



#### **Kentucky Educational Television**

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The FastForward system is produced by KET, Kentucky Educational Television. KET is the largest PBS member network in America, delivering both the PBS national schedule and our own wide range of local arts, cultural, documentary, and public affairs productions throughout Kentucky and into surrounding states. For more than 40 years, KET has been widely acknowledged as a premier producer of adult basic skills and workplace education resources.

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## **Components of FastForward**

#### Online Courses

A complete online curriculum helps students prepare for high school equivalency exams. Designed for classroom use as well as independent study, the multimedia courses allow teachers to manage, track, and report student enrollment and activity. Courses are approved for use to prepare for the GED®, HiSET®, and TASC tests.

#### "Basics" Workbooks

Five workbooks—*Math Basics*, *Writing Basics*, *Reading Basics*, *Science Basics*, and *Social Studies Basics*—are written at the 6th-8th grade reading level and build a foundation for higher-level study. Books include video segments and are available in print and as e-books.

#### "Skills for Success" Workbooks

Two workbooks—*Math Skills for Success* and *Language Arts Skills for Success*—help students freshen up their skills before taking a high school equivalency exam. Books include video segments and are available in print and as e-books.

#### **Inside This Preview Guide**

#### FastForward Online Courses

This preview guide includes a list of features and information about **FastForward**, KET's online high school equivalency curriculum. Learn about teacher tools, reports, helpful features, content, and structure.

## Writing Basics Workbook "Writing Effective Sentences"

You will find pages from the "Writing Effective Sentences" chapter of the Writing Basics workbook and a detailed description of the content in each "Basics" book.

## Math Skills for Success Workbook "Linear Equations"

An excerpt from the "Linear Equations" chapter of the *Math Skills for Success* workbook and a detailed description of the content in each "Skills for Success" book is also included.



#### **Watch the Workbook Videos**

To watch the videos from the **FastForward** workbooks, visit KETFastForward.org/ebookvideos.



## **FASTFORWARD ONLINE COURSES**

**FastForward** online courses in math, language arts, science, and social studies are:

- Flexible, for use in the classroom, at home, or any place with Internet access;
- Mobile friendly for tablets and smart phones;
- **Self-paced**, with personalized study plans, step-by-step instructions, and lots of feedback;
- **Interactive**, including animations, instructional videos, and techenhanced quiz item types, motivational badges; and
- **Helpful**, with text-to-speech features, customizable background colors, an on-screen highlighter, a calculator, and more.

#### The courses include:

- Computer skills students need;
- Class tools for enrolling, tracking, and generating reports, including time on task and quiz grades;
- Reusable seats that allow for flexible enrollments; and
- A Teacher Toolkit with lesson plans, professional development, correlations to standards and assessment targets, and more.

#### Ready for a free trial?

Sign up for a two-week trial account at tinyurl.com/FF-2weeks.

Call (800) 354-9067, e-mail adulted@ket.org, or visit KETFastForward.org for more information.







## What are people saying about FastForward?

"I wanted to pass on to you a story about our first student to pass the 2014 GED® test this fiscal year. Her success is all due to FastForward. She is a stay-athome mom with a two-year-old child and no transportation. She was unable to come to the center because of a lack of child care and a lack of transportation. She used **FastForward** to improve her skills and to pass the GED® with impressive scores.... Thank you so much for all of the wonderful products you provide to improve the lives of our students."

> -Pat McKinley, Instructor Todd County, Ky.

"Just a few lines to say I am studying on the computer and it is helping me out a lot. I know I have got a long way to go before I am ready to take the test. Thanks for going along with me [and] helping me out."

-Regina Nattion FastForward student

"Tammy became a dedicated full-time student at Bluegrass Community and Technical College's Scott County Adult Education in Georgetown so that she could reach her goals.... After a long journey, Tammy conquered the obstacles and made the sacrifices needed to accomplish her dreams. There is no doubt that KET's FastForward played a major role in her success."

-Tina Whaley, Instructor Scott County, Ky.



### **FASTFORWARD COURSE CONTENT**

FastForward includes courses in math, language arts, science, and social studies. Math and language arts contain multiple sections. This list provides a brief description of the content included in each course.

#### Math

#### Reasoning with Numbers, Statistics, and Geometry

This section covers four topics and includes 19 lessons.
Topics include: Number Sense, Operations, and Problem
Solving; Problem Solving with Ratio, Proportion, and
Percent; Problem Solving with Statistical Measurement; and
Problem Solving with Geometric Measurement.

#### **Algebraic Reasoning**

This section covers seven topics and includes 18 lessons. Topics include: Numbers and Operations, Linear Expressions, Linear Equations, Systems of Equations and Linear Equalities, Patterns and Functions, Polynomials and Rational Expressions, and Quadratic Equations.

#### Language Arts

#### Language

This section covers three topics and includes eight lessons. Topics include: Effective Sentence Structure; Correct Grammar and Usage; and Correct Spelling, Capitalization, and Punctuation.

#### Reading

This section covers seven topics and includes 15 lessons. Topics include: Analyze Central Ideas and Supporting Details, Analyze Development of Ideas, Interpret Words and Phrases, Determine Author's Purpose or Point of View, Analyze the Structure of Text, Evaluate Arguments and Reasoning, and Synthesize Multiple Sources.

#### Writing

This section covers two topics and includes 11 lessons. Topics include: Writing Basics and Construct Extended Responses to Text.

#### Science

This course covers five topics and includes 13 lessons. Topics include: Life Science, Physical Science, Earth and Space Science, Science Practices, and Short Answer Construction.

#### Social Studies

This course covers five topics and includes 16 lessons. Topics include: United States History, Civics and Government, Economics, Geography and the World, and Social Studies Practices.

#### FASTFORWARD "BASICS" WORKBOOKS CONTENT

Writing Basics is one of five workbooks designed to help adult learners build a foundation for higher-level study. Writing Basics, Reading Basics, Math Basics, Science Basics, and Social Studies Basics are available in print and as e-books. Each book includes instructional video segments, a pretest, a posttest, an answer key with detailed explanations, and additional resources.

This list provides a brief description of the content included in each book.

#### Writing Basics

Writing Basics offers you a general overview of writing concepts and skills. From a basic understanding that writing is a way to express ideas and feelings, this book covers the writing process; organized writing; effective sentences; grammar and usage; and the mechanics of spelling, punctuation, and capitalization.

#### Reading Basics

Reading Basics starts with the practical skills of reading for information and analyzing and understanding nonfiction. Then, learn about critical thinking skills through reading fiction, poetry, and drama.

#### Math Basics

Math Basics gives a broad introduction to math, from developing number sense and an understanding the basics of problem solving, to specific help with decimals, fractions, ratios, proportion, and percent. You will also work with measurements and data analysis and see how math applies to everyday life.

#### Science Basics

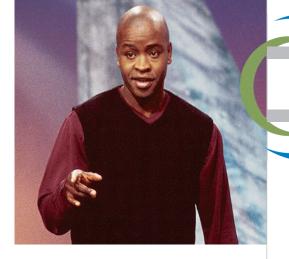
Science Basics covers life science, earth and space science, chemistry, and physics. You will study the basic building blocks of life and learn how the environment affects living things. Explore the structure and systems of our planet and its place in the universe, the structure of matter and how chemicals behave, and how the laws of physics apply to everyday life.

#### Social Studies Basics

Social Studies Basics covers United States history, world history, economics, civics and government, and geography. As you learn about the settling and building of the U.S. and the rise of major civilizations around the world, you will also learn how to read and understand maps, charts, graphs, and timelines. You will study the U.S. government and learn how the economy works for the nation and for individuals.

The following sample lesson is excerpted from the FastForward Writing Basics workbook.





#### INTRODUCTION

## **Effective Sentences**

#### I. Think About the Topic

Reading would be boring if all sentences were the same. This chapter explains the difference between complete sentences and fragments, and tells how to write compound and complex sentences to make your writing more interesting. Use variety!

You will also learn to recognize poor construction that can make sentences confusing and hard to understand. Teachers and professional writers say that using correct, complete sentences is even more important when you are writing than when you are speaking. Why do you think that is true?

#### 2. Give It a Try

The sentences you use can determine the rhythm of your writing. Try writing a piece with a quick, choppy rhythm.

# You might have written something similar to this: I left for work. I was very late. I had to drive. My car was old. It had trouble starting. It stuttered and stopped a lot. I barely made it on time.

#### 3. Study the Vocabulary

Review the terms on the next page. Understanding their meaning will help you understand the rest of this lesson.

#### **LESSON GOALS**



#### WRITING SKILLS

- Write complete sentences and correct fragments and run-ons
- Write compound sentences
- Write complex sentences



#### **WRITER'S TOOL**

Combine sentences



## ESSAY CONNECTION

Use a variety of sentence types



#### **REVIEW**

Review: Effective Sentences

#### EXTRA PRACTICE, pp. 152-155

- Complete Sentences
- Compound Sentences
- Complex Sentences
- Essay

Three short videos tell more about the writing process. You can watch them now or when you get to that section of the lesson.







**Compound Sentences** 



**Complex Sentences** 

#### **LEARN MORE**

#### I. Ask Yourself

Why are clear and complete sentences important to your writing?

What are some of the various types of sentence structures?

Why should you vary sentence structure and length in your writing?

How can you identify fragments and run-ons?

#### 2. Make the Connection

Think about the difference between speaking and writing. In a journal or on a separate sheet of paper, write about your day. Then tell a friend or family member about your day. Notice the differences in how you write about the events of your day and how you speak about them.

#### comma splice—

a compound sentence mistakenly written without the conjunction

#### complex sentence—

a sentence made up of a complete thought (main clause) and an incomplete thought (dependent thought)

#### compound sentence—

two simple sentences connected with a comma and a conjunction

#### conjunction—a

connecting word

**fragment**—an incomplete sentence

predicate—the part of a sentence that tells the action or describes the subject.

The predicate always includes a verb.

#### run-on sentence-

a compound sentence mistakenly written with two or more complete thoughts

**sentence**—a complete thought

#### simple sentence—

a sentence with just one subject and one predicate

**subject**—the part of a sentence that tells who or what is acting or being described in the sentence

**verb**—a word that shows action or a state of being



"To write, you really have to fall in love with sentences."

## Complete Sentences

#### Why Are Complete Sentences Important?

A **sentence** is a complete thought. Every sentence you write should help your reader understand your message. However, a sentence can be confusing—especially if it's not really a sentence! For example, read the paragraph below. Underline any confusing "sentences" that are really incomplete thoughts.

Taco Dan's is the best Tex-Mex cooking in town. A plateful of soft tacos. Dan serves up a great burrito with melted cheese on top. Also having a children's menu.

Did you notice any problems? You probably underlined two incomplete sentences: the second and the fourth.

#### **Completing Fragments**

An incomplete sentence is a **fragment**. It has something missing. You might remember from the program that a complete sentence has a subject and a predicate. The **subject** tells you who or what is acting or being described. The **predicate** tells you the action or describes the state of the subject. A **verb** is always part of the predicate. It is the word that shows the action (such as *take*) or the state of being (such as *is* or *seem*).

Look at what's missing from the fragments in the paragraph about Taco Dan's.



**Fragment:** A plateful of soft tacos.

**Complete sentence:** A plateful of soft tacos is enough for two people.

The predicate was missing from that fragment. You might have wondered, *What about the plateful of soft tacos? Did the writer forget something?* 

#### EXAMPLE

**Fragment:** Also having a children's menu.

**Complete sentence:** Taco Dan's also has a children's menu.

The subject was missing from that fragment. You might have thought, "That sentence doesn't start out right." When the writer added the subject, she had to change the verb too—from *having* to *has*.

You can learn to spot fragments in your own writing. To find fragments, use your ear. Read each sentence in your writing out loud. Does it sound complete?



A Good Sentence



### Review: Effective Sentences

## Choose the <u>one best answer</u> to each question.

<u>Questions 1 through 4</u> refer to the following letter to a customer.

Dear Dan:

#### (A)

- (1) Thank you for your call this morning.(2) I certainly understand why you were upset, I am very sorry that we printed your menus on the wrong color paper.
  - **(B)**
- (3) Because you are a valued customer at Speedy Printing. (4) We would like to make this up to you. (5) We have reprinted your menus on the correct paper and I would also like to offer you a special discount for the next three months. (6) Your orders at a 20 percent discount through July 1.

#### (C)

(7) I hope you'll be bringing us your business for many years to come, Dan. (8) Best of luck with the new menu.

Sincerely, Alicia Rodales, President

I. Sentence 2: I certainly understand why you were upset, I am very sorry that we printed your menus on the wrong color paper.

Which correction should be made to sentence 2?

- (A) insert a comma after understand
- **(B)** change the comma to a question mark
- (C) insert and after the comma
- **(D)** no correction is necessary

 Sentences 3 and 4: Because you are a valued customer at Speedy <u>Printing</u>.
 We would like to make this up to you.

Which is the best way to write the underlined portion of these sentences? If the original is the best way, choose option (A).

- (A) Printing. We
- (B) Printing, we
- (C) Printing, but we
- (D) Printing we
- 3. Sentence 5: We have reprinted your menus on the correct paper and I would also like to offer you a special discount for the next three months.

Which correction should be made to sentence 5?

- (A) insert a comma after paper
- (B) remove and before I
- **(C)** replace <u>I would also like</u> with liking
- **(D)** no correction is necessary
- 4. Sentence 6: Your orders at a 20 percent discount through July 1.

Which is the best way to write the underlined portion of this sentence? If the original is the best way, choose option (A).

- (A) Your orders
- **(B)** For you, orders
- **(C)** Giving your orders
- (D) You can order

# FASTFORWARD "SKILLS FOR SUCCESS" WORKBOOKS CONTENT

Math Skills for Success is one of two workbooks designed to help learners freshen up their skills before taking a high school equivalency exam. Math Skills for Success and Language Arts Skills for Success are available in print and as e-books. Books include instructional videos, plenty of practice questions, lesson reviews, answer keys with detailed explanations, and additional resources.

This list provides a brief description of the content included in each book.

#### Math Skills for Success

Math Skills for Success includes lessons and practice on number sense; problem solving; fractions, decimals, and percents; statistics and probability; geometric measurement; expressions; linear equations; graphs and slope; inequalities; quadratic equations; and functions. This book also includes a posttest.

#### Language Arts Skills for Success

Language Arts Skills for Success includes lessons and practice on interpreting nonfiction and informational text; interpreting fiction; analyzing an author's argument; synthesizing information; preparing to write; writing responses to text; writing effective sentences; using correct grammar; and using correct spelling, capitalization, and punctuation.

The following sample lesson is excerpted from the FastForward Math Skills for Success workbook.





## **Linear Equations**

THE FOLLOWING LESSONS FOCUS ON SKILLS THAT WILL HELP YOU:

- Use properties of equality with equations
- Use distribution to factor and expand equations
- Solve real-world problems with equations

Have you ever wondered how people in the past weighed small things? Gold miners in the west took the gold they found to bankers, who put the gold on one side of a balance scale and small weights on the other side. When the two sides balanced, the banker added the weights and paid the miner for the gold.

Keeping an equation balanced is the key to solving for an unknown. In these lessons, you will learn how to work with both sides of an equation and how to use inverse operations to uncover the value of a variable. You will get practice writing equations to represent real-life situations. These ideas are at the core of becoming an excellent problem solver. Make sure you understand these ideas before you continue your study of algebra.

#### Skill: Use properties of equality with equations

#### vocabulary

addition property of equality: adding the same number to both sides of an equation results in an equivalent equation

inverse operations: operations that undo each other

multiplication property of equality: multiplying both sides of an equation by the same number results in an equivalent equation



When solving or simplifying equations, always perform the same operation to both sides of the equation.

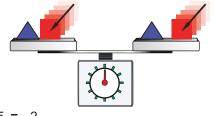


**Use Properties of Equality** with Equations KETFastForward.org/

ebookvideos

The properties of equality are the rules for working with equations. These rules define what you can do to the two sides of an equation while you are solving it.

The addition property of equality says that you can add the same amount to both sides of an equation to get an equivalent, or balanced, equation.



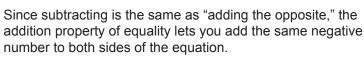
You can apply this property to solve equations.

**EXAMPLE** Solve for *x*: 
$$x - 5 = -2$$

Add 5 to both sides of the equation.

ANSWER: The equation is still balanced because you added the same number to both sides. After adding, you can see that x = 3.

What about subtraction? Can you subtract the same number from both sides of an equation?





See how this works when solving an equation.

**EXAMPLE** Solve for *y*: 
$$y + 3 = 7$$

$$y+3 = 7$$

$$-3 \quad -3$$

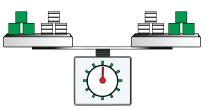
Add –3 to both sides of the equation.

$$\frac{-3}{y} = \frac{-3}{4}$$

ANSWER: The equation is still balanced because you added the same number to both sides. After adding, you can see that y = 4.

The multiplication property of equality says that you can multiply both sides of an equation by the same quantity to get an equivalent equation. In other words, the equation will remain balanced.

Since multiplication is the opposite of division, the same property allows you to divide both sides by the same quantity.



Think about the drawing. Can you see that it can represent both multiplication and division? It could show 3 multiplied by 2, or 6 divided by 2. Why does it work? Dividing by 2 is the same as multiplying by  $\frac{1}{2}$ .

**EXAMPLES** 

Solve: 
$$\frac{1}{2}x = 3$$

Solve: 4y = 28

Multiply both sides by 2.

Divide both sides by 4. 
$$4y = 28$$

$$2 \cdot \frac{1}{2}x = 2 \cdot 3$$

$$v = 7$$

STRATEGY: When solving an equation, you want to isolate the variable on one side of the equal sign. To solve an equation, you can use one inverse operation to undo its opposite.

- Use addition to undo subtraction.
- Use subtraction to undo addition.
- · Use multiplication to undo division.
- Use division to undo multiplication.

## Skill PRACTICE

#### **QUESTION 1**

**1.** Solve x + 2 = 5.

A. 
$$x = \frac{5}{2}$$

B. 
$$x = 3$$

C. 
$$x = 7$$

D. 
$$x = 10$$

#### **QUESTION 2**

2. Solve 5t = 30.

Hint: What operation undoes multiplication?

#### QUESTION 3

- 3. Which step should be taken to solve x-5=-2?
  - A. Add –2 to both sides.
  - B. Subtract 5 from both sides.
  - C. Add 5 to both sides.
  - D. Add -5 to both sides.

#### **QUESTION 4**

**4.** Which step should be taken to solve  $\frac{x}{9} = 4$ ?

A. Multiply both sides by 9.

B. Multiply both sides by  $\frac{1}{9}$ .

C. Divide both sides by 4.

D. Divide both sides by 9.

#### **QUESTION 5**

5. Solve -2 + r = 22.

A. 
$$r = -24$$

B. 
$$r = -20$$

C. 
$$r = 20$$

D. 
$$r = 24$$

## DROPPING BACK IN

Meet some of America's dropouts, learn about the issues they face and the people and programs helping them drop back in and move on with their educations and lives. Watch the entire series at **DroppingBackIn.org**.



#### **Second Chances**

When an individual drops out of school, the personal and public costs are tremendous. So are the potential gains of second chances.

#### More than a Statistic

The longer someone is out of school, the harder it is to go back. Visit alternative schools and programs designed to reach young dropouts as quickly as possible.

#### **Building a Better Life**

This program looks at successful apprentice and training-based programs that are preparing undereducated and underemployed people for available jobs by teaching marketable skills.

#### **Working for the Future**

Helping America's dropouts attain college and career readiness requires new thinking about high school equivalency and post-secondary education. As a result, community colleges and other higher education institutions are changing.

#### **Complicated Lives**

Why does someone drop out of school? Why does it take some dropouts years to attain a GED® credential? The challenges dropouts face go far beyond academics. Helping to meet the demands of their complicated lives is a key success for these featured adult education programs.





## **FASTFORWARD**





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