. trotted/trotting

10A-E:

William Shakespeare is known for his wit and wisdom. He wrote nearly 38 plays. They included tragedies, comedies, and histories. Actors posed as kings, boys, ladies, fairies, spies, and many other characters. A flag was often raised over the theater. Its color showed what kind of play was being performed. Audiences loved Shakespeare's plays. His stories had unexpected twists and turns. He invented many expressions that are now part of our everyday language. These timeless plays are still acted in theaters all over the world.

Workshop 10C: 1. birthday 2. payday 3. noonday 4. workday 5. someday
6. everywhere 7. everyone 8. everything

11A-E:

Miguel de Cervantes was born in Spain to a poor family. He loved to read and write poetry. Later he joined the military and was wounded. He had to work hard for most of his life, but Miguel still spent time writing. His most famous work is *Don Quixote*. The book tells about an elderly man who read many stories about chivalry. The man comes to believe that he is a brave knight himself. As a knight, Don Quixote fights a windmill, believing it is a dangerous beast. Today, if we say someone is "tilting at windmills," we mean that he is fighting nonexistent enemies.

Workshop 11C: 1. done 2. mountainous (1) 3. glorious (2) 4. various (2)
5. furious (2) 6. studious (2) 7. famous (3) 8. dangerous (1)

12A-E:

Francis Bacon was an English statesman, essayist, and scientist. Most thinkers of his time used a deductive approach to new ideas. They tried to fit the new discoveries with the ideas of older writers. Bacon encouraged a different approach to science. He started with an open mind. He thought carefully about a question. He took notes and looked for a pattern. Today, scientists use experiments to check their ideas. This approach is called the scientific method.

Workshop 12C: 1. artist 2. therapist 3. journalist 4. cyclist 5. novelist
6. soloist 7. economist

13A-E:

Galileo lived about 100 years after Copernicus. Most people still believed that the earth was the center of the solar system. They had other incorrect ideas about the universe. Galileo did not accept those ideas. He studied motion and gravity for himself. Finally, he created his own telescope. He carefully observed the heavens. As he explored the skies, he found confirmation that the planets revolved around the sun. He also discovered sunspots, the moons of Jupiter, and the Milky Way.

Workshop 13C: 1. information 2. organization 3. observation
4. recommendation 5. temptation 6. election 7. location 8. discussion
9. expression 10. direction

14A-E:

Rembrandt was a respected Dutch artist. He painted landscapes and portraits. He also painted story pictures that retold scenes from history. Gradually, his style became more creative. He used richer colors and bolder brushstrokes. He experimented with darkness and light. Several unfortunate experiences came into his life. Rembrandt's portraits became more expressive. His self-portraits show his deep sadness.

Workshop 14C: 1. attractive 2. defective 3. active 4. expensive
5. protective 6. excessive 7. creative 8. impressive

15A-E:

Before the invention of photography, great men hired artists to paint portraits of themselves and their families. One man was an official painter to the king of Spain. He had an assistant, Juan de Pareja. Juan was a slave who loved painting. Slaves were not supposed to be artists. It is said that the king saw some of Juan's work and thought it was outstanding. The king felt that Juan should be released. Researchers have discovered Juan's certificate of freedom. Today his work is displayed in several museums.

Workshop 15C: 1. wolves 2. halves 3. lives 4. shelves 5. knives 6. leaves
7. scarves 8. loaves

16A–E:

When Johannes Kepler was six, his mother took him outside to view a comet. Later, she showed him a lunar eclipse. Her foresight may have sparked his lifelong interest in astronomy. He excelled in math. He used his mathematical skills to study the skies. He focused on motion in space. He also considered the observations of others. Finally, he was convinced that planets have elliptical orbits. He made two more important findings about the motion of the planets. His findings are referred to as Kepler's Laws.

Workshop 16C: 1. critical 2. classical 3. electrical 4. clinical 5. identical
6. historical 7. economical 8. biological

17A–E:

Isaac Newton was born the year after Galileo died. Many people were exploring the universe. Newton had many unanswered questions. Soon he began to find answers. Eventually, he explained three laws of motion. Based on these, he developed the law of gravity. Every object has a gravitational force. That force keeps things in their proper places. Newton realized others had laid the groundwork for all his monumental discoveries. He said, “If I have seen further, it is by standing on the shoulders of giants.”

Workshop 17C: 1. C (children) 2. F (sheep) 3. G (feet) 4. A (geese)
5. E (men) 6. H (mice) 7. I (oxen) 8. B (teeth) 9. D (women)

18A–E:

In 1682, Edmond Halley noticed a particular comet. At the time, people believed comets occurred by chance. Halley strongly disagreed. He applied Newton's laws of motion and gravity. He tracked celestial orbits. Like a detective, he sifted through past records. Halley uncovered evidence that a similar comet had passed by Earth in 1531 and 1607. He predicted that this comet would reappear in 1758. Although Halley was not alive to see it, that year the comet returned. Astronomers named it Halley's Comet in his honor.

Workshop 18C: 1. occurred 2. excelled 3. referring 4. admitted 5. beginning
6. controlled 7. forgetting 8. permitted

19A–E:

George Handel was discouraged from studying music. Still, he continued to practice. As an adult he wrote many different kinds of music. Musicians played Handel's beautiful *Water Music* as the British king and his attendants glided down the river on a barge. Four anthems he wrote were used when the next king was crowned. Handel's best-known work is the *Messiah*. A legend says that the king stood when the "Hallelujah Chorus" from this work was sung. Today it is customary for people to stand whenever this matchless chorus is sung.

Workshop 19C: 1. entered 2. limited 3. collecting 4. repeated 5. explaining
6. appearing 7. attending 8. complained

20A–C:

Like Handel, Johann Sebastian Bach played and composed Baroque music. This music was orderly. It was also lively and complex. Bach wrote over a thousand musical compositions. Unlike Handel, he was not recognized as a great composer during his lifetime. He was known as a skillful organist. After he died, his works seemed old-fashioned. Musical styles were changing. Bach went unnoticed for decades. Then people began to perform older music on the instruments for which it had been composed. There was an awakened interest in Bach's music.

Workshop 20C: 1. bigger/biggest 2. smaller/smallest 3. shorter/shortest
4. hotter/hottest 5. quicker/quickest 6. colder/coldest 7. wetter/wettest
8. thinner/thinnest

21A–C:

Franz Joseph Haydn was a beloved Austrian composer. For many years, he worked as a music director for wealthy men. He also wrote many new compositions. At that time, symphonies were short and unimportant. Haydn made them longer and more complex. Other classical musicians followed his lead. During this time, orchestras became larger as well. Haydn was known for his pranks. The *Surprise Symphony* is an example of unexpected humor in his music.

Workshop 21C: 1. sadder/saddest 2. faster/fastest 3. stronger/strongest
4. slower/slowest 5. gladder/gladdest 6. taller/tallest 7. lower/lowest
8. bigger/biggest

22A–E:

Joseph Priestley described a tool that could make unwanted pencil marks disappear from paper. It was an early eraser made from raw rubber. Priestley was a busy experimental chemist as well as a writer. He believed that air is not a single element. It is a combination of gases. Over the years he discovered several different gases that are part of air. One of them was oxygen. He also observed how plants affect the air. Scientists disagreed with some of his theories. Still, they were able to build on his discoveries.

Workshop 22C: 1. greedier/greediest 2. sweeter/sweetest 3. cheaper/cheapest
4. shinier/shiniest 5. happier/happiest 6. cleaner/cleanest 7. tinier/tiniest
8. drier/driest

23A–E:

Caroline Herschel was unwell as a child. Her parents thought she would never marry. Her father wanted her to be educated. Her mother disagreed, so Caroline learned dressmaking. Sometimes she listened to her brother William's lessons. After their parents died, Caroline lived with her brother. When he became interested in astronomy, she learned along with him. Caroline spent hours studying the sky. She was the first woman to discover a comet. At least five new comets are credited to her. She was awarded two gold medals for her accomplishments.

Workshop 23C: 1. teeth 2. people 3. geese 4. mice 5. children 6. oxen
7. feet 8. men

24A–E:

Mozart was a talented musician. When he was four, he could play short pieces on a keyboard. At five, he could write musical notes and compose music. As a child, Mozart traveled around Europe, dazzling audiences with his unusual skills. He excelled at composing as he played, without hesitation. By the time he died at age 35, Mozart had composed over 600 works. His skill was remarkable. Joseph Haydn said that Mozart was the greatest composer that he knew, either in person or by reputation.

Workshop 24C: 1. zoos 2. photos 3. silos 4. pianos 5. solos 6. videos
7. tacos 8. memos

25A–E:

Imagine being a talented pianist and composer. Now imagine starting to go deaf at age thirty. That happened to Ludwig van Beethoven. He stopped performing, but he refused to let his disability silence him. He continued to write beautiful music. Finally, he could not hear even the echoes of his music. Beethoven tried to conduct the orchestra when his *Ninth Symphony* was played. He could not hear the people applauding. Someone turned him around so that he could see them clapping. Amazingly, the theme of this final symphony is joy.

Workshop 25C: 1. torpedoes 2. potatoes 3. heroes 4. tomatoes
5. vetoes 6. embargoes 7. echoes

26A–E:

Jacques and Joseph Montgolfier were interested in the idea of flight. They observed that hot air rises and cold air sinks. They used a fire to heat the air under a cloth balloon. First, the brothers launched an unmanned balloon. Then they prepared for passengers. No one knew how dangerous higher altitudes might be for living creatures. The brothers had to be careful. They chose a sheep, a duck, and a rooster for their first passengers. When the animals returned safely, the brothers were relieved. Since then, hot air balloons have carried useful cargoes and people.

Workshop 26C: no solutions

27A–E:

Louis Pasteur was an **inattentive** student who **preferred fishing** and **sketching**. Later, he **studied** science and **became interested** in **research**. At that time, many people **died** from **infectious diseases**. No one knew how to prevent them. Pasteur **proved** that **harmful germs** **caused** some **diseases**. He **encouraged** **doctors** to wash their **hands** and **equipment**. He **created** a **vaccination** for rabies. There were no **refrigerators**, so milk often **spoiled**. It made children sick. Pasteur **developed** a process that made milk **safer**. It was **named** **pasteurization** after its **inventor**.

Workshop 27C: 1. studied/studying/studious/student
 2. refrigerator/refrigeration 3. invented/inventing/invention/inventor/reinvent
 4. equipped/equipping/equipment/unequipped

28A–E:

Claude Monet was a **nontraditional** painter. Oil paints had **recently** **become** **available** in **tubes**. Now it was **easier** to paint **outdoors** and to use many **different colors**. Monet often **Painted** the same scene at **morning**, **midday**, and **evening**. **Painting** quickly, he **focused** on light, **reflections**, and **shadows**. Other **artists** **experimented** with this new style. A critic **mocked** a **painting** titled **Impression, Sunrise**. He **called** those who **Painted** in this style **Impressionists**. The **artists** **liked** the name. It is still **used** to refer to their work.

Workshop 28C: 1. midnight 2. midsummer 3. midstream 4. midyear
 5. midpoint 6. midweek 7. midday 8. midwestern

29A–E:

Renoir's first job was painting decorations on china. Hoping to improve his skills, he took drawing lessons. He became friends with Monet and other Impressionists. Unlike Monet, he focused on people rather than landscapes. Renoir used lively colors and feathery brushstrokes. After his marriage, he painted many scenes of family life. For the last twenty years of his life, he had to use a wheelchair. Arthritis made gripping a brush more and more difficult. Finally, he had to have an assistant put the brush in his hand. Still, Renoir continued to paint.

Workshop 29C: 1. hopped/hopping 2. taxed/taxing 3. taped/taping
4. tapped/tapping 5. mopped/mopping 6. moped/moping 7. snowed/snowing
8. wagged/wagging 9. griped/gripping 10. glowed/glowing

30A–E:

Mary Cassatt was born in the United States. Her family was quite wealthy. Mary visited Europe and saw the works of many fashionable artists. The family disapproved of her plan to be a working artist. Instead, they believed she should draw and paint for her own enjoyment. Then Mary moved to Paris. She learned from other artists, copying the works of well-known masters. In time, Mary developed her own style of painting. Her pictures of mothers and children doing everyday activities are famous.

Workshop 30C: 1. safes 2. chefs 3. proofs 4. roofs 5. handkerchiefs
6. chiefs 7. giraffes 8. cliffs

31A–E:

Vincent van Gogh worked as an art dealer. He also preached and helped the poor. None of his jobs gave him pleasure, and he was uncertain about the future. Finally he followed his brother's suggestion and tried painting. In less than ten years, van Gogh completed hundreds of works. He is known to have sold only one of them. Van Gogh lived a short, unhappy life. After his death, people began to admire his extraordinary work. The strong colors and distinctive brushwork expressed powerful feeling. This emotional style came to be called Expressionism.

Workshop 31C: 1. departure 2. sculpture 3. moisture 4. architecture
5. pressure 6. failure

32A–E:

Marie Curie was the first woman to receive the Nobel Prize. She and her husband, Pierre, were **honored** for their work with **radioactivity**. They **uncovered** two new **elements**. **Tragically**, Pierre **died** in an accident. Marie **pushed** on **without** him. She was the first person to win two Nobel **prizes**. During World War I, she **sponsored** mobile x-ray **units** that could be **driven** to the **battlefield**. She even drove one **herself**! Marie **misunderstood** the **dangers** of **radiation**. Her final **illness** and death were **caused** by **years** of **radiation** **exposure**.

Workshop 32C: Here are some words that can be made from cover using the suggested prefixes and suffixes. The order of the words is not important: *discover, recover, uncover, undercover, covered, covering, covers, discovered, discovering, discovers, discovery, recovered, recovering, recovers, recovery, uncovered, uncovering, uncovers.*

33A–E:

Anna was born before the Civil War. Her father was a **farmer** and a **mill**. When she grew up, she **married** Thomas Moses. Anna **raised** her ten children and **worked** hard on the family farm. In her spare time, she made **beautiful** **needlework**. When she was over 70 **years** old, arthritis made it **challenging** to hold a needle. She took up **painting** instead. **Gradually** she **became** **famous** for her **delightful** **pictures** of country life. People **called** her Grandma Moses. Her **pictures** were **reproduced** on **greeting** **cards** and on a **postage** stamp. She **lived** to be 101 **years** old and **painting** **hundreds** of **pictures**.

Workshop 33C: 1. brushes 2. farms 3. pictures 4. theories 5. turkeys
6. dishes 7. countries 8. pieces 9. valleys 10. classes

34A-E:

Albert Einstein was a scientist who did not work in a lab. Instead he worked in an office. In his spare time, Einstein pondered facts about the universe. Time, light, matter, and energy all fascinated him. His theories explained how visible and invisible forces are related. Einstein became famous for his ideas. He left his office and began teaching. He debated theories about the framework of our world. Einstein was not an inventor, but he influenced the development of atomic energy, space travel, and television.

Workshop 34C: 1. loaves 2. pianos 3. roofs 4. videos 5. echoes
6. zeros 7. giraffes 8. proofs 9. potatoes 10. wolves

35A-E:

During World War I, many soldiers died from infections. After serving in the war, Alexander Fleming renewed his study of bacteria. One day, he left some used lab dishes on the counter. When he returned from vacation, he noticed something unusual. Mold had developed in one of the dishes. Also, there were no bacteria around the mold! Something in the mold killed harmful bacteria. Fleming named his discovery penicillin. Other scientists produced a form of it that could be used to treat infections. Many lives were saved.

Workshop 35C: 1. rested/resting 2. skated/skating 3. cried/crying
4. hopped/hopping 5. applied/applying 6. stayed/staying 7. hoped/hoping

36A-E:

People noticed Marian Anderson's musical talent while she was still a child. Her family was unable to pay for voice lessons. People from her church raised money for Marian's training. Many people enjoyed her singing. Others thought it was improper for an African-American to sing in their concert hall. Instead, she was invited to give a concert from the steps of the Lincoln Memorial. Thousands of people gathered to hear her sing. Later, Marian performed at the White House. She traveled to other countries as a goodwill ambassador.

Workshop 36C: 1. boxed/boxing 2. block/blocking 3. chewed/chewing
4. fixed/fixing 5. kicked/kicking 6. locked/locking 7. rowed/rowing
8. showed/showing