



Lessons and Activities

11th Grade

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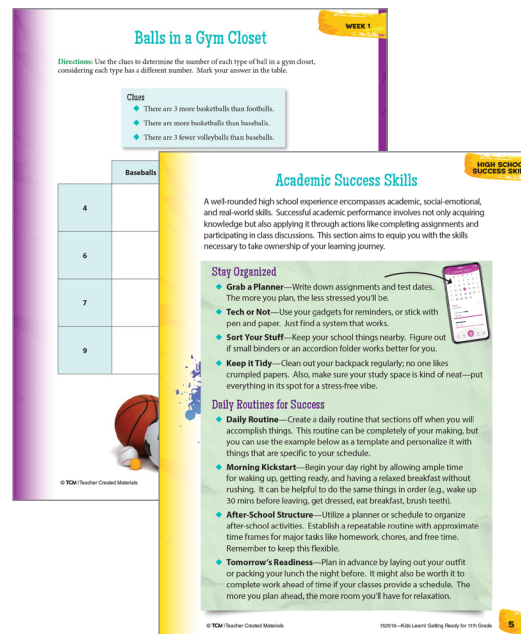
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GETTING READY FOR 11TH GRADE

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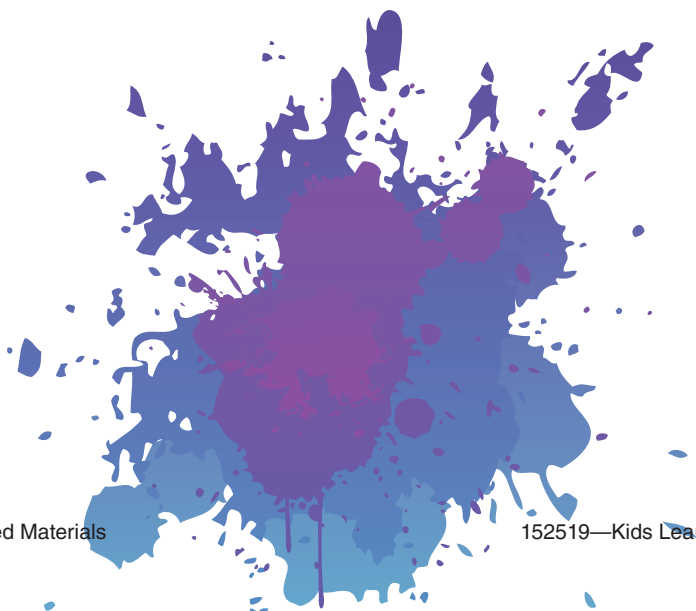
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Welcome Letter

Dear Student,

High school brings a multitude of learning opportunities, not just within the classroom but also within yourself. As per usual, you'll delve into core subjects like math and English, but now that you're halfway through high school, you should take the opportunity to explore everything that it has to offer whether that be high school electives—such as art, journalism, or computer science—or the opportunity to play sports and join clubs like soccer, chess, and (at some schools) even video games. No matter what, you've got these last couple years to broaden your horizons.

This phase is unique, providing you with the chance to take charge of your education. You'll be reviewing concepts that you have previously learned while also picking up some helpful life skills, such as how to make intelligent choices with your money. Here are some tips to make the most out of this book and your high school experience:

- ◆ Dedicate a specific time to work on the activities **every day**. Completing this book will be super easy if you make it part of your daily routine.
- ◆ Do some kind of reflection **every day**. Reflection makes your recall of the material much more likely, and if you do them **every day**, these skills will sink in.
- ◆ The "My Journal" pages can help store your thoughts about this material more privately. These pages are meant to be a little more creative and flexible, so feel free to put down whatever comes to mind.

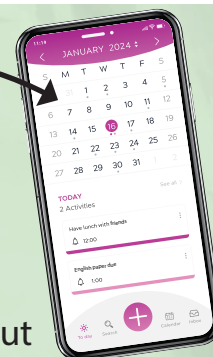
Change can make people feel anxious, but this book will be your guide to a smooth transition into the second half of high school. Learn even a few of these concepts well, and you will have a successful year in 11th grade!

Academic Success Skills

A well-rounded high school experience encompasses academic, social-emotional, and real-world skills. Successful academic performance involves not only acquiring knowledge but also applying it through actions like completing assignments and participating in class discussions. This section aims to equip you with the skills necessary to take ownership of your learning journey.

Stay Organized

- ◆ **Grab a Planner**—Write down assignments and test dates. The more you plan, the less stressed you'll be.
- ◆ **Tech or Not**—Use your gadgets for reminders, or stick with pen and paper. Just find a system that works.
- ◆ **Sort Your Stuff**—Keep your school things nearby. Figure out if small binders or an accordion folder works better for you.
- ◆ **Keep it Tidy**—Clean out your backpack regularly; no one likes crumpled papers. Also, make sure your study space is kind of neat—put everything in its spot for a stress-free vibe.



Daily Routines for Success

- ◆ **Daily Routine**—Create a daily routine that sections off when you will accomplish things. This routine can be completely of your making, but you can use the example below as a template and personalize it with things that are specific to your schedule.
- ◆ **Morning Kickstart**—Begin your day right by allowing ample time for waking up, getting ready, and having a relaxed breakfast without rushing. It can be helpful to do the same things in order (e.g., wake up 30 mins before leaving, get dressed, eat breakfast, brush teeth).
- ◆ **After-School Structure**—Utilize a planner or schedule to organize after-school activities. Establish a repeatable routine with approximate time frames for major tasks like homework, chores, and free time. Remember to keep this flexible.
- ◆ **Tomorrow's Readiness**—Plan in advance by laying out your outfit or packing your lunch the night before. It might also be worth it to complete work ahead of time if your classes provide a schedule. The more you plan ahead, the more room you'll have for relaxation.

What Is Financial Literacy?

Of all the things that we cover in this book, this section may be the most important. Regardless of what you do in academics or in your career, money will be an important part of your life. In this section, we will review what *financial literacy* means.

Definition of Financial Literacy

Financial literacy is an umbrella term for the knowledge and skills that help people make smart decisions with their money. Use the following sections to guide you toward being more financially literate in high school and beyond.

General Knowledge

Know Who to Ask

- ◆ If you're looking for help on your math homework, you generally don't ask the English teacher to help! The same thing is true with finance—the real estate broker might be helpful when it comes to buying a house, but they won't be as helpful when it comes to doing your online banking. You need to talk to people who work and study economics and personal finance.
- ◆ This also applies to friends, family, and acquaintances. When people you know give you advice for how to spend your money, you should ask yourself, "How much does this person know about finances?" The more expertise someone has, the more you can trust their advice.

Personal Finance

- ◆ The general rule of personal finance is that your expenses should not outweigh your income (how much money you make).
- ◆ Carefully choosing a career and knowing how to balance your income and expenses can help you avoid going into debt.
- ◆ Investing your money wisely can also help you have more success financially.



College & Career Success Skills

Some of you may feel it's too soon to ponder college or career goals, while others might have been plotting their futures for years. Regardless of your stance, now is an opportune moment to reflect on how your current decisions can shape your long-term life.

Use the Concept IKIGAI

- ◆ Use the Japanese concept of IKIGAI (look it up!) to give yourself a framework of what it is that you want to accomplish in the coming years. Whether this is a familiar concept or a new one, now is the ideal time to consider how your choices align with your values and goals. I would recommend using IKIGAI as a guide while absorbing the skills introduced throughout this book.
- ◆ It's crucial to approach your IKIGAI and future goals with flexibility. Allow yourself to make changes when it feels necessary. Consistent reflection on this section can help you identify the skills you should cultivate in high school that will best prepare you for college and career success.

Identify Your Strengths

Ponder how your strengths can shape your future college and career experiences. For instance, if you thrive in social settings and enjoy working with children, a career as a teacher might align with your strengths.

- ◆ **Self-Reflection**—Take a moment to identify your strengths, encompassing your interests, passions, talents, and any other positive qualities that define you.
- ◆ **Personality Insight**—Explore your personality further by taking assessments like the Myers-Briggs Personality Test or other reputable online quizzes. These tools can offer insights into how your personality traits may align with specific workplaces or career paths.

Remember not to rely solely on these tests! Use them as brainstorming tools—the beginning of identifying what type of future fits your plans.



Summarizing

Directions: To summarize an informational text, readers restate the main ideas while focusing on the most important facts and details. After reading the article, think about how to summarize it in two or three sentences.

Wearable Technology

Wearable technology refers to electronic devices people can wear on their bodies, such as smartwatches. But wearable technology, or wearables, are not limited to smartwatches. Other kinds of wearables include fitness trackers, smart jewelry, and smart clothing. Wearables are often fun to use and can make life a lot easier. In the future, wearables may even change or save lives.

Smartwatches have become a powerful way for people to gather and track their health data. These impressive devices sit on your wrist and can track your heart rate, how many steps you take a day, and how many calories you burn. They can track your blood oxygen levels and how long you sleep at night, too. Some smartwatches can even connect you to friends or play audiobooks.

A similar wearable technology that is more discrete is a smart ring. These rings collect data from the pulse in your finger. Some smart rings can track your sleep, your heart rate, and your body temperature.

Smart clothing is another wearable becoming popular. It is made with types of cloth known as *electronic textiles*, or *e-textiles*. Electronic textiles use sensors, circuits, and other hardware to track activities. These wearables range from yoga gear that help you get into the right position to jean jackets that play music. One brand of smart exercise gear can track your heart rate and assess your stress levels. Another brand offers baby clothes that track sleeping and breathing habits. There are also swimsuits that alert you to apply sunscreen or get out of the sun.

Even the medical industry has developed wearables, including hearing aids and devices that administer medication. Medical tech improves the lives of many, but it can look awkward and bulky. However, Dr. Leah Heiss, a designer in Australia, designed crystal-shaped hearing aids that are both functional and visually appealing. She built the aids using rechargeable batteries. Each battery is magnetic, allowing users to simply click it into place. Many regular hearing aids use disposable batteries that are difficult to install for someone with arthritis. Heiss also created attractive diabetes jewelry in the form of shiny necklaces that use tiny needles to discreetly deliver insulin while looking like regular jewelry.

Wearable technology is changing lives. It is also making healthcare empowering and accessible.



Dr. Heiss and some of her jewelry designs

Summarizing (cont.)

Directions: Answer the questions about the article “Wearable Technology.”

1. Which sentence best summarizes this text?
 - (A) Medical technology today is visually appealing and easier to use.
 - (B) Smart clothing is a trendy way to improve your health.
 - (C) Smartwatches have health and entertainment benefits.
 - (D) Wearable technologies help people monitor their health.

2. Which new paragraph topic would be the best addition to this article?
 - (A) how gyms are using advanced workout machines to improve fitness
 - (B) how hospitals are using adhesive biosensor patches to collect patient data
 - (C) how augmented reality windshields are improving navigation and car safety
 - (D) how artificial intelligence is enabling doctors to diagnose and treat diseases earlier

3. How are the designs Dr. Heiss created different from other medical technology?
 - (A) They are wearable.
 - (B) They are less expensive.
 - (C) They are more attractive.
 - (D) They needed a common name that is easy to remember.

4. Which sentence from the text best summarizes the fifth paragraph?
 - (A) “Even the medical industry has developed wearables, including hearing aids and devices that administer medication.”
 - (B) “Medical tech improves the lives of many, but it can look awkward and bulky.”
 - (C) “Many regular hearing aids use disposable batteries that are difficult to install for someone with arthritis.”
 - (D) “Heiss also created attractive diabetes jewelry in the form of shiny necklaces that uses tiny needles to discreetly deliver insulin while looking like regular jewelry.”

5. Write a two- to three-sentence summary of “Wearable Technology” in your own words.

Adding and Subtracting Polynomial Expressions

Directions: Simplify each expression, and write the expression in standard form. Use the workspace to show your work.

When adding and subtracting expressions, only “like terms” can be added or subtracted.

Example 1

Simplify: $(5x^2 - 12x + 3) + (-2x^2 + 8x - 4)$

$$5x^2 + (-2x^2) = 3x^2$$

$$-12x + 8x = -4x$$

$$3 + (-4) = -1$$

$$3x^2 - 4x - 1$$

Example 2

Simplify: $(-3g^3 - 6g + 5) - (5g^3 - 2g^2 + 8)$

$$-3g^3 - 5g^3 = -8g^3$$

$$-(-2g^2) = 2g^2$$

$$-6g = -6g$$

$$5 - 8 = -3$$

$$-8g^3 + 2g^2 - 6g - 3$$

1. What is the sum of $2k^2 - 5k + 3$ and $7k^2 - 3k + 6$?

2. Simplify:
 $(2v^3 - 8v^2 + 4v) + (-5v^3 + 3v^2 - v)$

3. Add: $(9m^2 + 3m) + (-m^2 + 5m - 6)$

4. Simplify:
 $(2n^3 - 5n^2 + 13) + (2n^2 - 8n - 7)$

5. What is the difference of $3w^2 - 4w + 3$ and $9w^2 + 12w - 4$?

6. Simplify:
 $(p^3 + 2) - (6p^3 - 5p + 4)$

7. Subtract:
 $(6n^2 + 8n - 3) - (5n^2 + 3n - 10)$

8. Simplify:
 $(2k^3 - 4k^2 - 6k) - (9k^2 + 4k - 3)$

Balls in a Gym Closet

Directions: Use the clues to determine the number of each type of ball in a gym closet, considering each type has a different number. Mark your answer in the table.

Clues

- ◆ There are 3 more basketballs than footballs.
- ◆ There are more basketballs than baseballs.
- ◆ There are 3 fewer volleyballs than baseballs.

	Baseballs	Basketballs	Footballs	Volleyballs
4				
6				
7				
9				

