

# GED® Test Curriculum Blueprint



An Educator's Guide to Being GED® Test-Ready

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**Essential Education**  
*Learning Made CERTAIN*

**Section 1**  
**About the**  
**GED<sup>®</sup> Test**

*And How It Affects Your Classroom*



## *The* Big Picture

THE updated GED test requirements represent a huge step toward improving the literacy of high school non-completers. It pushes, or perhaps pulls, adult education to a higher level of education competency. The question, though, is how do we get there? Simply raising the bar for obtaining a high school equivalency diploma does not magically transform the way we teach. In the end, it comes down to what happens in the classroom. The most rigorous assessments mean nothing if the test-taker is not prepared.

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## *Adjusting* Your Curriculum

A QUESTION teachers often ask is whether there are some magic bullets: one or two overarching instructional themes that they can overlay on their current curriculum to ensure their students are getting what they need to not only pass the GED or other HSE tests, but to prepare them for the workforce and higher education. It is clear from the GED Assessment Guide as well the Common Core State Standards that the fundamental focus is on a thinking curriculum, teaching adults how to reason in the context of real-life reading texts, science concepts, social science, and writing. The second essential take-away is the critical importance of digital literacy. Without basic computer navigation skills and the ability to complete the question types for the computer-based test, test-takers will not pass.

The key question, then, is how to apply these overarching directions to the Adult Basic Education (ABE) and GED test preparation curriculum. That is the purpose of this booklet. It is divided into three sections. First, there is an overview of the most important aspects of the GED test and how they affect the adult education instructor, including a discussion of each subject or test area. The second section includes resources that will be valuable for the GED test instructor. Section three is a detailed blueprint of exactly how the ABE and GED test preparation curriculum needs to be structured to meet the CCSS and GED Assessment Targets. This curriculum blueprint will also align the CCSS and GED test prep curriculum with the GED Academy computer-based learning program.

The fundamental  
focus is

on a

*thinking  
curriculum.*

The second  
essential

take-away is  
the critical

importance of

*digital  
literacy.*

## *Aligned* with Common Core State Standards (CCSS)

### What Is the CCSS?

THE CCSS<sup>1</sup> is a grade level progression of core skills from K through 12. They are evidenced-based and are aligned with Career and College Readiness. The standards are designed to be robust and relevant to the real world and reflect the knowledge and skills that are needed for success in college and careers.

K–12 education is quickly moving to the Common Core State Standards (CCSS). During the 2014–2015 school year, K–12 students were assessed on Common Core standards for the first time. The GED Assessment Targets are aligned to the CCSS, though not all CCSS are included in the GED Assessment Targets.

### What It Means for the Adult Ed Classroom

IN SIMPLE TERMS, adult education will need to transition to the CCSS. The question is, when and how? Trying to build a curriculum based on assessment standards and targets is problematic. Knowing what will be tested is helpful to the curriculum developer and teacher, but it does not map out the content that makes up the curriculum. The assessment targets point to what outcomes are desired, but not how to get the students there.

What this booklet will do is identify the core skills and reasoning processes that need to be a part of the GED (or any HSE) curricula. It will also give the teacher easy-to-use checklists to determine the robustness of their GED programs to prepare students for the GED test. There are several categories that will be considered: the requirements of the GED and potential future changes; the use of Webb's Depth of Knowledge to distinguish levels of understanding; and computer-based testing in general. Then, this booklet will explore the math, language arts, social studies, and science content areas specifically.

This booklet will identify the *core skills* and *reasoning processes* that need to be a part of the GED or any HSE curricula.

## *Webb's* Depth of Knowledge (DOK) Instead of Bloom's Taxonomy

### What Is DOK?

FUNDAMENTALLY, building lessons based on DOK rather than Bloom's Taxonomy structure means changing the emphasis to cognitive processes instead of just learner activity. It means adding a core of reasoning skills to the lessons. (2.4)<sup>2</sup>

### What It Means for the Adult Ed Classroom

GED PREPARATION content should have more emphasis on understanding and reasoning than procedure. For example, a DOK math activity might teach students how to plan a solution or outline a path of reasoning to solve a problem. This is a major change in emphasis beyond memorizing a procedure or algorithm. The goal is to teach students a set of tools that enable them to reason effectively when confronted with problems instead of relying on remembering rules and procedures.

Page 28 gives you a tool that will quickly turn lessons into DOK levels 2 and 3. Use the DOK questions and activity suggestions to build higher order reasoning lessons and activities. DOK lessons will place more emphasis on understanding and reasoning instead of procedure.

## *Computer-Based* Testing

### What Is It?

THE GED TEST is a computer-based test. GED testing centers are required to test on computers, except for students who are approved for special accommodations that include paper-based testing. The GED test includes a number of technology-enhanced items, which GED test-takers should have practice using prior to sitting for the exam. (1.4–1.23) See page 23 for more about these test items.

### Make a Classroom DOK Checklist

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### GED

preparation content should have more emphasis on *understanding and reasoning* than procedure.

<sup>2</sup> Refers to the chapter and page number in the GED Assessment Guide: <http://www.gedtestingservice.com/educators/the-new-assessment-downloads>

## What It Means for the Adult Ed Classroom

COMPUTER LITERACY is clearly a requirement in today's workplace and a fundamental mandate of adult education. But the reality is that digital literacy is not a core part of many adult education programs. The challenge is to update the core ABE and HSE/GED programs immediately to include basic computer skills such as keyboarding and other basic computer techniques.

Clearly, if a test-taker cannot type a minimum of 20 words per minute, he or she will be penalized on the Extended Response and Short Answer items on the GED test. Basic computer literacy must be an integral part of GED test preparation and include assessment tools to determine readiness for this important part of the test. For information about how Computer Essentials can help prepare your students, see page 55.

The challenge is to update the core ABE and HSE/GED programs immediately to include *basic computer skills* such as keyboarding.

## *A Moving* Target for Passing the GED Test

### A Progressively More Difficult Test

PASSING STANDARDS for the GED test are dynamic instead of static, as in the 2002 series test. The GEDTS will conduct new norming studies as more rigorous standards are implemented in K-12 education and update the test to reflect the data. (1.28)

## What It Means for the Adult Ed Classroom

CURRICULUM DEVELOPERS and teachers will need to continually update their curriculum to reflect an increasingly more rigorous GED test. (1.28) In other words, the GED test will likely get more difficult as new norming studies are conducted, making preparation for it challenging.



# GED Mathematical Reasoning Test

## // a Nutshell

THE GED Mathematics Reasoning Test requires substantially more math preparation than the 2002 Series GED Test. The emphasis on deep mastery means that in addition to more content preparation, instructors need to include instruction on mathematical practices. The bottom line is that the Mathematics Reasoning Test requires a dramatic overhaul of the math curriculum for most adult ed programs. (2.79)

## *Math* Content

THE GED Mathematical Reasoning Test focuses on problem solving in two areas: (2.21)

- Quantitative problem solving (45%)
- Algebraic problem solving (55%)

## What It Means for the Adult Ed Classroom

THERE NEEDS to be a much greater emphasis on basic algebra to prepare students for the GED test. Since many Adult Education (AE) students require ABE instruction in math before they are able to move to secondary material, the increased emphasis on algebra means more instruction time in math for many GED credential students. Focusing on algebraic concepts integrated with ABE instruction will help prepare students for higher level math and help students prepare faster.

There will have to be a much greater emphasis on *basic algebra* to prepare students.

## 2002 Series Comparison

Number  
Operations and  
Number Sense  
20–30%

Measurement and  
Geometry  
20–30%

Data Analysis,  
Statistics, and  
Probability  
20–30%

Algebra,  
Functions, and  
Patterns  
20–30%

## What's Actually Tested?

THE GEDTS has grouped each content area's assessment targets into reporting categories. (3.14–3.16) The reporting categories are groups of skills in which the test-taker's scores are aggregated. In the mathematics area, there are four reporting categories: (3.27)

25%	Quantitative Problems in Rational Numbers
20%	Quantitative Problems in Measurement
30%	Algebraic Problem Solving with Linear Equations and Expressions
25%	Algebraic Problem Solving with Graphs and Functions

The reporting categories are given percentage weights according to their relative importance on the GED test. These percentages should guide instructors in the development of a curriculum.

## *More* Clarity with Skill Articulation

THE CCSS describes a core set of math skills through progressive grade levels. The GED Assessment Targets are aligned to a set of CCSS that represent the current level of high school equivalency. GED test takers are assessed for their mastery of the GED Assessment Targets. For a student to show mastery of the skill(s) identified by a GED Assessment Target, there are a set of foundational skills that contribute to the understanding and mastery of the skill. Consequently, it may be necessary for instructors to spend more time on mastering foundational skills than it was with the 2002 Series GED test. (2.79) Further, there is an increased emphasis in the CCSS and GED Assessment Targets on addressing mathematical practices. These are more generalized practices that students and test-takers need to be able to use while applying the core skills.

## What It Means for the Adult Ed Classroom

THE INCREASED granularity of the CCSS gives GED instructors more guidance for developing their GED curriculum. The skills are broken down in much greater detail than the 2002 Series content, enabling more clarity in what needs to be taught. However, most math programs need to add substantially more content as well as emphasis on cognitive processes and practices in order to prepare students sufficiently for the GED test.

## *Mathematical* Practices

APPROXIMATELY 30 percent of the GED test items are aligned to a mathematical practice standard in addition to a content indicator. The practices are based on NCTM<sup>3</sup> process standards and the National Research Council's report *Adding It Up*.<sup>4</sup> Below are the GED test mathematical practices. (2.27)

### GED Test Mathematical Practices

#### *Building Solution Pathways and Lines of Reasoning*

- Search for and recognize entry points for solving a problem.
- Plan a solution pathway or outline a line of reasoning.
- Select the best solution pathway, according to given criteria.
- Recognize and identify missing information that is required to solve a problem.
- Select the appropriate mathematical technique(s) to use in solving a problem or a line of reasoning.

#### *Abstracting Problems*

- Represent real world problems algebraically.
- Represent real world problems visually.
- Recognize the important and salient attributes of a problem.

### My GED Math Test Curriculum Covers:

- 55% algebra emphasis
- Online scientific calculator
- Mathematical practices
- Basic computer skills for technology items
- DOK levels 2 and 3

3 <http://www.nctm.org>

4 [http://www.nap.edu/openbook.php?record\\_id=9822&page=115](http://www.nap.edu/openbook.php?record_id=9822&page=115)

Aligning to math practices is a major change to curriculum and requires *significant upgrades* in content and staff development.

### **Furthering Lines of Reasoning**

- Build steps of a line of reasoning or solution pathway, based on previous step or givens.
- Complete the lines of reasoning of others.
- Improve or correct a flawed line of reasoning.

### **Mathematical Fluency**

- Manipulate and solve arithmetic expressions.
- Transform and solve algebraic expressions.
- Display data or algebraic expressions graphically.

### **Evaluating Reasoning and Solution Pathways**

- Recognize flaws in others' reasoning.
- Recognize and use counterexamples.
- Identify the information required to evaluate a line of reasoning.

## **What It Means for the Adult Ed Classroom**

MATHEMATICAL practices are designed to teach students to do the thinking behind the problem and to put into words the reasoning that is required to actually solve a problem. Instead of merely teaching algorithms, GED instructors need to teach the math thinking accompanying the algorithm. For example, instead of just teaching a student to solve a linear equation with one unknown, the student will learn how search for and plan a solution pathway, and then build the steps of a line of reasoning to come up with a correct answer.

Why is learning mathematical practices important? One of the most compelling reasons is that no matter how effective our math teaching is, most of the math algorithms we teach will be forgotten because they are not used frequently enough for permanent retention. Secondly, in real life people encounter many math problems that are different from the ones they were taught in school and struggle to remember the algorithm that produces a solution. However, if in addition to learning basic math algorithms, students develop a conceptual framework for why the algorithms work as well as a process for approaching problems, then they are better equipped for real-life math. It is like the old adage: "Give a man a fish, he'll eat for a day. Teach a man to fish, he'll eat for a lifetime."



## Section 1: About the GED® Test

Aligning the GED test prep curriculum to mathematical practices is a very significant update to most GED math prep programs. This is a basic overhaul of the fundamental way of teaching mathematics and will require significant upgrades in content and staff development.

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### *Calculator*

CANDIDATES will be provided with an on-screen calculator, the Texas Instruments TI-30XS Multiview scientific calculator, for use on most of the items on the GED mathematics test. The on-screen calculator will also be provided for selected items on the science and social studies tests. (2.22)

### What It Means for the Adult Ed Classroom

GED TEST-TAKERS will need to be familiar with using a scientific calculator prior to taking the GED test. Test-takers can watch a demonstration video for the computer-based calculator at: <http://www.gedtestingservice.com/educators/ticalc>

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### *Math* Item Types

THE GED mathematical reasoning test features the following items. (1.6) See page 23 for a detailed description of these items.

- Multiple choice items
- Fill-in-the-blank items
- Drop-down items
- Hot spot items
- Drag-and-drop items

GED test-takers will need to be familiar with using a *scientific calculator* prior to taking the GED test.

# GED Reasoning Through Language Arts (RLA) Test

*In* a Nutshell

The two biggest challenges in Language Arts are the emphasis on *reasoning skills* in the context of argumentative text and an *essay requirement* which requires the test-taker to analyze source texts.

THE TWO biggest challenges in language arts are the emphasis on reasoning skills in the context of argumentative text and an essay requirement, called Extended Response, which requires the test-taker to analyze one or more source texts to produce a writing sample. (1.6) Test-takers will encounter multiple opportunities to demonstrate the ability to evaluate complex argumentative text and to analyze information in both the reading and writing sections. (2.69)

Essentially, the RLA test will require a higher level of thinking complexity than the 2002 Series test. Test-takers must demonstrate high level critical thinking and argumentative skills in all three areas.

## *One* Test, Not Two

UNLIKE THE 2002 Series test and other HSE exams, the GED Test groups all language arts under a single test which will include three types of content:

1. Reading Comprehension
2. Writing
3. Language Conventions and Usage

## *Concentration* on Informational Texts

A SIGNIFICANT change from the 2002 Series test is increased use of informational text. Seventy-five percent of the texts in the GED exam are informational texts (including nonfiction drawn from science and social studies as well as a range of texts from workplace contexts); twenty-five percent are literature. The texts included in the test cover a range of text complexity, including texts at the career- and college-readiness level. (2.11)

## What It Means for the Adult Ed Classroom

Teachers need to change the reading content in their reading programs to emphasize informational texts and include complex texts. For many programs, this will entail significant upgrades in reading texts and supplementary teaching materials.

## *Two* Overarching Reading Standards

TWO HIGH-LEVEL standards broadly govern all aspects of passage selection and item development in the reading comprehension area of the RLA test. Candidates are asked to determine main ideas, points of view, meanings of words and phrases, inferences and claims, and other aspects of texts, and those texts span a range of complexity, including texts at the career- and college-readiness level. (2.13)

### Overarching Reading Standards

- Determine the details of what is explicitly stated and make logical inferences or valid claims that square with textual evidence.
- Read and respond to questions from a range of texts that are from the upper levels of complexity, including texts at the career- and college-ready level of text complexity.

## *Additional* Reasoning Skills to Be Tested

COMPARED to the 2002 Series GED test, the RLA GED test adds the following reasoning skills to the reading section. (2.69)

- Analyze how individuals, events, and ideas develop and interact over the course of a text.
- Analyze the structure of texts, including how specific sentences or paragraphs relate to each other and the whole.
- Determine an author's purpose or point of view in a text and explain how it is conveyed and shapes the content and style of a text.
- Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.
- Analyze how two or more texts address similar themes or topics.

### 2002 Series Comparison

Literary Texts  
(5 Passages)  
75%

Non-fiction Prose  
(2 Passages)  
25%

Teachers will need to change the reading content in their reading programs to emphasize *informational texts.*

## *The* Essay, or Extended Response

THE EXTENDED Response task on the GED test presents test-takers with real-world situations where they can demonstrate their ability to develop an argument and support their ideas with text-based evidence. The GED test presents test-takers with two engaging passages describing opposing viewpoints on a similar topic. Test-takers will read the passages and evaluate which position is better supported, and then be expected to draw relevant and sufficient evidence from the passages to support analysis and reflection. (2.73)

### What It Means for the Adult Ed Classroom

INSTEAD OF descriptive or explanatory writing as required in the 2002 Series, the GED exam requires test-takers to develop an argument in which they use evidence directly drawn from provided passages to support their assertions. Test-takers will be evaluated on the following three traits: (3.8)

**Trait 1:** Analysis of arguments and use of evidence

**Trait 2:** Development of ideas and structure

**Trait 3:** Clarity and command of standard English conventions

GED reading and writing test preparation programs need to focus more on analysis of arguments and the use of evidence to build persuasive writing. It means that reading and writing programs are melded together, and just as important, that writing be an integral part of science and social studies programs.

### *Computer* Scoring for Extended Response Items

ALL ITEMS, including the 45 minute Extended Response item, are scored with computers in place of live test scorers. The computer scoring algorithms are programmed through an elaborate process of review with actual test-takers responses. Traits 1 and 2 (above) on the RLA rubric (3.8) require interpretation in the scoring process. The best preparation, however, focuses on strong reasoning and writing skills, instead of on computer scoring of Extended Responses.

Instead of descriptive or explanatory writing, the GED test requires the test-taker to develop an *argument* in which they use *evidence* directly from the passages.



## What It Means for the Adult Ed Classroom

GED WRITING programs need to be aligned to a set of standards and an evaluation rubric that is potentially more rigorous than what will be evaluated and scored on the GED test. Students need to delineate evidence and support in their writing in ways that will be clear in computer scoring.

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### *Computer*-Based Testing Requirements

THE GED test is a computer-based test requiring test-takers to use technology to produce writing. This requires sufficient command of keyboarding skills. Students who are not proficient at keyboarding will be effectively penalized by the estimated times for the Extended Response and Short Answer items, as they will struggle with the technology of communicating quickly with a keyboard.

## What It Means for the Adult Ed Classroom

TO BE successful with the CBT, the test-taker must be proficient at the following computer skills and functions.

- Following conventional web site navigation prompts.
- Using a mouse as an input device.
- Opening and closing informational windows.
- Moving informational windows around the screen.
- Using a scroll bar.
- Using item content on multiple pages accessed with tabs to answer single questions.
- Selecting answers on a coordinate plane grid.
- Typing on a keyboard.
- Understanding what symbols are allowed in short and long answer responses.
- Using the backspace and delete keys to remove content from answers, and navigating in text on the screen.
- Selecting words and moving them from one position to another in the Extended Response items.
- Using the editing tools in the Extended Response items.
- Copying and pasting.
- Using undo and redo features.

Students  
who are not  
proficient at  
*keyboarding*  
will be  
effectively  
penalized.

- Understanding the test-tracking tools included on the test.
- Flagging an item for review at a later time.
- Dragging and dropping text and images.
- Using hot spot questions.

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## *Language* Content Domain

THE LANGUAGE Conventions and Usage section of the GED test has shifted from the multiple-choice selection used on the 2002 Series to drop-down menus for the answer choices. After the test-taker chooses an answer, it then appears in the context of the sentence, allowing the test-taker to see the correctness of his or her answer. (2.18)

The language component measures a candidate's ability to demonstrate command of a foundational set of conventions of standard English that are important for career and college readiness. This core set includes essential components of grammar, usage, capitalization, and punctuation. (2.18)

### **What It Means for the Adult Ed Classroom**

WHILE THE 2002 Series covered extensive reasoning skills, the current GED test significantly raises the bar with its focus on analyzing argumentation with the new Extended Response and reading sections. Aligning with DOK levels 2 and 3 means the test-taker is required to demonstrate deep knowledge using reasoning, planning, and evidence. The AE language arts curriculum must shift to more practice and application with analyzing argumentative and deeper reasoning, implementing core language skills in the context of writing.

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### *RLA* Item Types

THE RLA test uses the following item types. (1.4) See page 23 for a detailed description of these items.

- Multiple choice items
- Fill-in-the-blank items
- Drag and drop items
- Drop-down items
- Extended Response

Aligning with  
DOK levels 2  
and 3 means  
the test-taker  
is required to  
demonstrate  
deep knowledge  
using  
*reasoning,  
planning, and  
evidence.*

# GED Science Test

## *In* a Nutshell

THE GED science test focuses on fundamentals of science reasoning by striking a balance between deeper conceptual understanding, procedural skill and fluency, and applying these in realistic situations.

The science test can be challenging because of the emphasis on science practices. The eight science practices focus on the test-taker's ability to glean information from scientific texts, reason with data representations, and apply key scientific models, theories, and processes. The alignment with DOK levels 2 and 3 means there is greater emphasis on complex reasoning. (2.84)

## *Science* Practices

THE EIGHT science practices on the GED test are skills that are key to scientific reasoning in both textual and quantitative contexts. They are loosely derived from the National Research Council's *A Framework for K–12 Science Education, Practices, Crosscutting Concepts, and Core Ideas* (2012). Each science test item will be aligned to one science practice and one content topic. Essentially, this means that test-takers are expected to be able to 'do' science rather than memorize or describe science concepts and processes. (2.31)

### GED Science Practices

- |   |  |
|---|--|
| 1. Comprehending Scientific Presentations | 2. Investigating Design (Experimental and Observational) |
| 3. Reasoning from Data                    | 4. Evaluating Conclusions with Evidence                  |
| 5. Working with Findings                  | 6. Expressing Scientific Information                     |
| 7. Scientific Theories                    | 8. Probability and Statistics                            |

## *Science* Content and Focusing Themes

THE THREE broad science content areas—Physical Science (40%), Life Science (40%), and Earth and Space Science (20%)—and the forty-one subtopic areas reflect what is taught in many high-school-level science courses and the science that is most relevant for an adult population. (2.31) Test-takers are expected to be broadly familiar with the concepts in each content topic, but are not expected to have in-depth and comprehensive knowledge of each subtopic.

The GED science test can be challenging because of the emphasis on *science practices*.

### 2002 Series Comparison

Physical Science  
35%

Life Science  
45%

Earth and Space Science  
20%

Teach a more  
focused  
curriculum on a  
foundation of  
*how to do  
science.*

### Student Readiness for CBT Science Items

- Can use a mouse
- Can drag and drop
- Can keyboard at 20 wpm
- Can complete “hot spot” questions
- Can express understanding and analysis in paragraph-length answers

The content from the three types of science is focused on two distinct themes, thereby limiting content that falls outside of these themes. (2.35)

- Human Health and Living Systems
- Energy and Related Systems

### What It Means for the Adult Ed Classroom

LIKE THE 2002 Series test, the current GED exam does not require test-takers to know science content or facts beyond a broad familiarity with concepts. (2.35) (2.44) The greater clarity in the science assessment targets and the defining of the eight science practices focuses the GED science curriculum on very specific science skills.

The GED science test gives instructors clearly defined expectations. However, due to the shifting focus toward science practices and higher reasoning abilities, DOK level 2 and level 3, most curricula require a substantial overhaul. Teachers now know more clearly what theories to teach for the science test, but have to teach a more focused curriculum that builds on a foundation of how to do science in the context of actual science material from the three main topic areas within the themes above. Students should be able to cite evidence from a scientific text and design a logical experiment that includes a hypothesis, a control group, data collection, and criteria to evaluate the data and whether it supports the hypothesis.

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### *Science* Item Types

THE SCIENCE test will use the following item types. See page 23 for a detailed description of these items. Approximately 50 percent of the items will be presented in item scenarios which will be used for two to three items.

- Multiple-choice items
- Fill-in-the-blank items
- Short answer items
- Drag-and-drop items
- Hot spot items



# GED Social Studies Test

*In* a Nutshell

THE GED social studies test includes content from ninety-seven subtopics. Each topic is aligned with one of the eleven new social studies practices. This is a huge amount of content to cover in the GED social studies curriculum. The question teachers will face is what do they teach to prepare students adequately for the GED test? Do they focus on the four content areas: U.S. History, Civics and Government, Economics, and Geography and the World? Or do they focus on the thinking and reasoning skills outlined in the social studies practices? (2.41) (2.90)

There is a consistent thread that runs through all of the GED test areas: high level reasoning skills. This is the biggest single change in the current GED test compared to the 2002 Series. Focusing the social studies content on thinking skills in the context of the broadest range of subtopic content possible will best prepare students for the GED social studies test.

## *Social* Studies Content

THE social studies test draws from four content domains: Civics and Government (50%), United States History (20%), Geography and the World (15%), and Economics (15%). As in the science test, the broad domains are broken down into subtopics to narrow the scope of what will be assessed. The social studies content domains comprise ninety-seven subtopics. Test-takers are expected to be broadly familiar with the concepts in each content topic, but are not expected to have in-depth and comprehensive knowledge of each subtopic. (2.40) The GED social studies test focuses on the fundamentals of social studies reasoning, striking a balance of deeper conceptual understanding, procedural skill and fluency, and the ability to apply these fundamentals in realistic situations.

Test-takers are expected to be

*broadly  
familiar*

with concepts in each topic, but not to have in-depth and comprehensive knowledge.

### 2002 Series Comparison

National History  
25%

World History  
15%

Geography  
15%

Civics and Government  
25%

Economics  
20%

The social studies test, similarly to the science test, uses a set of *core practices* that more clearly assesses test-takers' competencies.

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## *Social* Studies Practices

THE SOCIAL studies test, similarly to the science test, uses a set of core practices that more clearly assesses test-takers' competencies. The new social studies practices focus on the test-taker's ability to glean information from primary and secondary source documents, reason with data representations and statistics, and apply key concepts and ideas relevant to the social sciences. (2.42)

### **GED Social Studies Practices**

1. Drawing Conclusions and Making Inferences
2. Determining Central Ideas, Hypotheses, and Conclusions
3. Analyzing Events and Ideas
4. Interpreting Meaning of Symbols, Word, and Phrases
5. Analyzing Purpose and Point of View
6. Integrating Content Presented in Different Ways
7. Evaluating Reasoning and Evidence
8. Analyzing Relationships between Texts
9. Writing Analytic Response to Source Texts
10. Reading and Interpreting Graphs, Charts, and Other Data Representations
11. Measuring the Center of a Statistical Dataset

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## *Social* Studies Skills

THREE skills have been added to the current GED test compared to the 2002 Series.

1. Analyzing relationships between texts
2. Writing analytic responses to source texts
3. Reading and interpreting graphs, charts and other data representations

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## *Focusing* Themes

THE CONTENT from the four domains in social studies is focused on two distinct themes, thereby limiting content that falls outside of these themes. (2.44)

- Development of Modern Liberties and Democracy
- Dynamic Responses in Societal Systems

### **What It Means for the Adult Ed Classroom**

LIKE THE 2002 Series test, the current GED Social Studies exam does not require test-takers to know social studies facts beyond a broad familiarity with concepts. (2.35) (2.44) The Assessment Targets better define what the expectations are for the GED test-taker, but dramatically enlarge the scope of the preparation process.

Test-takers will be expected to analyze the relationship between texts, interpret data representations, and then demonstrate their understanding of social studies texts and graphics. (2.90)

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## *Social* Studies Item Types

THE SOCIAL studies test uses the following item types. See page 23 for a detailed description of these items.

- Multiple-choice items
- Fill-in-the-blank/short answer items
- Drag-and-drop items
- Hot spot items

Stimulus materials may include brief text, maps, graphs, tables, or other graphic representations of data or social science concepts. Many of the brief texts featured in both discrete items and item scenarios will be drawn from texts reflecting “the Great American Conversation.” These texts may be directly excerpted from founding documents, such as The Bill of Rights, or they may contain analyses of these documents. They may also be drawn from other more contemporary primary and secondary source documents (e.g. political speeches and commentary) that convey important concepts about American civics.

The Assessment Targets better define what the expectations are for the GED test-taker, but *dramatically enlarge the scope* of the preparation process.





## Item types

### Extended Response (ER) Item

EXTENDED RESPONSE items allow test-takers to demonstrate their written communication skills and analysis of text at a high DOK level by producing a writing sample in response to a prompt. There is one ER in the current GED assessment, on the Reasoning Through Language Arts test. The ER requires test-takers to respond to textual source materials and evaluate arguments.

### Short Answer (SA) Item

THE SCIENCE test features SA items that assess higher-level cognitive skills. These short-answer items require test-takers to write a short paragraph in response to questions based on graphical and/or textual stimuli. Students should be prepared to design an experiment and cite evidence from a scientific text.

### Drag-and-Drop Item

DRAG-AND-DROP items are composed of two main parts: drag tokens and drop targets. Test-takers are typically given several drag tokens, which they must place on one or more specified drop targets. This item type may be employed in the service of sequencing or reordering tasks, graphing tasks, mapping tasks, and many others. This item type can be an effective tool that enables test-takers to interact with academic content in real-world situations, such as reordering paragraphs in a letter to improve the letter's organization.

### Hot Spot Item

HOT SPOT items typically contain a graphic (e.g. maps, graphs, diagrams, etc.) with virtual “sensors” placed in key locations on the graphic. The test-taker selects the correct answer by clicking on the designated sensor or by graphing a point onto it (also by clicking). This interactive item type allows test-takers to respond to graphic stimuli in a way that mirrors real-life situations, such as selecting locations on a map or gathering data from a graph.

### Drop-Down Item

DROP-DOWN items contain response opportunities embedded directly within a text. The GED assessment will employ this item type primarily to assess language skills in tasks designed to mimic the editing

#### Practice All Item Types with Your Students:

- Extended Response
- Short Answer
- Drag-and-Drop
- Hot Spot
- Drop-Down
- Fill-in-the-Blank
- Multiple Choice

## Notes

process in an authentic manner. These items present a brief text with five to eight drop-down menus embedded within it. The drop-down menus contain several answer options which, when selected, will appear within the text itself.

### Fill-in-the-Blank (FIB) Item

FILL-IN-THE-BLANK items are, in essence, very brief short answer items. They require the test-taker to supply a word, short phrase, or numerical answer in response to an open-stem question. This item type can be used to assess a wide variety of skills. These items allow test-takers to construct their own responses when there is little variability in correct answers.

### Multiple Choice (MC) Item

MC ITEMS continue to appear in all four content areas of the GED assessment. Each MC item has four answer options with only one correct answer.

### Item Scenarios

THE MATHEMATICS, science, and social studies tests all feature item scenarios. An item scenario is made up of a stimulus and two to three associated items. Stimuli may be a short text, a graphic, or a combination of graphic and short text.

### Discrete Item

THE MATHEMATICS, science, and social studies tests also include discrete items, or single items that may or may not have a stimulus embedded in their stems.

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## Scoring on the GED Test

RAW TEST scores are converted to a scaled score of 100 to 200 points on each test. The minimum passing score for high school equivalency is 145 on each test, for a total of 580 for the battery. Scores of 165 to 174 are designated as GED College Ready and show readiness for college-level courses. Scores of 175 to 200 are designated as GED College Ready + Credit and may qualify students for college credit up to 10 hours.



**Essential Education**  
*Learning Made CERTAIN*

**Section 2**  
**Curriculum & Lesson**  
**Resources**

*To Help You Build DOK*





Notes

# Depth of Knowledge (DOK) Lesson Guide

## How to Turn a Lesson or Activity into a DOK Reasoning Activity

USE THE questions and activity suggestions to build higher order reasoning lessons and activities. DOK lessons will place more emphasis on understanding and reasoning instead of procedure.

### Level 1: Recall

AT LEVEL 1, the student is able to recall facts and information. For example, explaining what a numerator and denominator are is a level 1 exercise. Similarly, doing an algebra problem through recall of how to apply a clearly defined set of steps is also a level 1 exercise. The main thinking skill the student is using is recall. Students must learn recall-based skills and information, which are often foundational to deeper knowledge, but the goal is for students to develop higher level depth of knowledge.

### Level 1 Activity Examples

- Recall or recognize a fact, term, definition, simple procedure or property.
- Demonstrate a rote response.
- Use a well-known formula.
- Represent in words or diagrams a scientific or mathematical concept or relationship.
- Perform a routine procedure, such as measuring a length or following a recipe.
- Perform a clearly defined set of steps.
- Identify, calculate, or measure.
- Make a timeline.
- Make a chart showing. . .
- Write in your own words. . .
- Report or present to the class.



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- Define the logical order of reasoning steps to solve the problem in the activity.
- Reorder a series of steps or rules about the process in the activity.

---

## Level 3: Strategic Thinking

LEVEL 3 thinking requires deep knowledge using reasoning, planning, evidence, and a higher level of thinking than the previous two levels. The cognitive demands at Level 3 are complex and abstract. The complexity does not result only from the fact that there could be multiple answers, a possibility for any DOK level, but because the multi-step task requires more demanding reasoning. In most instances, requiring students to explain their thinking is a Level 3 activity; while requiring a very simple explanation or a word or two should be at Level 2. An activity that has more than one possible answer and requires students to justify the response they give would most likely be a Level 3.

### Level 3 Activity Examples

- Use a Venn Diagram to show how two topics or concepts are the same and different.
- Design a flowchart to show critical stages.
- Classify concepts or events.
- Evaluate two sources of information.
- Interpret information from a complex graph.
- Use reasoning, planning, and evidence.
- Explain thinking beyond a simple explanation using only a word or two.
- Justify a response.
- Identify research questions.
- Use concepts to solve non-routine problems with more than one possible answer.
- Form conclusions from experimental or observational data.
- Complete a multi-step problem that involves planning and reasoning.
- Provide an explanation of a principle.
- Justify a response when more than one answer is possible.









## Notes

## Instruction

THE GOAL of instruction is to give students the needed tools to do the skill being taught. Instruction should relate directly to the objective, and should involve student activity and participation. It focuses on developing background and understanding concepts, and on building up the skills that the student will put together in guided practice. Some examples of instructional activities follow.

### Think-Pair-Share

To do a think-pair-share activity, ask the class a key question about the topic you're studying. First, have students write independently for a short time, making notes of their thoughts. Then, have the students pair up, and discuss the question with each other. Finally, have the pairs share their thoughts with the group for class-wide discussion. Make notes about class-wide conclusions about the topic on the board.

### Debate

Develop a debate topic relevant to the concept being taught. Assign students to each side of the debate, and allow groups of students to prepare arguments in advance. For the debate, call students up to the front in pairs, and give each pair a set time for an argument and a rebuttal on each side. Periodically, take time for class discussion on the arguments so far. At the end of the debate, have students vote on the topic.

### “Why” Questioning

Break students up into pairs. Have one student give an explanation of the concept or skill being taught, and have the other student ask, “Why?” throughout the explanation, to get at the underlying concepts, or reasons for the steps in the process.

### Scenario Examination/Case Studies

Case studies or scenarios can be simple or complex, depending on the topic and the scenario, and so the time required will vary. Find or create a scenario that uses the skill being taught or demonstrates the concepts being taught. As a class or in groups, examine the scenario or case study. What are the issues it brings up? How does it show the application of the student's learning? What next steps should be taken? What's the best way to resolve the situation? What are





*Notes***Group Examination of Examples**

Break students up into groups, and give each group examples of the topic to evaluate. For instance, you can give quotations with examples of figurative language; examples of real-world problems that require today's math skill to solve; examples of different cultures responses to drought; examples of experimental designs; or any other examples relevant to your topic. Have the student evaluate how the topic applies to the examples. Prepare a list of questions for each group to answer. Have the groups share their results with the class for discussion.

**Group Discussion**

Prepare questions for a group to discuss related to the concept or skill being taught. Break students up into groups, and ask them to discuss and answer each question. Have students summarize their discussion, and share their results with the class.

**Diagrams, Timelines, Tables, and Charts**

Ask groups to create diagrams, timelines, tables, or charts illustrating the concept being taught. Come up with an appropriate graphic for your topic, such as a timeline of a historical event; a table categorizing and rating arguments; a flowchart showing a decision-making process; a chart of the steps to solve a complex math problem; or any other graphical representation of the learning. Give the students some background about the type of graphic you expect them to create, and then let each group create their own graphic. Have the groups present their graphics to the class.

**Pair and Double-Pair**

Break students up into pairs, and have each person in the pair interview the other about the topic or skill or problem being taught. Then, assign the pairs to other pairs. The first pair explains their conclusions to the second pair, and the second pair explains their conclusions to the first pair.

**Evaluating a Text for Examples**

This works well for literary devices such as irony or alliteration. It also can work well for types of arguments, or for applying sociological or psychological concepts. Read through a text aloud, and have students stop the reading whenever they come to an example of the concept



## Notes

or student volunteer. Students may work individually, in pairs, or in groups. After a specific length of time, such as 20, 30 or 40 minutes, students rotate to a new station. Examples of station activities might be: solving a series of algebraic equations to solve a puzzle, engaging in a real-world project such as interpreting data, writing an interpretation of events from different perspectives, or researching information about notable historical figures in order to complete a worksheet.

### Role-playing Multiple Points of View

To develop students' understanding of concepts, literature (particularly character), historical situations, or conflicts, conduct role-playing scenarios in class. Assign students to different roles (typically characters, but you might also personify scientific theories or concepts, for example), and give them a situation to role-play. Let the students role-play the scenario, and then discuss it as a class. What attributes of the characters or concepts were brought out in the role-play? Did the students faithfully represent their characters?

### Questioning

Ask students to come up with three questions relevant to the concept being taught. Have students share their questions with the class or with a small group, and generate answers through class or group discussion.

### Peer Teaching

Assign various students to each learn a small portion of the material and become the master of that topic. Break students up into groups and have the masters each teach their topic to the whole group.

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## Guided Practice

THE GOAL of guided practice is for the student, in a scaffolded or supported environment, to practice the outcome defined in the objective. **The activity the student does for guided practice should match the objective stated for the lesson plan.** Some of the instruction activities can be adapted as guided practice, but guided practice should be distinguished as asking the student to perform the lesson's objective.





## Notes

## Reflection

REFLECTION at the end of a lesson gives a student an opportunity to think about what they are doing. What have they learned? Has their learning been successful? How can they improve? Where do they go from here? What's important about what they're learning? How can they apply the learning to life? To do a reflection, come up with several questions to ask students about learning.

### Reflection as a Class

Ask the class the reflection questions for discussion. Spend a few minutes bringing out problems and solutions to help the students improve their learning.

### Reflection in a Group

Assign groups or pairs to discuss the reflection questions and share how each of them responded to the lesson, what they learned, and how they can improve or apply their learning.

### Personal Reflection

Show the reflection questions to the class, and have each student spend a few minutes writing a personal reflection on his or her learning.

## Assessment

ASSESSMENT is your judgement of students' understanding and performance. Your assessment will involve checking students' guided and independent practice to see how well students are performing the skill being taught, with and without help. To reach the highest level of DOK and reinforce students' understanding, it's also important to assign longer-term projects for assessments. Below are some examples.

### Experiments

Have students design and conduct experiments to demonstrate knowledge of science concepts.

### Research Papers

Have students research and write a full paper on a topic of their choice related to the learning content.



## Notes

# Sample Lesson Plans

THE FOLLOWING lesson plans give you examples of how to customize lessons in math, reading, and writing. When developing lessons, keep in mind the demands of the particular subject area and topic.

## Reading & Writing

REASONING through language arts requires full comprehension, expression of analysis through writing, and development and critique of arguments. Students will need to achieve a DOK level 3 to be successful in the writing Extended Response, so focus on high-level activities to understand materials and express ideas. Content should focus on informational texts including social studies and science materials.

## Math

MATHEMATICAL reasoning means being able to think through math problems and understand why you might choose and use math processes. The GED math practices reflect DOK level 3, and developing level 3 math reasoning will help students learn and retain better. Level 3 DOK will also prepare your curriculum for future evolution to more complex math GED testing.

## Social Studies

WHEN DEVELOPING social studies lessons, the focus should be on reading, writing, and reasoning based on social studies topics. It is important to develop higher level DOK skills, since students will not be tested on specific social studies knowledge. Focus on social studies practices and develop language arts lessons centered on social studies content materials (especially covering 'The Great American Conversation.')

## Science

SPECIFIC knowledge of a science topic is not tested on the GED exam. That means students will need the ability to read, write, comprehend, and reason based on science materials. Emphasis on science practices and science literacy is key, and language arts lessons should include science materials.

## Section 2: Curriculum & Lesson Resources

<p>LESSON PLAN TITLE Creating an Argument</p>	<p><b>Language Arts</b></p>
<p>GED TARGET/CCSS GED W.1, W.2 CCSS.ELA-Literacy.CCRA.W.1</p>	<p>TIME 1 hour, 40 minutes</p>
<p>OBJECTIVE The student will create an effective argument, citing evidence, in writing.</p>	
<p>REQUIRED MATERIALS White board; copies of a short argumentative essay; a bell; a paragraph that makes a specific argument</p>	
<p>ANTICIPATORY SET <b>Before class.</b> (DOK 2) In preparation for class, have each student think of a time when he or she wanted something and had to convince someone that they should have it, such as convincing a boss to give him/her more hours. Each student should write a paragraph or more explaining the situation, the arguments used, whether those arguments were effective, and why those arguments were or were not effective. <b>15 mins.</b> At the beginning of class, discuss students' examples as a class. Ask, how do other students respond to the arguments? What more effective arguments could have been made? Do students have similar experiences to compare?</p>	
<p>INSTRUCTION <b>Activity: Group examination of arguments</b> (DOK 3) <b>20 mins.</b> Break students up into groups. Ask each group to read their paragraphs and compare and categorize their arguments. What types of arguments are there? Why are they effective? How can they be classified? Can the students think of other kinds of arguments that could be made in each situation, and how those arguments could be classified? <b>15 mins.</b> Have each group share their classifications of types of arguments, and compile a class-wide classification system on the board, asking students to combine, define, and expand their classifications as needed. Compare the students' argument types to typically taught argument types such as logical (logos), emotional (pathos), or ethical (ethos) arguments. Keep this classification system available to the students. <b>Activity: Evaluating an argumentative text</b> (DOK 3) <b>15 mins.</b> After briefly reviewing types of arguments, hand out to the students a short, well-constructed argumentative essay. Have a student or students read the essay aloud, and ask students to come ring a bell when the essay makes an argument. (It may work well to have students in a circle, and the bell in the center.) Stop the reading each time a student rings the bell, and ask the student to identify the argument. What kind of argument is it? How is it presented? Is it effective? How could it be more effective? How could it be argued against?</p>	
<p>GUIDED PRACTICE <b>15 mins.</b> (DOK 2–3) Break students up into groups. Have each group write an argument opposing a position in the argumentative essay, citing the essay and explaining their reasons. Have each group read their argument to the class, and discuss how well-supported and effective each argument is.</p>	
<p>APPLICATION AND INDEPENDENT PRACTICE <b>15 mins.</b> (DOK 2–3) Put a paragraph on the board that makes a specific argument. Ask each student to write an argument either agreeing or disagreeing with the paragraph.</p>	
<p>REFLECTION <b>5 mins.</b> In a class discussion, ask students to evaluate what they've learned about arguments. How difficult is it to make a convincing argument? What are the pros and cons of different types of arguments? How can arguments be communicated most effectively?</p>	
<p>ASSESSMENT (DOK 4) Assign students to find an opinion article in the newspaper or online on a newspaper or magazine website. Have each student write a paper about the article topic, either agreeing with or disagreeing with the writer's opinion and providing supporting arguments, citing the article and other materials.</p>	



<b>LESSON PLAN TITLE</b> Understanding an Argument	<b>Language Arts</b>
<b>GED TARGET/CCSS</b> GED R.8.1, R.8.2, R.8.3; CCSS.ELA-Literacy.CCRA.R.8	<b>TIME</b> 1 hour, 40 minutes
<b>OBJECTIVE</b> The student will be able to understand and evaluate an argument.	
<b>REQUIRED MATERIALS</b> Slips of paper with scenarios, whiteboard, overhead projector	
<b>ANTICIPATORY SET</b> <b>15 min.</b> (DOK 2) Tell this story: A student approached a teacher about a paper that was marked down for being late. The student said she took the time to do the paper right and met all the criteria, giving examples from the paper. She also said she had a sick child, so she couldn't turn the paper in on time with the time and care it deserved. Ask, "What is the student trying to do here?" Students will likely answer that the student is trying to persuade or convince the teacher to change the grade. Ask, how is the student doing that? A possible answer would be sympathy, because of the sick child. Another is logic, since the student argues that she did the paper well. Discuss how good the student's arguments are, and why. Ask students to compare it to situations from their experience.	
<b>INSTRUCTION</b> <b>Activity: Planning an argument (DOK 3)</b> <b>20 min.</b> Group students into pairs and hand each pair a slip of paper with a scenario on it, such as getting your boss to give you a day off, getting a seller to lower the price of a car, or getting a refund from the manager at a restaurant. Have each pair plan an argument, answering the following questions: What is the argument? Who is the audience? What are you trying to convince the person of? What strategy will you use? Then, the pair should act out their scenario, with one person trying to persuade the other, and plan out how they will try to convince the other person of something together. Have each pair write an analysis of the argument and why it was or wasn't effective. As a class, discuss elements that made arguments most effective. <b>Activity: Elements of an argument (DOK 2)</b> <b>15 min.</b> Take an example of a successful argument from one of the pairs. Write the word "claim" on the board and explain that the claim is what you're trying to show. Ask students to identify the claim and why that's the claim. Do the same with "grounds" (data or support or evidence), "warrant" (the logic why the evidence supports the claim). Put up the term "rebuttal" and explain that a rebuttal argues against the claim. Ask students for rebuttals against the example argument. Are the rebuttals good? Do they have grounds and warrants?	
<b>GUIDED PRACTICE</b> <b>20 min.</b> (DOK 3) Break the students up into groups. Give each group a short paragraph that makes an argument, and a worksheet to complete. On the worksheet, ask: What claim is being made? What grounds supports the claim? What warrant ties the grounds to the claim? Is the argument successful? Why or why not? What might be a good rebuttal? Discuss the results as a class.	
<b>APPLICATION AND INDEPENDENT PRACTICE</b> <b>20 min.</b> (DOK 3) Hand out another paragraph that makes an argument, and have each student write a short essay evaluating the argument's effectiveness.	
<b>REFLECTION</b> <b>10 min.</b> Assign students to pairs. Ask each pair to discuss what is easy and difficult about evaluating an argument. Why? What can they do to make it easier to evaluate an argument?	
<b>ASSESSMENT</b> Evaluate students' independent and guided practice for assessment. To reach DOK 4, assign a longer-term project for students to come up with a controversial topic, research arguments for and against, and write an evaluation of writings on the topic, indicating which side is strongest based on the literature reviewed. Focus on science and social studies topics to enhance those literacies.	

## Section 2: Curriculum & Lesson Resources

<p>LESSON PLAN TITLE</p> <p>Writing Using Figurative Language</p>	<p><b>Language Arts</b></p>
<p>GED TARGET/CCSS</p> <p>GED R.4.3/L.4.3, R.6.4; CCSS.ELA-Literacy.CCRA.W.3, CCSS.ELA-Literacy.L.11-12.5</p>	<p>TIME</p> <p>50 minutes</p>
<p>OBJECTIVE</p> <p>The student will use figurative language effectively in writing.</p>	
<p>REQUIRED MATERIALS</p> <p>Several short passages that use figurative language; objects for students to describe; video clip and video player</p>	
<p>ANTICIPATORY SET</p> <p><b>10 min.</b> (DOK 2) Briefly review a few examples of figurative language (metaphor: “you’re a peach”, simile: “red as a rose”, oxymoron: “a deafening silence”, hyperbole: “broke in a million pieces”, personification: “the stars danced”, and other examples students can think of) if needed. Make it clear that these aren’t all the types of figurative language. Ask each student to think of an example of figurative language from their own life: from something they’ve read, a song, or a saying they’ve heard or used that uses words in other ways than their literal meanings. As a class, review student examples of figurative language, their meanings, and their usage. Why is figurative language used? What effect does it have?</p>	
<p>INSTRUCTION</p> <p><b>Activity: Read a passage with figurative language</b> (DOK 3)</p> <p><b>15 min.</b> Break students up into groups. Give each group a brief passage that includes figurative language, such as one of the following:</p> <p style="padding-left: 40px;">But my mother’s hair, my mother’s hair, like little rosettes, like little candy circles all curly and pretty because she pinned it in pincurls all day, sweet to put your nose into when she is holding you, holding you and you feel safe, is the warm smell of break before you bake it, is the smell when she makes room for you on her side of the bed still warm with her skin, and you sleep near her, the rain falling outside and Papa snoring. (Sandra Cisneros, <i>The House on Mango Street</i>)</p> <p style="padding-left: 40px;">It is with a kind of fear that I begin to write the history of my life. I have, as it were, a superstitious hesitation in lifting the veil that clings about my childhood like a golden mist. The task of writing an autobiography is a difficult one. When I try to classify my earliest impressions, I find that fact and fancy look alike across the years that link the past with the present. The woman paints the child’s experiences in her own fantasy. (Helen Keller, <i>The Story of My Life</i>)</p> <p>Ask each group to identify the figurative language in the passage, and to describe its use, meaning, and effectiveness. Why does the author use this language? What effect does it have on the reader? Have each group share their results with the class for discussion.</p>	
<p>GUIDED PRACTICE</p> <p><b>10 min.</b> (DOK 3) Break students up into groups. Give each group an object. Ask each group to write a description of the object using figurative language, and then to explain their figurative language and its meaning and purpose in describing the object.</p>	
<p>APPLICATION AND INDEPENDENT PRACTICE</p> <p><b>10 min.</b> (DOK 3) Play a short scene from a movie or TV show. Have each student write a brief description of the scene using figurative language, and identify the figurative language he or she has used. Each student should explain the figurative language and its meaning and purpose.</p>	
<p>REFLECTION</p> <p><b>5 min.</b> In a class discussion, ask students to summarize why figurative language is used. How does figurative language aide communication? How does it get used in everyday life? Is figurative language something students will use outside of a classroom? Do they have trouble identifying it? Is that a problem in understanding?</p>	
<p>ASSESSMENT</p> <p>(DOK 4) Assign each student to write a narrative short essay that uses figurative language. Along with the essay, have each student identify his or her figurative language, and explain its meaning and purpose in the essay.</p>	

<b>LESSON PLAN TITLE</b> Determining a Theme	<b>Language Arts</b>
<b>GED TARGET/CCSS</b> GED R.3.2, R.2.6; CCSS.ELA-Literacy.CCRA.R.2, CCSS.ELA-Literacy.CCRA.R.3	<b>TIME</b> 1 hour, 40 minutes
<b>OBJECTIVE</b> The student will be able to identify a theme in a text.	
<b>REQUIRED MATERIALS</b> White board, butcher paper, list of well-known movies, copies of "Excerpt from <i>Adventures of Huckleberry Finn</i> "	
<b>ANTICIPATORY SET</b> <p><b>Before class.</b> Tell students to have a movie they watched recently (or a book they read) in mind for class.</p> <p><b>15 min.</b> (DOK 2) Have a student tell the class about a movie they've seen recently. Explain that the student described the movie's plot: what happens (a series of events) in a movie, book, or other kind of story. What about the theme? Ask for student ideas about what theme is, or the theme of the film. Break the students up into pairs. Have each pair write a definition of theme and an example theme from each of the student's movies or books.</p>	
<b>INSTRUCTION</b> <p><b>Activity: Class discussion of theme vs. plot</b> (DOK 2)</p> <p><b>15 min.</b> Discuss the pairs' definitions of theme and clear up any misconceptions. Make a T-chart (a table with two columns) on the board, with a column for theme and one for plot. Discuss the pairs' themes from films and books, and write them on the T-chart with a brief summary of plot. Give or ask for additional examples of themes, such as "be careful what you wish for" or "love is stronger than evil." Ask students to apply the themes to other books or movies, and write brief plot and theme summaries on the T-chart. Ask how plot is different from theme, based on the chart. Main points may include that theme extends beyond the characters in the book; it's a message that can be applied to everyday life, a universal idea that the author communicates through elements of the story. Theme is rarely stated and usually must be inferred. Have each student write a summary comparison of plot and theme.</p> <p><b>Activity: Finding a theme</b> (DOK 2-3)</p> <p><b>15 min.</b> Break students into pairs to discuss finding a theme. Common ideas include: The more you understand/think about the story, the easier it is to find the theme. The theme won't come up just once but will be implied many times. We make inferences using prior knowledge and clues/details in the story. Have each pair write questions to ask to determine theme. Questions may include: What are the main character's thoughts/feelings? What thoughts/ideas are repeated throughout the story? What does the main character learn? What is the author's purpose? What point of view is the story told from? What is the conflict? What message about life does the author seem to give? Compile a class list of questions on butcher paper, adding your own and discussing the questions as they come up.</p>	
<b>GUIDED PRACTICE</b> <p><b>20 min.</b> (DOK 3) Break students up into pairs, and give each pair a list of well known movies (like <i>Titanic</i>, <i>The Lion King</i>, and <i>The Godfather</i>). Have each pair pick two movies (or add their own movies or books) that they're familiar with and, referring to the question list, come up with a sentence explaining the plot of the movie and a sentence which identifies a theme. Explain that a the theme should not be just a word like "greed," but a complete sentence like, "Greed is not without consequences." For each story, have the students explain in a paragraph how they identified the theme and what in the story supports the theme. Have the pairs share their results with the class.</p>	
<b>APPLICATION AND INDEPENDENT PRACTICE</b> <p><b>20 min.</b> (DOK 3) Give students a copy of the theme passage on the following pagepage, and ask each student to identify the theme and explain what evidence, in the passage, supports the theme in a short essay.</p>	
<b>REFLECTION</b> <p><b>10 min.</b> As a class, discuss why authors include themes. How does finding a theme help you get more out of a book?</p>	
<b>ASSESSMENT</b> Evaluate independent practice to determine students' understanding of finding a theme. To reach DOK 4, assign a longer-term paper identifying and supporting a theme in a work of the student's selection, or a paper comparing themes in two works.	

## *Excerpt from Adventures of Huckleberry Finn*

(THE EXCERPT takes place shortly after Huck fakes his own death, and leaves to go hide out on the nearby Jackson's Island. There, he runs into Jim, Miss Watson's slave, who has gone on there to avoid being sold.)

"How do you come to be here, Jim, and how'd you get here?"

He looked pretty uneasy, and didn't say nothing for a minute. Then he says:

"Maybe I better not tell."

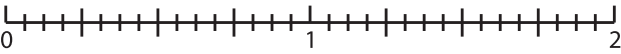
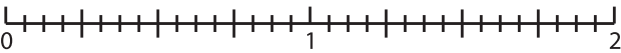
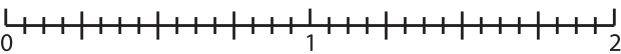
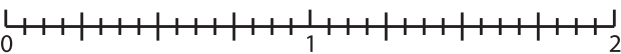
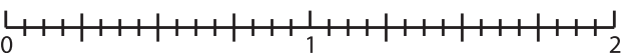
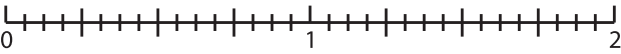
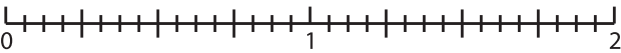
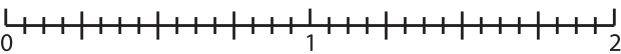
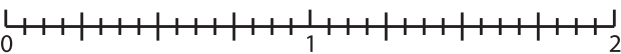
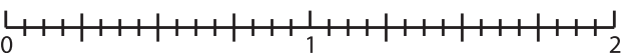
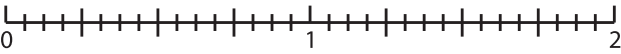
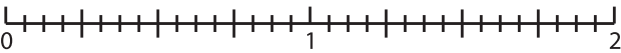
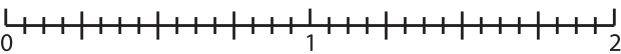
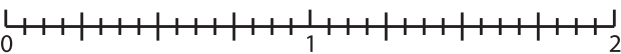
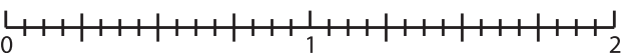
"Why, Jim?"

"Well, dey's reasons. But you wouldn't tell on me ef I uz to tell you, would you, Huck?"

But mind, you said you wouldn't tell—you know you said you wouldn't tell, Huck."

"Well, I did. I said I wouldn't, and I'll stick to it. Honest INJUN, I will. People would call me a low-down Abolitionist and despise me for keeping mum—but that don't make no difference. I ain't a-going to tell, and I ain't a-going back there, anyways. So, now, le's know all about it."



<b>LESSON PLAN TITLE</b> Introduction to Fractions	<b>Mathematics</b>																																																														
<b>GED TARGET/CCSS</b> GED Q.1.a; CCSS.4.NF.2	<b>TIME</b> 1 hour																																																														
<b>OBJECTIVE</b> Students will be able to compare the value of fractions and identify which are greater, less than, or equal.																																																															
<b>REQUIRED MATERIALS</b> White board, independent practice worksheet																																																															
<b>ANTICIPATORY SET</b> <b>10 min.</b> (DOK 1–2) Poll the class: What is a fraction? When have you used them? What for? Ask students to recall times when they have cut something into equal pieces. (Common answers: cutting a pizza or pie, apple wedges, etc.) Poll the class: How did they decide to cut it? Why? Were the pieces generally the same size? How would they describe the pieces in relation to the whole? Allow discussion to unfold, and then introduce parts of fractions, related to one class example. Have each student write a fraction as a number and explain what that fraction means.																																																															
<b>INSTRUCTION</b> <b>Activity: Examination of Fraction Examples</b> (DOK 1–2) <b>15 min.</b> Ask students to write their fraction on the board, read it, and give their explanation. Discuss how the fraction is read and written, and note special ways to read fractions, such as “one half” or “one quarter” or differences in writing (slanted vs. straight lines). Discuss the explanations of the fractions, and give a formal definition, related to the examples. Ask each student to write a definition of “fraction” in their own words. <b>Activity: Understanding a Fraction’s Size</b> (DOK 2–3) <b>20 min.</b> Using an example from the class (such as pizza), illustrate cutting an object into fractions, and name the fraction parts (numerator, denominator). Point out: The whole object is 1 (i.e., 1 pizza). Cut into halves, it is $\frac{2}{2}$ (two halves). Each half is $\frac{1}{2}$ . Cut into fourths, it is $\frac{4}{4}$ (four fourths/four quarters). Each is $\frac{1}{4}$ . Fractions like $\frac{2}{2}$ , $\frac{4}{4}$ , $\frac{8}{8}$ equal 1. Break students into groups and assign each group several fractions. Have each group represent the fractions visually, using a circle and a number line, and rank the fractions largest to smallest. What can the group conclude about larger vs. smaller fractions? Have each group share their results with the class for discussion.																																																															
<b>GUIDED PRACTICE</b> <b>5 min.</b> (DOK 1) On the board, write a group of three fractions. Ask the class: Which is the largest? Which is the smallest? Why? Discuss answers and correct mistakes. Repeat with several sets of fractions.																																																															
<b>APPLICATION AND INDEPENDENT PRACTICE</b> <b>5 min.</b> (DOK 1) Give each student the following exercises to complete: Use the number line to show which fraction is greater. <table style="width: 100%; border: none;"> <tr> <td style="width: 20%;"><math>\frac{1}{2}</math></td> <td style="width: 20%;"><math>\frac{1}{4}</math></td> <td style="width: 60%;"></td> <td style="width: 20%;"></td> <td style="width: 20%;"></td> <td style="width: 60%;"></td> </tr> <tr> <td><math>\frac{1}{2}</math></td> <td><math>\frac{5}{8}</math></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td><math>\frac{1}{2}</math></td> <td><math>\frac{7}{16}</math></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td><math>1\frac{1}{4}</math></td> <td><math>\frac{8}{3}</math></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td><math>\frac{1}{2}</math></td> <td><math>\frac{5}{8}</math></td> <td></td> <td></td> <td></td> <td></td> </tr> </table> Identify which fractions are greater than (>), less than (<), or equal to (=). <table style="width: 100%; border: none;"> <tr> <td><math>\frac{5}{8}</math></td> <td><math>\frac{3}{4}</math></td> <td><math>\frac{1}{3}</math></td> <td><math>\frac{1}{4}</math></td> </tr> <tr> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td><math>\frac{7}{8}</math></td> <td><math>\frac{3}{4}</math></td> <td><math>\frac{3}{4}</math></td> <td><math>\frac{2}{3}</math></td> </tr> <tr> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td><math>\frac{3}{2}</math></td> <td><math>1\frac{1}{2}</math></td> <td><math>\frac{1}{2}</math></td> <td><math>\frac{2}{3}</math></td> </tr> <tr> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td><math>2\frac{1}{32}</math></td> <td><math>\frac{5}{8}</math></td> <td><math>\frac{2}{8}</math></td> <td><math>\frac{1}{4}</math></td> </tr> <tr> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> </table>		$\frac{1}{2}$	$\frac{1}{4}$					$\frac{1}{2}$	$\frac{5}{8}$					$\frac{1}{2}$	$\frac{7}{16}$					$1\frac{1}{4}$	$\frac{8}{3}$					$\frac{1}{2}$	$\frac{5}{8}$					$\frac{5}{8}$	$\frac{3}{4}$	$\frac{1}{3}$	$\frac{1}{4}$	_____	_____	_____	_____	$\frac{7}{8}$	$\frac{3}{4}$	$\frac{3}{4}$	$\frac{2}{3}$	_____	_____	_____	_____	$\frac{3}{2}$	$1\frac{1}{2}$	$\frac{1}{2}$	$\frac{2}{3}$	_____	_____	_____	_____	$2\frac{1}{32}$	$\frac{5}{8}$	$\frac{2}{8}$	$\frac{1}{4}$	_____	_____	_____	_____
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<b>REFLECTION</b> <b>5 min.</b> In pairs, have students discuss elements of dealing with fractions that are difficult, and ways to improve learning to deal with fractions.																																																															
<b>ASSESSMENT</b> (DOK 3) Research Zeno’s Paradox, a thought experiment that “proves” that it’s impossible to cross any specific distance, and explain how it uses fractions. Discuss: How small can a fraction be?																																																															

<p>LESSON PLAN TITLE Multiplying and Dividing Fractions</p>	<p><b>Mathematics</b></p>
<p>GED TARGET/CCSS GED Q.2.a; CCSS.7.NS.1; CCSS.7.NS.1</p>	<p>TIME 1 hour, 40 minutes</p>
<p>OBJECTIVE Students will be able to add and subtract rational numbers in fraction form.</p>	
<p>REQUIRED MATERIALS Computer, projector</p>	
<p>ANTICIPATORY SET <b>15 min.</b> (DOK 2) Discuss the problem: If Abe takes <math>\frac{1}{8}</math> of <math>\frac{3}{4}</math> of a pizza, how much does he have? Is this problem multiplication or division? Discussion points: Does dividing <math>\frac{3}{4}</math> of a pizza 8 ways help? A whole can also be a part, i.e. <math>\frac{3}{4}</math> of a pizza can be a “whole” that is divided into eighths. Dividing by 8 means the same thing as multiplying by <math>\frac{1}{8}</math>: a fraction is a way of showing division—the numerator divided by the denominator. Have students work in pairs to answer: What does it mean to divide or multiply by a fraction? Use <math>\frac{1}{8}</math> of <math>\frac{3}{4}</math> of a pizza as an example.</p>	
<p>INSTRUCTION <b>Activity: Flowcharting fraction multiplication and division (DOK 3)</b> <b>25 min.</b> Break students up into pairs. Ask students to write down equations to answer: If I have \$22 but all in quarters, how many coins do I have? If I use <math>\frac{1}{2}</math> of the gas left in my tank, and the tank was <math>\frac{3}{4}</math> full, how much gas did I use? How do the equations answer the questions? How do the results compare to the original fractions? Combine the pairs into groups of four. Have the groups compare their answers, and draw a decision tree or flowchart to decide whether to multiply or divide, and to multiply or divide any fractions. The groups should test the charts with several problems. Have the groups present their charts to the class, and discuss their effectiveness.</p>	
<p>GUIDED PRACTICE <b>25 min.</b> (DOK 2–3) Break students up into pairs. Give each pair the following problems to solve, showing their work. Ramona started with a 54 ounce bag of beans, approximately 5400 beans. If <math>\frac{1}{3}</math> of the bag of beans are gone, how many beans are left? (3600) Frankie had 6 pizzas cut into 8 slices each. If he sold <math>\frac{5}{8}</math> of his slices, how many does he have left? (18) Ask pairs to present their solutions and methods, and compare ways of approaching the problems.</p>	
<p>APPLICATION AND INDEPENDENT PRACTICE <b>25 min.</b> (DOK 2) Assign each student to complete the following problems, showing their work: <math>\frac{5}{8} \times \frac{3}{4} =</math>     <math>\frac{1}{3} \div \frac{1}{4} =</math>     <math>\frac{2}{5} \times \frac{3}{5} =</math>     <math>1\frac{2}{3} \div \frac{1}{9} =</math> You have a recipe for muffins that requires <math>\frac{1}{4}</math> cup of chopped nuts. If you want to make <math>\frac{1}{3}</math> as many muffins, what quantity of nuts would you need? Your car gets 33 miles per gallon. If you put <math>5\frac{2}{3}</math> gallons in an empty tank, how many miles can you travel? For a craft project, you are cutting a tube into <math>\frac{3}{4}</math> inch pieces. You have a piece of tubing that’s 12 inches long. How many pieces can you get out of one 12-inch tube? You have sixty quarters. How many fifty-cent pieces will they give you at the bank in exchange for sixty quarters?</p>	
<p>REFLECTION <b>10 min.</b> Ask each student to write two questions about multiplying and dividing fractions. Discuss students’ questions as a class.</p>	
<p>ASSESSMENT Assess students’ guided and independent practice. To reach DOK 4, assign longer-term projects: Given a specific amount of different ingredients, find several recipes that will use all of at least two ingredients and make at least 3 desserts/dishes. Discuss how to calculate a solution to this type of problem.</p>	

<b>LESSON PLAN TITLE</b> Measuring Volume	<b>Mathematics</b>
<b>GED TARGET/CCSS</b> GED Q.5.a; CCSS.Math.Content.6.G.2; CCSS.Math.Content.6.EE.2c	<b>TIME</b> 1 hour, 55 minutes
<b>OBJECTIVE</b> The student will be able to calculate the volume of a rectangular prism.	
<b>REQUIRED MATERIALS</b> Unit cubes that can be packed into a rectangular prism with an open top, paper/cardstock, rulers, team worksheets	
<b>ANTICIPATORY SET</b> <p><b>25 min.</b> (DOK 2) Ask students to raise their hands if they have ever moved from one house to another or one city to another. What were some of the things they needed to do when they moved? Students may describe packing, changing their address, renting or borrowing a truck, or hiring movers. Expand on the topic of packing a moving truck. Draw a picture of a moving container/truck and label it with the following dimensions: L = 14 feet, W = 8 feet and H = 7 feet, and a cube labeled 1 foot (a unit cube). Ask students to imagine they had 1-foot cube boxes. How would they know how many boxes can fit in the truck?</p> <p>Allow students to brainstorm and illustrate solutions to the problem. Students might suggest packing the container with as many boxes as possible and counting. Some might use a formula such as Volume = length × width × height or base × height, or reason through a similar solution without relating it to a formula. If a formula for area comes up, expand on that and ask students how that formula would need to be altered to work for volume.</p>	
<b>INSTRUCTION</b> <p><b>Activity: Find multiple approaches to a geometric measurement (volume) problem</b> (DOK 3)</p> <p><b>40 min.</b> Divide the class into teams of two or three students. Give each team a real-world “moving problem” to work on, paper/cardstock, rulers, and manipulatives. Students may also use a 3-d computer program, if available. Have each team find at least two ways to solve the problem. Ask each team to decide which method is more accurate or logistically appropriate for the situation, and justify their conclusions in a class presentation using 2-D and/or 3-D models or illustrations. For example, if students choose to develop a formula for volume, they must show how and why the formula works. Students should mention any issues or constraints. Following each presentation is a question answer period and a set time for discussion.</p> <p><b>Example problem:</b> Find out how many boxes (of X size) can fit into a trailer, moving truck, or a storage room (of X size) with a door that swings open. Note any space that will be left over after the boxes have been loaded in.</p> <p>After presentations, ask each team to answer: How does volume relate to area? What is a definition of volume as it relates to area? Why does Volume = base × height work as a formula? Could it be considered a “short-cut”?</p>	
<b>GUIDED PRACTICE</b> <p><b>20 min.</b> (DOK 2) Display a volume problem: A rectangular prism has length of 10 inches, width of 8 inches, and height of 5 inches. What is the volume? Have each student write a solution and how they calculated it. Discuss the problem as a class. Is one way of solving it easier? Repeat with additional volume problems.</p>	
<b>APPLICATION AND INDEPENDENT PRACTICE</b> <p><b>20 min.</b> (DOK 2) Provide a set of volume problems, including word problems and illustrations of prisms, for students to solve independently. Have students show their work.</p>	
<b>REFLECTION</b> <p><b>10 min.</b> Journaling: Have students write independently about the problem-solving experience and conclusions they came to. Ask them to note any faulty reasoning during the team activity and how team or audience members addressed that. You may suggest topics to focus on or offer additional enquiry questions for the student to answer in the reflection.</p>	
<b>ASSESSMENT</b> Assess students’ independent practice. To reach DOK 4, assign a project that involves volume. Example project: Investigate pricing for the U.S. postal service. How is volume used to calculate pricing of priority mail flat-rate boxes as well as other packages? How does volume affect costs to the postal service for shipping?	

## Section 2: Curriculum & Lesson Resources

<p>LESSON PLAN TITLE Laws of Exponents</p>	<h3>Mathematics</h3>
<p>GED TARGET/CCSS GED Q.1.c.; CCSS.Math.Content.8.EE.1; CCSS.Math.Content.HSN-RN.2</p>	<p>TIME 1 hour, 40 minutes</p>
<p>OBJECTIVE The student will be able to perform mathematical operations with exponents.</p>	
<p>REQUIRED MATERIALS Whiteboard, exponent quiz worksheet</p>	
<p>ANTICIPATORY SET <b>20 min.</b> (DOK 2) Write on the board the terms “exponential” and “exponent.” Ask students to brainstorm ideas related to these concepts. What does “exponential growth” mean? What is the relationship between “exponential” and “exponents”? After brainstorming, ask students to group the ideas into categories or larger concepts, and then have each student write definitions of “exponential” and “exponent” based on the exercise. Introduce three ideas: a light-year [<math>9.46 \times 10^{17}</math> cm]; compounding interest [Principal <math>\times (1 + \text{Rate})^{\text{Time}}</math>]; bacterial growth [population = <math>2^{\text{Time}}</math>]. Ask how these reflect the ideas of “exponent” or “exponential.” What are the reasons for these formulas? What do they say about light years, compounding interest, and bacterial growth?</p>	
<p>INSTRUCTION <b>Activity: Developing exponent rules</b> (DOK 3) <b>40 min.</b> Divide students into pairs or small groups. Give each group an example of a mathematical problem with exponents, and ask them to create a rule based on the problem and test their rule with examples (including cases such as negative numbers and zeros). Each pair will present their rule to the class for discussion. <b>Problem 1:</b> <math>5^3 \times 5^2 = (5 \times 5 \times 5) \times (5 \times 5) = 5 \times 5 \times 5 \times 5 \times 5</math>   What rule can you come up with for multiplying exponents? Why does it work? When wouldn't it work? [<b>Rule:</b> <math>x^a \times x^b = x^{(a+b)}</math>] <b>Problem 2:</b> <math>(6^2)^3 = (6 \times 6) \times (6 \times 6) \times (6 \times 6) = 6 \times 6 \times 6 \times 6 \times 6 \times 6</math>   What rule can you come up with for raising an exponent to another exponent? Why does it work? When wouldn't it work? [<b>Rule:</b> <math>(x^a)^y = x^{ay}</math>] <b>Problem 3:</b> <math>(1/2)^2 = (1/2) \times (1/2) = (1 \times 1) / (2 \times 2) = 1^2/2^2</math>   What rule can you come up with for raising a fraction or division problem to an exponent? Why does it work? When wouldn't it work? [<b>Rule:</b> <math>(x \div y)^a = x^a \div y^a</math>] <b>Problem 4:</b> <math>(5 \times 2)^2 = 100 = 25 \times 4</math>   What rule can you come up with for raising a multiplication problem to an exponent? Why does it work? When wouldn't it work? [<b>Rule:</b> (Distributive Law) <math>(xy)^a = x^a \times y^a</math>] <b>Problem 5:</b> <math>3^{-3} = 1/(3 \times 3 \times 3) = 1/9</math>   What rule can you come up with for a negative exponent? Why does it work? When wouldn't it work? [<b>Rule:</b> <math>x^{-a} = 1/x^a</math>] <b>Problem 6:</b> <math>2^4 \div 2^2 = (2 \times 2 \times 2 \times 2) \div (2 \times 2) = 2 \times 2</math>   What rule can you come up with for dividing exponents? Why does it work? When wouldn't it work? [<b>Rule:</b> <math>x^a \div x^b = x^{(a-b)}</math>]</p>	
<p>GUIDED PRACTICE <b>15 min.</b> (DOK 1–2) Put a problem on the board/overhead: <math>(-3^4)^2</math>   Ask what rules apply to this problem if any. How would they solve it? With suggestions from the class, work through the problem, addressing mistakes or alternate solutions as they arise. Repeat with additional exponent problems, including real-world problems and a data set.</p>	
<p>APPLICATION AND INDEPENDENT PRACTICE <b>15 min.</b> (DOK 1–2) Assign an in-class independent worksheet, using mathematical and real world exponent problems. Material should include problems with fractions and negative numbers, and at least one problem drawn from a data set.</p>	
<p>REFLECTION <b>10 min.</b> Review quizzes in class. Have each student self-correct his/her quiz independently, describing where he/she went wrong on incorrect answers and ways to improve. Monitor students and answer any questions.</p>	
<p>ASSESSMENT Assess students by reviewing independent practice. To reach DOK 4, assign longer-term projects, such as having students investigate and compare real-world growth patterns among populations.</p>	



<b>LESSON PLAN TITLE</b> Choosing a Research Topic	<b>Science/Social Studies</b>
<b>GED TARGET/CCSS</b> GED SP.6.c, SSP.9.a, SSP.9.b, SSP.9.c; CCSS.ELA-Literacy.CCRA.W.7	<b>TIME</b> 50 minutes
<b>OBJECTIVE</b> The student will define the topic and scope of a research paper in social studies or science.	
<b>REQUIRED MATERIALS</b> Examples of research topics	
<b>ANTICIPATORY SET</b> <b>10 min.</b> (DOK 2) Ask each student to think of a time when he/she wanted to know the answer to a question: how to do something, whether something was true, what happened during a specific event. Discuss students' examples. What sparked their interest in that topic? How hard or easy was it to learn about? What do students do to find that information? What resources do they use (what websites do they visit or who do they ask)?	
<b>INSTRUCTION</b> <b>Activity: Evaluate research topics</b> (DOK 3) <b>20 min.</b> Briefly explain that the students will write a research paper and must choose a topic. Ask students what qualities a good research topic should have. What problems could they have with writing a paper, that might be caused by their choice of topic? Show students examples of two research topics. (See example research topics.) Call on students to defend one or the other topic as better, and give reasons why it would be a better topic. After discussion, have the class vote on the better topic. Repeat this exercise with additional topics. At the end of the exercise, have each student write a list of qualities they would look for in a research topic.	
<b>GUIDED PRACTICE</b> <b>15 min.</b> (DOK 3) Break students up into groups. Have each group brainstorm potential topics for research papers and ask: <ul style="list-style-type: none"> <li>• What is interesting or not interesting about each topic?</li> <li>• What questions would they ask about the topic?</li> <li>• How much information do they think they would find about the topic?</li> <li>• What is the scope of the topic—how big or small is it?</li> </ul> Have each group rank their ideas as good research topics and share their conclusions with the class.	
<b>APPLICATION AND INDEPENDENT PRACTICE</b> <b>After Class.</b> (DOK 3) Have each student choose three potential research topics, and write down the pros and cons that they anticipate from those topics. You may wish to have students present and discuss their research topics in a future class session.	
<b>REFLECTION</b> <b>5 min.</b> Ask students why some topics are interesting or not interesting. What causes them to want to research a topic? How hard is it to think about what they want to know or will be interested in?	
<b>ASSESSMENT</b> (DOK 3) Assign the student to choose a topic for a research paper and delineate its scope and the questions the paper will answer. From the student's potential research topics, have each student do an initial search for information and create questions and keywords to go with the topic. From this initial research, have the student determine a topic to pursue and explain why he/she chose that topic and what the scope of the paper will cover. This should be part of a larger, DOK 4 project that will involve researching and writing the proposed paper.	

## Example Research Topics

### Science Related Topics

**3-D Printing:** What is the current state of 3-D printing technology, and what does this technology offer for the future?

**Fast Food:** How does the prevalence of fast food affect our society and individual's health, and what laws (if any) should be made to regulate fast food?

**Mars:** Would a mission to Mars be worthwhile, and what are possible objectives of a Mars mission?

**Invisibility:** What advances have been made toward an “invisibility cloak”? What might invisibility technology be like, and what would it be used for?

**The Flu:** What causes seasonal flu, and why does the flu change each season? Why is a new flu vaccine needed each year, and how effective is the vaccine? What can be done to prevent epidemics of flu?

**Sleep:** Why do we sleep? What purpose does it serve?

### Social Studies Related Topics

**Food Gardens:** How could an increase in home gardening impact society through our health, the environment, the economy, and the food supply?

**Family Dinners:** How does eating dinner as a family affect children and parents?

**Memes:** How do Internet memes spread? What are the patterns of memes, and what does that tell us about human society?

**Texting:** How does texting affect young people and their development of reading and writing skills?

**Redistricting:** How does redistricting happen, and how does it affect the outcome of elections? What is fair districting, and what is gerrymandering?

**Apartheid:** How did apartheid end? What affect did it have on South African society, and what changes have happened since the end of apartheid?

### Famous Figures

Abraham Lincoln

Bill Clinton

Frida Kahlo

Pablo Neruda

Adam Smith

Cesar Chavez

George W. Bush

Pocahontas

Adolf Hitler

Charles Darwin

George Washington

Red Cloud

Albert Einstein

Charles Dickens

Georgia O'Keeffe

Ronald Reagan

Andrew Jackson

Che Guevara

Helen Keller

Saddam Hussein

Anne Frank

Christopher Columbus

John F. Kennedy

Sally Ride

Barack Obama

Cleopatra

John Steinbeck

Theodore Roosevelt

Benito Mussolini

Eleanor Roosevelt

Madonna

Thomas Jefferson

Benjamin Franklin

Franklin D. Roosevelt

Martin Luther King, Jr.

William Shakespeare

LESSON PLAN TITLE	
GED TARGET/CCSS	TIME
OBJECTIVE	
REQUIRED MATERIALS	
ANTICIPATORY SET	
INSTRUCTION	
GUIDED PRACTICE	
APPLICATION AND INDEPENDENT PRACTICE	
REFLECTION	
ASSESSMENT	

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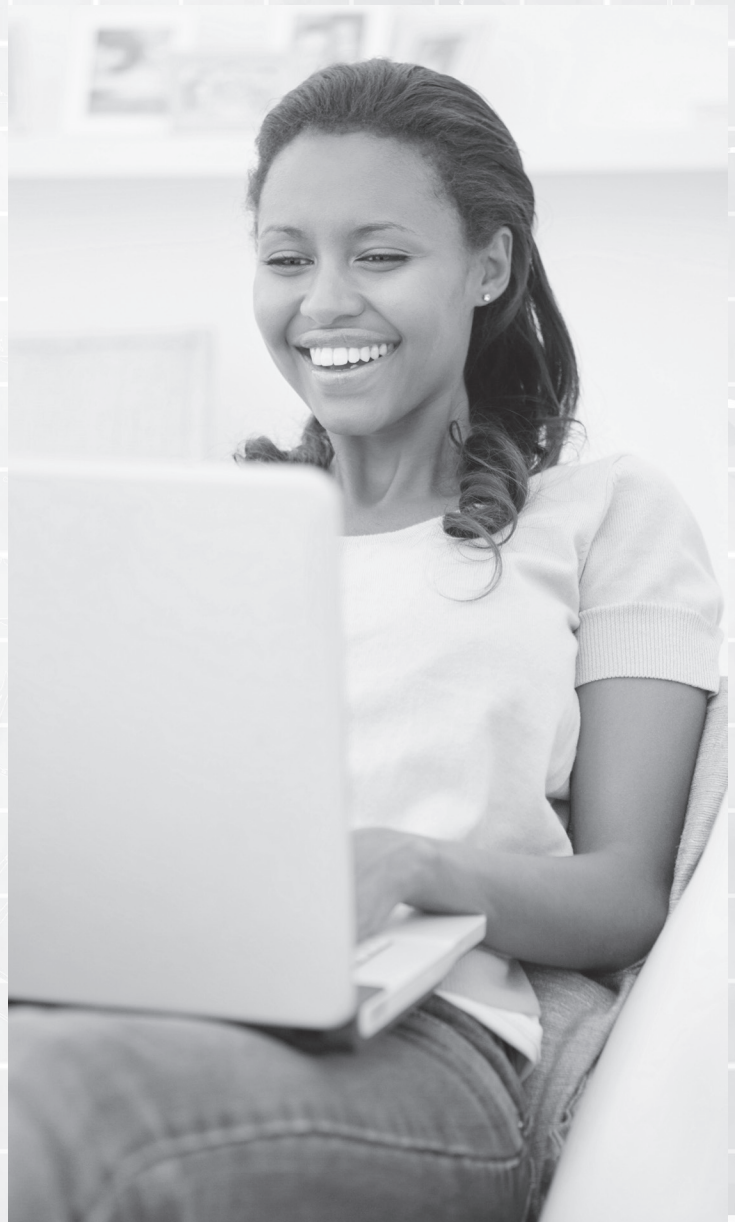
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- See alignment to 2014 GED assessment targets and Depth of Knowledge levels in Section 3.





*Notes*

## Guide to the Common Core Standards: Kentucky Adult Education

This guide will help you understand how to apply the CCSS to an adult education environment:

<http://www.teachersdomain.org/special/ccaded/>

### CCSS Presentations and Webinars

On this site, you will find continually updated listings of webinars and presentations on CCSS in mathematics, English language arts, literacy, and assessment:

<http://www.cde.ca.gov/re/cc/presentationswebinars.asp>

### Hess' Cognitive Rigor Matrix & Curricular Examples for Math/Science and Reading/Writing

These charts give examples of exercises that meet DOK levels 1 through 4 at differing levels of Bloom's Taxonomy.

#### **Math and Science:**

[http://www.stancoe.org/SCOE/iss/common\\_core/overview/overview\\_depth\\_of\\_knowledge/cognitive\\_rigor\\_matrix\\_math\\_science.pdf](http://www.stancoe.org/SCOE/iss/common_core/overview/overview_depth_of_knowledge/cognitive_rigor_matrix_math_science.pdf)

#### **Reading and Writing:**

[http://www.stancoe.org/SCOE/iss/common\\_core/overview/overview\\_depth\\_of\\_knowledge/cognitive\\_rigor\\_matrix\\_reading\\_writing.pdf](http://www.stancoe.org/SCOE/iss/common_core/overview/overview_depth_of_knowledge/cognitive_rigor_matrix_reading_writing.pdf)



**Essential Education**  
*Learning Made CERTAIN*

**Section 3**  
**GED<sup>®</sup> Test**  
**Targets, Standards, &**  
**Alignments**

*Making Connections between CCSS,  
GED Targets, DOK, and Lessons*

## Alignment Tables

The following alignment tables for math, language arts, science, and social studies show relationships between assessment targets, CCSS, DOK levels, GED Academy lessons, and other resources.

### Abbreviations and Standard Designations

#### CCSS Designations

CCSS designations start with CCSS; followed by a designation of subject area; followed by a designation of grade level; followed by a designation for the domain; and finally the standard number. For example, the CCSS designation CCSS. ELA-Literacy.CCRA.R.1 means:

ELA-Literacy	English Language Arts, Literacy
CCRA	Career and College Readiness Anchor
R	Reading
1	Standard 1

The CCSS designation CCSS.Math.Content.8.EE.A.1 means:

Math	Mathematics
Content.8	Eighth Grade Content
EE	Expressions & Equations
A.1	Standard A.1

Visit <http://www.corestandards.org> for more details.

#### GED Targets

GED Targets are abbreviated with a letter designating content area, such as W (writing), R (reading), SP (science practice), SSP (social studies practice) or MP (math practice), and a number for the standard number. Subtopics will be designated with .a, .b, etc. For example, Q.1.a means:

Q	Quantitative Problem Solving
1	Target 1
a	Part a of target 1

#### Other Abbreviations

ES	Essential Skills, available summer 2013
KA	Khan Academy, <a href="https://www.khanacademy.org/">https://www.khanacademy.org/</a>
DOK	Depth of Knowledge



MATHEMATICAL REASONING		
2014 GED Assessment Targets	Curriculum Design	
	Common Core State Standards	Depth of Knowledge
<b>Quantitative Problem Solving with Rational Numbers (25%)</b>		
<b>Q.1   Apply number sense concepts, including ordering rational numbers, absolute value, multiples, factors, and exponents</b>		
<b>Q.1.a</b>   Order fractions and decimals, including ordering on a number line.	<b>CCSS.Math.Content.4.NF.A.2</b>   Compare two fractions with different numerators and different denominators, e.g., by creating common denominators or numerators, or by comparing to a benchmark fraction such as $\frac{1}{2}$ . Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with symbols $>$ , $=$ , or $<$ , and justify the conclusions, e.g., by using a visual fraction model.	Levels 1–2
	<b>CCSS.Math.Content.6.NS.C.6</b>   Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates.	Levels 1–2
	<b>CCSS.Math.Content.6.NS.C.7</b>   Understand ordering and absolute value of rational numbers.	Levels 1–2
<b>Q.1.b</b>   Apply number properties involving multiples and factors, such as using the least common multiple, greatest common factor, or distributive property to rewrite numeric expressions.	<b>CCSS.Math.Content.6.NS.B.4</b>   Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1–100 with a common factor as a multiple of a sum of two whole numbers with no common factor.	Levels 1–2
<b>Q.1.c</b>   Apply rules of exponents in numerical expressions with rational exponents to write equivalent expressions with rational exponents.	<b>CCSS.Math.Content.8.EE.A.1</b>   Know and apply the properties of integer exponents to generate equivalent numerical expressions. For example, $3^2 \times 3^{-5} = 3^{-3} = 1/3^3 = 1/27$ .	Levels 1–2
	<b>CCSS.Math.Content.HSN-RN.A.2</b>   Rewrite expressions involving radicals and rational exponents using the properties of exponents.	Levels 1–2
<b>Q.1.d</b>   Identify absolute value or a rational number as its distance from 0 on the number line and determine the distance between two rational numbers on the number line, including using the absolute value of their difference.	<b>CCSS.Math.Content.6.NS.C.7</b>   Understand ordering and absolute value of rational numbers.	Levels 1–2
	<b>CCSS.Math.Content.7.NS.A.1</b>   Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.	Levels 1–2
<b>Q.2   Add, subtract, multiply, divide, and use exponents and roots of rational, fraction and decimal numbers</b>		
<b>Q.2.a</b>   Perform addition, subtraction, multiplication, and division on rational numbers.	<b>CCSS.Math.Content.7.NS.A.1</b>   Apply and extend previous understandings of addition and subtraction to add and subtract rational numbers; represent addition and subtraction on a horizontal or vertical number line diagram.	Levels 1–2
	<b>CCSS.Math.Content.7.NS.A.2</b>   Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.	Levels 1–2

Section 3: GED® Test Targets, Standards, & Alignments

MATHEMATICAL REASONING		
Resources		
GED Academy Lessons	GED Smart Study Guide	Additional Resources
Introduction to Fractions (DOK 1 & 2) (MP.1) Fractions (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Adding and Subtracting Fractions (DOK 1 & 2) (MP.1) Multiplying Fractions (DOK 1) (MP.1) Dividing Fractions (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Decimals (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Converting Decimals to Fractions (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Operations with Decimals (DOK 1 & 2) (MP.1) (MP.2) (MP.4)	pp. 660–680	
Ordering Numbers (DOK 2) (MP.1) Functions, Graphs, Inequalities (DOK 1 & 2) (MP.1) (MP.2) (MP.4)	pp. 595–608	
Ordering Numbers (DOK 2) (MP.1) Order of Operations (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Functions, Graphs, Inequalities (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Review of Number Operations (DOK 1 & 2) (MP.1) (MP.2) (MP.4)	p. 621	
Using Integers (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Number Operations (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Number Operations I (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Number Operations II (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Number Operations III (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Number Operations IV (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Number Operations V (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Number Operations VI (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Number Operations Review (DOK 1 & 2) (MP.1) (MP.2) (MP.4)	pp. 651–654	
Exponents and Roots (DOK 1, 2 & 3) (MP.1) (MP.2) (MP.3) (MP.4) (MP.5)	pp. 651–654	
Exponents and Roots (DOK 1, 2 & 3) (MP.1) (MP.2) (MP.3) (MP.4) (MP.5)		
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Using Integers (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Solving Equations (DOK 1, 2 & 3) (MP.1) (MP.2) (MP.3) (MP.4) (MP.5)	pp. 651–654	
Addition and Subtraction (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Word Problems I (DOK 1, 2 & 3) (MP.1) (MP.2) (MP.3) (MP.4) (MP.5) Work Problems II (DOK 1, 2 & 3) (MP.1) (MP.2) (MP.3) (MP.4) (MP.5)	pp. 651–654 pp. 609–617	
Multiplication and Division (DOK 1 & 2) (MP.1) (MP.2) (MP.4)	pp. 651–654	

MATHEMATICAL REASONING		
2014 GED Assessment Targets	Curriculum Design	
	Common Core State Standards	Depth of Knowledge
Q.2.b   Perform computations and write numerical expressions with squares and square roots of positive, rational numbers.	CCSS.Math.Content.8.EE.A.2   Use square root and cube root symbols to represent solutions to equations of the form $x^2 = p$ and $x^3 = p$ , where $p$ is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that $\sqrt{2}$ is irrational.	Levels 1–2
	CCSS.Math.Content.HSN-RN.A.2   Rewrite expressions involving radicals and rational exponents using the properties of exponents.	Levels 1–2
Q.2.c   Perform computations and write numerical expressions with cubes and cube roots of rational numbers.	CCSS.Math.Content.8.EE.A.2   Use square root and cube root symbols to represent solutions to equations of the form $x^2 = p$ and $x^3 = p$ , where $p$ is a positive rational number. Evaluate square roots of small perfect squares and cube roots of small perfect cubes. Know that $\sqrt{2}$ is irrational.	Levels 1–2
	CCSS.Math.Content.HSN-RN.A.2   Rewrite expressions involving radicals and rational exponents using the properties of exponents.	Levels 1–2
Q.2.d   Determine when a numerical expression is undefined.	CCSS.Math.Content.7.NS.A.2   Apply and extend previous understandings of multiplication and division and of fractions to multiply and divide rational numbers.	Level 2
Q.2.e   Solve one-step or multi-step arithmetic, real world problems involving the four operations with rational numbers, including those involving scientific notation.	CCSS.Math.Content.7.NS.A.3   Solve real-world and mathematical problems involving the four operations with rational numbers.	Levels 1–2
	CCSS.Math.Content.7.EE.B.3   Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies.	Levels 1–2
	CCSS.Math.Content.8.EE.A.4   Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology	Levels 1–2
<b>Q.3   Calculate and use ratios, percents and scale factors</b>		
Q.3.a   Compute unit rates. Examples include (but are not limited to): unit pricing, constant speed, people per square mile, BTUs per cubic foot.	CCSS.Math.Content.6.RP.A.3   Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations.	Levels 1–2
	CCSS.Math.Content.6.RP.A.1   Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities.	Levels 1–2
	CCSS.Math.Content.HSG-MG.A.2   Apply concepts of density based on area and volume in modeling situations (e.g., persons per square mile, BTUs per cubic foot).	Levels 1–2
Q.3.b   Use scale factors to determine the magnitude of a size change. Convert between actual drawings and scale drawings.	CCSS.Math.Content.7.G.A.1   Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.	Levels 1–2

Section 3: GED® Test Targets, Standards, & Alignments

MATHEMATICAL REASONING		
Resources		
GED Academy Lessons	GED Smart Study Guide	Additional Resources
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Exponents & Roots (DOK 1 & 2) (MP.1) (MP.5) (MP.7) (MP.8)	pp. 651–654	
Exponents & Roots (DOK 1 & 2) (MP.1) (MP.5) (MP.7) (MP.8)	pp. 651–654	
Exponents & Roots (DOK 1 & 2) (MP.1) (MP.5) (MP.7) (MP.8)	pp. 651–654	
Solving Equations (DOK 1 & 2) (MP.1) (MP.2) (MP.4)		
Solving Equations (DOK 1 & 2) (MP.1) (MP.2) (MP.4)		
Solving Equations (DOK 1 & 2) (MP.1) (MP.2) (MP.4)		
Solving Equations (DOK 1 & 2) (MP.1) (MP.2) (MP.4)		
Estimating (DOK 1, 2 & 3) (MP.1) (MP.2) (MP.3) (MP.4) (MP.5) Interest (DOK 1, 2 & 3) (MP.1) (MP.2) (MP.3) (MP.4) (MP.5) Rate (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Money (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Money and Rate (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Ratios and Proportions (DOK 1 & 2) (MP.1) (MP.2) (MP.4)	pp. 618–621	
Ratios and Proportions (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Introduction to Percentages (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Solving Percentage Problems (DOK 1 & 2) (MP.1) (MP.2) (MP.4)		
Perimeter and Area (DOK 1 & 2) (MP.1) (MP.2) (MP.4)		
Perimeter and Area (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Similar and Congruent (DOK 1 & 2) (MP.1) (MP.2) (MP.4)		



MATHEMATICAL REASONING		
2014 GED Assessment Targets	Curriculum Design	
	Common Core State Standards	Depth of Knowledge
<b>Q.3.c</b>   Solve multi-step real-world arithmetic problems using ratios or proportions including those that require converting units of measure.	<b>CCSS.Math.Content.6.RP.A.3</b>   Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations.	Level 2
	<b>CCSS.Math.Content.6.RP.A.3</b>   Use ratio and rate reasoning to solve real-world and mathematical problems, e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations.	Levels 1–2
	<b>CCSS.Math.Content.7.RP.A.1</b>   Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units.	Levels 1–2
	<b>CCSS.Math.Content.7.RP.A.2</b>   Recognize and represent proportional relationships between quantities.	Levels 1–2
	<b>CCSS.Math.Content.7.RP.A.3</b>   Use proportional relationships to solve multistep ratio and percent problems. Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error.	Levels 1–2
	<b>CCSS.Math.Content.HSN-Q.A.1</b>   Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.	Levels 1–2
<b>Q.3.d</b>   Solve two-step real-world arithmetic problems involving percentages. Examples include (but are not limited to): simple interest, tax, markups and markdowns, gratuities and commissions, percent increase or decrease.	<b>CCSS.Math.Content.7.RP.A.3</b>   Use proportional relationships to solve multistep ratio and percent problems. Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error.	Levels 1–2

MATHEMATICAL REASONING		
Resources		
GED Academy Lessons	GED Smart Study Guide	Additional Resources
Estimating (DOK 1, 2 & 3) (MP.1) (MP.2) (MP.3) (MP.4) (MP.5) Interest (DOK 1, 2 & 3) (MP.1) (MP.2) (MP.3) (MP.4) (MP.5) Rate (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Money (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Money and Rate (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Introduction to Percentages (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Solving Percentage Problems (DOK 1 & 2) (MP.1) (MP.2) (MP.4)		
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MATHEMATICAL REASONING		
2014 GED Assessment Targets	Curriculum Design	
	Common Core State Standards	Depth of Knowledge
<b>Quantitative Problem Solving in Measurement 20%</b>		
<b>Q.4   Calculate dimensions, perimeter, circumference, and area of two-dimensional figures</b>		
<b>Q.4.a</b>   Compute the area and perimeter of triangles and rectangles. Determine side lengths of triangles and rectangles when given area or perimeter.	<b>CCSS.Math.Content.7.G.6</b>   Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.	Levels 1–2
<b>Q.4.b</b>   Compute the area and circumference of circles. Determine the radius or diameter when given area or circumference.	<b>CCSS.Math.Content.7.G.4</b>   Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.	Levels 1–2
<b>Q.4.c</b>   Compute the perimeter of a polygon. Given a geometric formula, compute the area of a polygon. Determine side lengths of the figure when given the perimeter or area.	<b>CCSS.Math.Content.6.EE.2</b>   Write, read, and evaluate expressions in which letters stand for numbers.	Levels 1–2
	<b>CCSS.Math.Content.7.G.6</b>   Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.	Levels 1–2
<b>Q.4.d</b>   Compute perimeter and area of 2-D composite geometric figures, which could include circles, given geometric formulas as needed.	<b>CCSS.Math.Content.6.EE.2</b>   Write, read, and evaluate expressions in which letters stand for numbers.	Levels 1–2
	<b>CCSS.Math.Content.7.G.6</b>   Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.	Levels 1–2
	<b>CCSS.Math.Content.8.G.9</b>   Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.	Levels 1–2
<b>Q.4.e</b>   Use the Pythagorean theorem to determine unknown side lengths in a right triangle.	<b>CCSS.Math.Content.8.G.B.7</b>   Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.	Levels 1–2

MATHEMATICAL REASONING		
Resources		
GED Academy Lessons	GED Smart Study Guide	Additional Resources
Perimeter and Area (DOK 1, 2 & 3) (MP.1) (MP.2) (MP.3) (MP.4) (MP.5) Lines and Angles (DOK 1, 2 & 3) (MP.1) (MP.2) (MP.3) (MP.4) (MP.5) Angles I (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Angles II (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Similar and Congruent Figures (DOK 1, 2 & 3) (MP.1) (MP.2) (MP.3) (MP.4) (MP.5)		
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Perimeter and Area (DOK 1, 2 & 3) (MP.1) (MP.2) (MP.3) (MP.4) (MP.5) Lines and Angles (DOK 1, 2 & 3) (MP.1) (MP.2) (MP.3) (MP.4) (MP.5) Angles I (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Angles II (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Similar and Congruent Figures (DOK 1, 2 & 3) (MP.1) (MP.2) (MP.3) (MP.4) (MP.5) Triangles and Quadrilaterals (DOK 1, 2 & 3) (MP.1) (MP.2) (MP.3) (MP.4) (MP.5) Irregular Figures (DOK 1, 2 & 3) (MP.1) (MP.2) (MP.3) (MP.4) (MP.5) Review of Geometry (DOK 1 & 2) (MP.1) (MP.2) (MP.4)	pp. 643–655	
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MATHEMATICAL REASONING		
2014 GED Assessment Targets	Curriculum Design	
	Common Core State Standards	Depth of Knowledge
<b>Q.5   Calculate dimensions, surface area, and volume of three-dimensional figures</b>		
<b>Q.5.a</b>   When given geometric formulas, compute volume and surface area of regular prisms. Solve for side lengths or height, when given volume or surface area.	<b>CCSS.Math.Content.6.EE.2</b>   Write, read, and evaluate expressions in which letters stand for numbers.	Levels 1–2
	<b>CCSS.Math.Content.7.G.6</b>   Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.	Levels 1–2
	<b>CCSS.Math.Content.8.G.9</b>   Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.	Levels 1–2
<b>Q.5.b</b>   When given geometric formulas, compute volume and surface area of cylinders. Solve for height, radius, or diameter when given volume or surface area.	<b>CCSS.Math.Content.6.EE.2</b>   Write, read, and evaluate expressions in which letters stand for numbers.	Levels 1–2
	<b>CCSS.Math.Content.7.G.6</b>   Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.	Levels 1–2
	<b>CCSS.Math.Content.8.G.9</b>   Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.	Levels 1–2
<b>Q.5.c</b>   When given geometric formulas, compute volume and surface area of right prisms. Solve for side lengths or height, when given volume or surface area.	<b>CCSS.Math.Content.6.EE.2</b>   Write, read, and evaluate expressions in which letters stand for numbers.	Levels 1–2
	<b>CCSS.Math.Content.7.G.6</b>   Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.	Levels 1–2

MATHEMATICAL REASONING		
Resources		
GED Academy Lessons	GED Smart Study Guide	Additional Resources
Solving Equations (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Simplifying Expressions (DOK 1 & 2) (MP.1) (MP.2) (MP.3)		
Perimeter and Area (DOK 1, 2 & 3) (MP.1) (MP.2) (MP.3) (MP.4) (MP.5) Lines and Angles (DOK 1, 2 & 3) (MP.1) (MP.2) (MP.3) (MP.4) (MP.5) Angles I (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Angles II (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Similar and Congruent Figures (DOK 1, 2 & 3) (MP.1) (MP.2) (MP.3) (MP.4) (MP.5) Triangles and Quadrilaterals (DOK 1, 2 & 3) (MP.1) (MP.2) (MP.3) (MP.4) (MP.5) Irregular Figures (DOK 1, 2 & 3) (MP.1) (MP.2) (MP.3) (MP.4) (MP.5) Review of Geometry (DOK 1 & 2) (MP.1) (MP.2) (MP.4)	pp. 643–655	
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MATHEMATICAL REASONING		
2014 GED Assessment Targets	Curriculum Design	
	Common Core State Standards	Depth of Knowledge
<b>Q.5.c (cont'd)</b>   When given geometric formulas, compute volume and surface area of right prisms. Solve for side lengths or height, when given volume or surface area.	<b>CCSS.Math.Content.7.G.6</b>   Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.	Levels 1–2
<b>Q.5.d</b>   When given geometric formulas, compute volume and surface area of right pyramids and cones. Solve for side lengths, height, radius, or diameter when given volume or surface area.	<b>CCSS.Math.Content.6.EE.2</b>   Write, read, and evaluate expressions in which letters stand for numbers.	Levels 1–2
	<b>CCSS.Math.Content.7.G.6</b>   Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.	Levels 1–2
	<b>CCSS.Math.Content.8.G.9</b>   Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.	Levels 1–2
<b>Q.5.e</b>   When given geometric formulas, compute volume and surface area of spheres. Solve for radius or diameter when given the surface area.	<b>CCSS.Math.Content.6.EE.2</b>   Write, read, and evaluate expressions in which letters stand for numbers.	Levels 1–2
	<b>CCSS.Math.Content.8.G.9</b>   Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.	Levels 1–2
<b>Q.5.f</b>   Compute surface area and volume of composite 3-D geometric figures, given geometric formulas as needed.	<b>CCSS.Math.Content.6.EE.2</b>   Write, read, and evaluate expressions in which letters stand for numbers.	Levels 1–2
	<b>CCSS.Math.Content.8.G.9</b>   Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.	Levels 1–2

MATHEMATICAL REASONING		
Resources		
GED Academy Lessons	GED Smart Study Guide	Additional Resources
Perimeter and Area (DOK 1, 2 & 3) (MP.1) (MP.2) (MP.3) (MP.4) (MP.5) Lines and Angles (DOK 1, 2 & 3) (MP.1) (MP.2) (MP.3) (MP.4) (MP.5) Angles I (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Angles II (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Similar and Congruent Figures (DOK 1, 2 & 3) (MP.1) (MP.2) (MP.3) (MP.4) (MP.5) Triangles and Quadrilaterals (DOK 1, 2 & 3) (MP.1) (MP.2) (MP.3) (MP.4) (MP.5) Irregular Figures (DOK 1, 2 & 3) (MP.1) (MP.2) (MP.3) (MP.4) (MP.5) Review of Geometry (DOK 1 & 2) (MP.1) (MP.2) (MP.4)	pp. 643–655	
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Perimeter and Area (DOK 1, 2 & 3) (MP.1) (MP.2) (MP.3) (MP.4) (MP.5) Lines and Angles (DOK 1, 2 & 3) (MP.1) (MP.2) (MP.3) (MP.4) (MP.5) Angles I (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Angles II (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Similar and Congruent Figures (DOK 1, 2 & 3) (MP.1) (MP.2) (MP.3) (MP.4) (MP.5) Triangles and Quadrilaterals (DOK 1, 2 & 3) (MP.1) (MP.2) (MP.3) (MP.4) (MP.5) Irregular Figures (DOK 1, 2 & 3) (MP.1) (MP.2) (MP.3) (MP.4) (MP.5) Review of Geometry (DOK 1 & 2) (MP.1) (MP.2) (MP.4)	pp. 643–655	
Solving Equations (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Simplifying Expressions (DOK 1 & 2) (MP.1) (MP.2) (MP.3)		
Perimeter and Area (DOK 1, 2 & 3) (MP.1) (MP.2) (MP.3) (MP.4) (MP.5) Lines and Angles (DOK 1, 2 & 3) (MP.1) (MP.2) (MP.3) (MP.4) (MP.5) Angles I (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Angles II (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Similar and Congruent Figures (DOK 1, 2 & 3) (MP.1) (MP.2) (MP.3) (MP.4) (MP.5) Triangles and Quadrilaterals (DOK 1, 2 & 3) (MP.1) (MP.2) (MP.3) (MP.4) (MP.5) Irregular Figures (DOK 1, 2 & 3) (MP.1) (MP.2) (MP.3) (MP.4) (MP.5) Review of Geometry (DOK 1 & 2) (MP.1) (MP.2) (MP.4)	pp. 643–655	
Solving Equations (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Simplifying Expressions (DOK 1 & 2) (MP.1) (MP.2) (MP.3)		
Perimeter and Area (DOK 1, 2 & 3) (MP.1) (MP.2) (MP.3) (MP.4) (MP.5) Lines and Angles (DOK 1, 2 & 3) (MP.1) (MP.2) (MP.3) (MP.4) (MP.5) Angles I (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Angles II (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Similar and Congruent Figures (DOK 1, 2 & 3) (MP.1) (MP.2) (MP.3) (MP.4) (MP.5) Triangles and Quadrilaterals (DOK 1, 2 & 3) (MP.1) (MP.2) (MP.3) (MP.4) (MP.5) Irregular Figures (DOK 1, 2 & 3) (MP.1) (MP.2) (MP.3) (MP.4) (MP.5) Review of Geometry (DOK 1 & 2) (MP.1) (MP.2) (MP.4)	pp. 643–655	



MATHEMATICAL REASONING		
2014 GED Assessment Targets	Curriculum Design	
	Common Core State Standards	Depth of Knowledge
<b>Q.6   Interpret and create data displays</b>		
<b>Q.6.a</b>   Represent, display, and interpret categorical data in bar graphs or circle graphs.	<b>CCSS.Math.Content.7.RP.A.2</b>   Recognize and represent proportional relationships between quantities.	Levels 1–2
	<b>CCSS.Math.Content.3.MD.B.3</b>   Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent 5 pets.	Levels 1–2
<b>Q.6.b</b>   Represent, display, and interpret data involving one variable plots on the real number line including dot plots, histograms, and box plots.	<b>CCSS.Math.Content.HSS-ID.A.1</b>   Represent data with plots on the real number line (dot plots, histograms, and box plots).	Levels 1–2
<b>Q.6.c</b>   Represent and display data involving two variables in tables and the coordinate plane including scatter plots and graphs. Interpret two-variable data displayed in tables, scatter plots, and graphs.	<b>CCSS.Math.Content.8.SP.A.1</b>   Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.	Levels 1–2

Section 3: GED® Test Targets, Standards, & Alignments

MATHEMATICAL REASONING		
Resources		
GED Academy Lessons	GED Smart Study Guide	Additional Resources
Graphs I (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Graphs II (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Graphs III (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Graphs IV (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Graphs V (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Graphs VI (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Graphs VII (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Tables and Charts (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Charts I (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Charts II (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Charts III (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Charts IV (DOK 1 & 2) (MP.1) (MP.2) (MP.4)	pp. 660–680	
Graphs I (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Graphs II (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Graphs III (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Graphs IV (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Graphs V (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Graphs VI (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Graphs VII (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Tables and Charts (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Charts I (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Charts II (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Charts III (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Charts IV (DOK 1 & 2) (MP.1) (MP.2) (MP.4)	pp. 660–680	
Graphs I (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Graphs II (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Graphs III (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Graphs IV (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Graphs V (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Graphs VI (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Graphs VII (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Tables and Charts (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Charts I (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Charts II (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Charts III (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Charts IV (DOK 1 & 2) (MP.1) (MP.2) (MP.4)	pp. 660–680	
Graphs I (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Graphs II (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Graphs III (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Graphs IV (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Graphs V (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Graphs VI (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Graphs VII (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Tables and Charts (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Charts I (DOK 1 & 2) (MP.1) (MP.2) (MP.4)	pp. 660–680	

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MATHEMATICAL REASONING		
2014 GED Assessment Targets	Curriculum Design	
	Common Core State Standards	Depth of Knowledge
<b>Q.6.c (cont'd)</b>   Represent and display data involving two variables in tables and the coordinate plane including scatter plots and graphs. Interpret two-variable data displayed in tables, scatter plots, and graphs.	<b>CCSS.Math.Content.8.SP.A.1 (cont'd)</b>   Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.	Levels 1–2
<b>Q.7   Calculate and use mean, median, mode and weighted average</b>		
<b>Q.7.a</b>   Calculate the mean, median, mode and range. Calculate a missing data value, given the average and all the missing data values but one, as well as calculating the average, given the frequency counts of all the data values, and calculating a weighted average.	<b>CCSS.Math.Content.6.SP.A.3</b>   Recognize that a measure of center for a numerical data set summarizes all of its values with a single number, while a measure of variation describes how its values vary with a single number.	Levels 1–2
	<b>CCSS.Math.Content.HSS-MD.A.2</b>   Calculate the expected value of a random variable; interpret it as the mean of the probability distribution.	Levels 1–2
<b>Q.8   Utilize counting techniques and determine probabilities</b>		
<b>Q.8.a</b>   Use counting techniques to solve problems and determine combinations and permutations.	<b>CCSS.Math.Content.HSS-CP.B.9</b>   Use permutations and combinations to compute probabilities of compound events and solve problems.	Levels 1–2
<b>Q.8.b</b>   Determine the probability of simple and compound events	<b>CCSS.Math.Content.7.SP.C.7</b>   Develop a probability model and use it to find probabilities of events. Compare probabilities from a model to observed frequencies; if the agreement is not good, explain possible sources of the discrepancy.	Levels 1–2
	<b>CCSS.Math.Content.7.SP.C.8</b>   Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation.	Levels 1–2
	<b>CCSS.Math.Content.HSS-CP.A.1</b>   Describe events as subsets of a sample space (the set of outcomes) using characteristics (or categories) of the outcomes, or as unions, intersections, or complements of other events (“or,” “and,” “not”).	Levels 1–2
	<b>CCSS.Math.Content.HSS-CP.A.2</b>   Understand that two events A and B are independent if the probability of A and B occurring together is the product of their probabilities, and use this characterization to determine if they are independent.	Levels 1–2
<b>Algebraic Problem Solving with Expressions and Equations (30%)</b>		
<b>A.1   Write, evaluate, and compute with expressions and polynomials</b>		
<b>A.1.a</b>   Add, subtract, factor, multiply, and expand linear expressions with rational coefficients.	<b>CCSS.Math.Content.7.EE.A.1</b>   Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.	Levels 1–2
<b>A.1.b</b>   Evaluate linear expressions by substituting integers for unknown quantities.	<b>CCSS.Math.Content.6.EE.A.2</b>   Write, read, and evaluate expressions in which letters stand for numbers.	Levels 1–2

Section 3: GED® Test Targets, Standards, & Alignments

MATHEMATICAL REASONING		
Resources		
GED Academy Lessons	GED Smart Study Guide	Additional Resources
Charts II (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Charts III (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Charts IV (DOK 1 & 2) (MP.1) (MP.2) (MP.4)		
Mean, Median, Mode (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Data Analysis/Mean (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Review of Using Data (DOK 1 & 2) (MP.1) (MP.2) (MP.4)	pp. 657–659	
Mean, Median, Mode (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Data Analysis/Mean (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Review of Using Data (DOK 1 & 2) (MP.1) (MP.2) (MP.4)		
Simple Probability (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Dependent Probability (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Independent Probability (DOK 1 & 2) (MP.1) (MP.2) (MP.4)		
Simple Probability (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Dependent Probability (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Independent Probability (DOK 1 & 2) (MP.1) (MP.2) (MP.4)		
Simple Probability (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Dependent Probability (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Independent Probability (DOK 1 & 2) (MP.1) (MP.2) (MP.4)		
Simple Probability (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Dependent Probability (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Independent Probability (DOK 1 & 2) (MP.1) (MP.2) (MP.4)		
Simple Probability (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Dependent Probability (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Independent Probability (DOK 1 & 2) (MP.1) (MP.2) (MP.4)		
Solving Equations (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Simplifying Expressions (DOK 1 & 2) (MP.1) (MP.2) (MP.3) Factoring Expressions (DOK 2 & 3) (MP.1) (MP.3) (MP.7) Exponents & Roots (DOK 1 & 2) (MP.1) (MP.5) (MP.7) (MP.8)		Adding polynomials; Addition and subtraction of polynomials; Factoring and the Distributive Property; Multiplying binomials; Factoring polynomials using the Greatest Common Factor (KA)
Solving Equations (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Simplifying Expressions (DOK 1 & 2) (MP.1) (MP.2) (MP.3) Linear Equation I (DOK 2) (MP.1) (MP.2) (MP.4) Missing Element I (DOK 1) (MP.1) Missing Element II (DOK 2) (MP.1) (MP.2) (MP.4)		Evaluating an expression; Evaluate a formula using substitution (KA)



MATHEMATICAL REASONING		
2014 GED Assessment Targets	Curriculum Design	
	Common Core State Standards	Depth of Knowledge
<b>A.1.c</b>   Write linear expressions as part of word-to-symbol translations or to represent common settings.	<b>CCSS.Math.Content.6.EE.A.2</b>   Write, read, and evaluate expressions in which letters stand for numbers.	Levels 1–2
	<b>CCSS.Math.Content.6.EE.B.6</b>   Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.	Levels 1–2
<b>A.1.d</b>   Add, subtract, multiply polynomials, including multiplying two binomials, or divide factorable polynomials.	<b>CCSS.Math.Content.HSA-APR.A.1</b>   Understand that polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials.	Levels 1–2
<b>A.1.e</b>   Evaluate polynomial expressions by substituting integers for unknown quantities	<b>CCSS.Math.Content.6.EE.A.2</b>   Write, read, and evaluate expressions in which letters stand for numbers.	Levels 1–2
<b>A.1.f</b>   Factor polynomial expressions.	<b>CCSS.Math.Content.HSA-SSE.A.2</b>   Use the structure of an expression to identify ways to rewrite it. For example, see $x^4 - y^4$ as $(x^2)^2 - (y^2)^2$ , thus recognizing it as a difference of squares that can be factored as $(x^2 - y^2)(x^2 + y^2)$ .	Levels 1–2
	<b>CCSS.Math.Content.HSA-SSE.B.3</b>   Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression.	Levels 1–2
	<b>CCSS.Math.Content.HSA-SSE.B.4</b>   Derive the formula for the sum of a finite geometric series (when the common ratio is not 1), and use the formula to solve problems. For example, calculate mortgage payments.	Levels 1–2
<b>A.1.g</b>   Write polynomial expressions as part of word-to-symbol translations or to represent common settings.	<b>CCSS.Math.Content.6.EE.A.2</b>   Write, read, and evaluate expressions in which letters stand for numbers.	Levels 1–2
	<b>CCSS.Math.Content.6.EE.B.6</b>   Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.	Levels 1–2

Section 3: GED® Test Targets, Standards, & Alignments

MATHEMATICAL REASONING		
Resources		
GED Academy Lessons	GED Smart Study Guide	Additional Resources
Solving Equations (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Simplifying Expressions (DOK 1 & 2) (MP.1) (MP.2) (MP.3) Linear Equation I (DOK 2) (MP.1) (MP.2) (MP.4) Missing Element I (DOK 1) (MP.1) Missing Element II (DOK 2) (MP.1) (MP.2) (MP.4)		Evaluating an expression; Evaluate a formula using substitution (KA)
Integers (DOK 1 & 2) (MP.1) (MP.6) Solving Equations (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Simplifying Expressions (DOK 1 & 2) (MP.1) (MP.2) (MP.3) Linear Equation I (DOK 2) (MP.1) (MP.2) (MP.4) Missing Element I (DOK 1) (MP.1) Missing Element II (DOK 2) (MP.1) (MP.2) (MP.4)		What is a variable; Evaluating an expression; Evaluate a formula using substitution (KA)
Simplifying Expressions (DOK 1 & 2) (MP.1) (MP.2) (MP.3) Factoring Expressions (DOK 2 & 3) (MP.1) (MP.3) (MP.7)		Adding polynomials; Multiplying polynomials; Dividing polynomials (KA)
Solving Equations (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Simplifying Expressions (DOK 1 & 2) (MP.1) (MP.2) (MP.3) Linear Equation I (DOK 2) (MP.1) (MP.2) (MP.4) Missing Element I (DOK 1) (MP.1) Missing Element II (DOK 2) (MP.1) (MP.2) (MP.4)		Evaluating an Expression; Evaluate a formula using substitution (KA)
Simplifying Expressions (DOK 1 & 2) (MP.1) (MP.2) (MP.3) Factoring Expressions (DOK 2 & 3) (MP.1) (MP.3) (MP.7) Exponents & Roots (DOK 1 & 2) (MP.1) (MP.5) (MP.7) (MP.8)		Simplify a polynomial (KA)
Simplifying Expressions (DOK 1 & 2) (MP.1) (MP.2) (MP.3) Quadratic Equation I (DOK 1) (MP.1) Quadratic Equation II (DOK 1) (MP.1) Factoring Expressions (DOK 2 & 3) (MP.1) (MP.3) (MP.7) Exponents & Roots (DOK 1 & 2) (MP.1) (MP.5) (MP.7) (MP.8)		
Series to Exponents (ES 6/13)		Series and sequences 1 & 2 (KA)
Solving Equations (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Simplifying Expressions (DOK 1 & 2) (MP.1) (MP.2) (MP.3) Linear Equation I (DOK 2) (MP.1) (MP.2) (MP.4) Missing Element I (DOK 1) (MP.1) Missing Element II (DOK 2) (MP.1) (MP.2) (MP.4)		Evaluating an Expression; Evaluate a formula using substitution (KA)
Integers (DOK 1 & 2) (MP.1) (MP.6) Solving Equations (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Simplifying Expressions (DOK 1 & 2) (MP.1) (MP.2) (MP.3) Linear Equation I (DOK 2) (MP.1) (MP.2) (MP.4) Missing Element I (DOK 1) (MP.1) Missing Element II (DOK 2) (MP.1) (MP.2) (MP.4)		What is a variable; Evaluating an expression; Evaluate a formula using substitution (KA)

MATHEMATICAL REASONING		
2014 GED Assessment Targets	Curriculum Design	
	Common Core State Standards	Depth of Knowledge
<b>A.1.h</b>   Add, subtract, multiply and divide rational expressions.	<b>CCSS.Math.Content.6.EE.A.2</b>   Write, read, and evaluate expressions in which letters stand for numbers.	Levels 1–2
	<b>CCSS.Math.Content.6.EE.B.6</b>   Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.	Levels 1–2
<b>A.1.i</b>   Evaluate rational expressions by substituting integers for unknown quantities.	<b>CCSS.Math.Content.6.EE.A.3</b>   Apply the properties of operations to generate equivalent expressions. For example, apply the distributive property to the expression $3(2 + x)$ to produce the equivalent expression $6 + 3x$ ; apply the distributive property to the expression $24x + 18y$ to produce the equivalent expression $6(4x + 3y)$ ; apply properties of operations to $y + y + y$ to produce the equivalent expression $3y$ .	Levels 1–2
<b>A.1.j</b>   Write rational expressions as part of word-to-symbol translations or to represent common settings. Writing and solving linear equations	<b>CCSS.Math.Content.6.EE.A.2</b>   Write, read, and evaluate expressions in which letters stand for numbers.	Levels 1–2
	<b>CCSS.Math.Content.6.EE.B.6</b>   Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.	Levels 1–2
<b>A.2   Write, manipulate, and solve linear equations</b>		
<b>A.2.a</b>   Solve one-variable linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms or equations with coefficients represented by letters. Includes solving routine first-degree equations.	<b>CCSS.Math.Content.7.EE.B.4</b>   Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.	Levels 1–2
	<b>CCSS.Math.Content.8.EE.C.7</b>   Solve linear equations in one variable.	Levels 1–2
	<b>CCSS.Math.Content.HSA-REI.B.3</b>   Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.	Levels 1–2

MATHEMATICAL REASONING		
Resources		
GED Academy Lessons	GED Smart Study Guide	Additional Resources
Solving Equations (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Simplifying Expressions (DOK 1 & 2) (MP.1) (MP.2) (MP.3) Linear Equation I (DOK 2) (MP.1) (MP.2) (MP.4) Missing Element I (DOK 1) (MP.1) Missing Element II (DOK 2) (MP.1) (MP.2) (MP.4)		Evaluating an Expression; Evaluate a formula using substitution (KA)
Integers (DOK 1 & 2) (MP.1) (MP.6) Solving Equations (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Simplifying Expressions (DOK 1 & 2) (MP.1) (MP.2) (MP.3) Linear Equation I (DOK 2) (MP.1) (MP.2) (MP.4) Missing Element I (DOK 1) (MP.1) Missing Element II (DOK 2) (MP.1) (MP.2) (MP.4)		What is a variable; Evaluating an expression; Evaluate a formula using substitution (KA)
Integers (DOK 1 & 2) (MP.1) (MP.6) Solving Equations (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Simplifying Expressions (DOK 1 & 2) (MP.1) (MP.2) (MP.3) Linear Equation I (DOK 2) (MP.1) (MP.2) (MP.4) Missing Element I (DOK 1) (MP.1) Missing Element II (DOK 2) (MP.1) (MP.2) (MP.4) Exponents & Roots (DOK 1 & 2) (MP.1) (MP.5) (MP.7) (MP.8)		Expressions with two variables; Arithmetic properties (KA)
Solving Equations (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Simplifying Expressions (DOK 1 & 2) (MP.1) (MP.2) (MP.3) Linear Equation I (DOK 2) (MP.1) (MP.2) (MP.4) Missing Element I (DOK 1) (MP.1) Missing Element II (DOK 2) (MP.1) (MP.2) (MP.4)		Evaluating an Expression; Evaluate a formula using substitution (KA)
Integers (DOK 1 & 2) (MP.1) (MP.6) Solving Equations (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Simplifying Expressions (DOK 1 & 2) (MP.1) (MP.2) (MP.3) Linear Equation I (DOK 2) (MP.1) (MP.2) (MP.4) Missing Element I (DOK 1) (MP.1) Missing Element II (DOK 2) (MP.1) (MP.2) (MP.4)		What is a variable; Evaluating an expression; Evaluate a formula using substitution (KA)
Solving Equations (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Simplifying Expressions (DOK 1 & 2) (MP.1) (MP.2) (MP.3) Linear Equation I (DOK 2) (MP.1) (MP.2) (MP.4) Missing Element I (DOK 1) (MP.1) Missing Element II (DOK 2) (MP.1) (MP.2) (MP.4)		Polynomials 1; Polynomials 2 (KA)
Solving Equations (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Linear Equation I (DOK 2) (MP.1) (MP.2) (MP.4) Missing Element I (DOK 1) (MP.1) Missing Element II (DOK 2) (MP.1) (MP.2) (MP.4)		Solving $Ax+B=C$ (KA)
Solving Equations (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Linear Equation I (DOK 2) (MP.1) (MP.2) (MP.4) Missing Element I (DOK 1) (MP.1) Missing Element II (DOK 2) (MP.1) (MP.2) (MP.4) Abstracting Algebra (ES 6/13)		



MATHEMATICAL REASONING		
2014 GED Assessment Targets	Curriculum Design	
	Common Core State Standards	Depth of Knowledge
<b>A.2.b</b>   Solve real-world problems involving linear equations.	<b>CCSS.Math.Content.7.EE.B.4</b>   Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.	Levels 1–2
	<b>CCSS.Math.Content.HSA-CED.A.1</b>   Create equations and inequalities in one variable and use them to solve problems. Include equations arising from linear and quadratic functions, and simple rational and exponential functions.	Levels 1–2
	<b>CCSS.Math.Content.HSA-CED.A.2</b>   Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.	Levels 1–2
<b>A.2.c</b>   Write one-variable and multi-variable linear equations to represent context.	<b>CCSS.Math.Content.6.EE.B.6</b>   Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.	Levels 1–2
	<b>CCSS.Math.Content.HSA-CED.A.1</b>   Create equations and inequalities in one variable and use them to solve problems. Include equations arising from linear and quadratic functions, and simple rational and exponential functions.	Levels 1–2
	<b>CCSS.Math.Content.HSA-CED.A.2</b>   Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.	Levels 1–2
<b>A.2.d</b>   Solve a system of two simultaneous linear equations by graphing, substitution, or linear combination. Solve real-world problems leading to a system of linear equations.	<b>CCSS.Math.Content.8.EE.B.6</b>   Use similar triangles to explain why the slope $m$ is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation $y = mx$ for a line through the origin and the equation $y = mx + b$ for a line intercepting the vertical axis at $b$ .	Levels 1–2
	<b>CCSS.Math.Content.HSA-REI.C.6</b>   Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables.	Levels 1–2
<b>A.3   Write, manipulate, solve, and graph linear inequalities</b>		
<b>A.3.a</b>   Solve linear inequalities in one variable with rational number coefficients.	<b>CCSS.Math.Content.HSA-REI.B.3</b>   Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.	Levels 1–2

Section 3: GED® Test Targets, Standards, & Alignments

MATHEMATICAL REASONING		
Resources		
GED Academy Lessons	GED Smart Study Guide	Additional Resources
Solving Equations (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Simplifying Expressions (DOK 1 & 2) (MP.1) (MP.2) (MP.3) Linear Equation I (DOK 2) (MP.1) (MP.2) (MP.4) Missing Element I (DOK 1) (MP.1) Missing Element II (DOK 2) (MP.1) (MP.2) (MP.4)		Dimensions of a garden; Basic linear equation word problem (KA)
Solving Equations (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Linear Equation I (DOK 2) (MP.1) (MP.2) (MP.4) Graphing Equations (DOK 1) (MP.2) (MP.3) (MP.5) Functions, Graphs, & Inequalities (DOK 1 & 2) (MP.2) (MP.4) (MP.5) Inequalities (DOK 1) (MP.1)		Polynomials 1; Polynomials 2 (KA)
Solving Equations (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Linear Equation I (DOK 2) (MP.1) (MP.2) (MP.4) Graphing Equations (DOK 1) (MP.2) (MP.3) (MP.5) Functions, Graphs, & Inequalities (DOK 1 & 2) (MP.2) (MP.4) (MP.5)		Evaluate expressions with 2 variables; Super Yoga (KA)
Integers (DOK 1 & 2) (MP.1) (MP.6) Solving Equations (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Simplifying Expressions (DOK 1 & 2) (MP.1) (MP.2) (MP.3) Linear Equation I (DOK 2) (MP.1) (MP.2) (MP.4) Missing Element I (DOK 1) (MP.1) Missing Element II (DOK 2) (MP.1) (MP.2) (MP.4)		What is a variable; Evaluating an expression; Evaluate a formula using substitution (KA)
Solving Equations (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Linear Equation I (DOK 2) (MP.1) (MP.2) (MP.4) Graphing Equations (DOK 1) (MP.2) (MP.3) (MP.5) Functions, Graphs, & Inequalities (DOK 1 & 2) (MP.2) (MP.4) (MP.5) Inequalities (DOK 1) (MP.1)		Polynomials 1; Polynomials 2 (KA)
Solving Equations (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Linear Equation I (DOK 2) (MP.1) (MP.2) (MP.4) Graphing Equations (DOK 1) (MP.2) (MP.3) (MP.5) Functions, Graphs, & Inequalities (DOK 1 & 2) (MP.2) (MP.4) (MP.5)		Evaluate expressions with 2 variables; Super Yoga (KA)
Geometry with Algebra (ES 6/13)		Equations of parallel and perpendicular lines; Parallel lines (KA)
Solving Systems of Equations (ES 6/13)		Systems of equations with substitution; Systems of equations by elimination; Solving systems graphically (KA)
Solving Equations (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Linear Equation I (DOK 2) (MP.1) (MP.2) (MP.4) Missing Element I (DOK 1) (MP.1) Missing Element II (DOK 2) (MP.1) (MP.2) (MP.4) Abstracting Algebra (ES 6/13)		

MATHEMATICAL REASONING		
2014 GED Assessment Targets	Curriculum Design	
	Common Core State Standards	Depth of Knowledge
<b>A.3.b</b>   Identify or graph the solution to a one variable linear inequality on a number line.	<b>CCSS.Math.Content.8.EE.B.6</b>   Use similar triangles to explain why the slope $m$ is the same between any two distinct points on a non-vertical line in the coordinate plane; derive the equation $y = mx$ for a line through the origin and the equation $y = mx + b$ for a line intercepting the vertical axis at $b$ .	Levels 1–2
	<b>CCSS.Math.Content.HSA-REI.C.6</b>   Solve systems of linear equations exactly and approximately (e.g., with graphs), focusing on pairs of linear equations in two variables.	Levels 1–2
<b>A.3.c</b>   Solve real-world problems involving inequalities.	<b>CCSS.Math.Content.7.EE.B.4</b>   Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.	Levels 1–2
<b>A.3.d</b>   Write linear inequalities in one variable to represent context.	<b>CCSS.Math.Content.6.EE.B.6</b>   Use variables to represent numbers and write expressions when solving a real-world or mathematical problem; understand that a variable can represent an unknown number, or, depending on the purpose at hand, any number in a specified set.	Levels 1–2
	<b>CCSS.Math.Content.HSA-CED.A.1</b>   Create equations and inequalities in one variable and use them to solve problems. Include equations arising from linear and quadratic functions, and simple rational and exponential functions.	Levels 1–2
	<b>CCSS.Math.Content.HSA-CED.A.2</b>   Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.	Levels 1–2
<b>A.4   Connect and interpret graphs and functions</b>		
<b>A.4.a</b>   Solve quadratic equations in one variable with rational coefficients and real solutions, using appropriate methods. (e.g. quadratic formula, completing the square, factoring, inspection)	<b>CCSS.Math.Content.HSA-REI.B.4</b>   Solve quadratic equations in one variable.	Levels 1–2
<b>A.4.b</b>   Write one-variable quadratic equations to represent context.	<b>CCSS.Math.Content.HSA-CED.A.1</b>   Create equations and inequalities in one variable and use them to solve problems. Include equations arising from linear and quadratic functions, and simple rational and exponential functions.	Levels 1–2
<b>Algebraic Problem Solving with Graphs and Functions (25%)</b>		
<b>A.5   Connect and interpret graphs and functions</b>		
<b>A.5.a</b>   Locate points in the coordinate plane.	<b>CCSS.Math.Content.6.NS.C.6</b>   Understand a rational number as a point on the number line. Extend number line diagrams and coordinate axes familiar from previous grades to represent points on the line and in the plane with negative number coordinates	Level 1

Section 3: GED® Test Targets, Standards, & Alignments

MATHEMATICAL REASONING		
Resources		
GED Academy Lessons	GED Smart Study Guide	Additional Resources
Geometry with Algebra (ES 6/13)		Equations of parallel and perpendicular lines; Parallel lines (KA)
Solving Systems of Equations (ES 6/13)		Systems of equations with substitution; Systems of equations by elimination; Solving systems graphically (KA)
Integers (DOK 1 & 2) (MP.1) (MP.6) Solving Equations (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Simplifying Expressions (DOK 1 & 2) (MP.1) (MP.2) (MP.3) Linear Equation I (DOK 2) (MP.1) (MP.2) (MP.4) Missing Element I (DOK 1) (MP.1) Missing Element II (DOK 2) (MP.1) (MP.2) (MP.4)		Polynomials 1; Polynomials 2 (KA)
Integers (DOK 1 & 2) (MP.1) (MP.6) Solving Equations (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Simplifying Expressions (DOK 1 & 2) (MP.1) (MP.2) (MP.3) Linear Equation I (DOK 2) (MP.1) (MP.2) (MP.4) Missing Element I (DOK 1) (MP.1) Missing Element II (DOK 2) (MP.1) (MP.2) (MP.4)		What is a variable; Evaluating an expression; Evaluate a formula using substitution (KA)
Solving Equations (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Linear Equation I (DOK 2) (MP.1) (MP.2) (MP.4) Graphing Equations (DOK 1) (MP.2) (MP.3) (MP.5) Functions, Graphs, & Inequalities (DOK 1 & 2) (MP.2) (MP.4) (MP.5) Inequalities (DOK 1) (MP.1)		Polynomials 1; Polynomials 2 (KA)
Solving Equations (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Linear Equation I (DOK 2) (MP.1) (MP.2) (MP.4) Graphing Equations (DOK 1) (MP.2) (MP.3) (MP.5) Functions, Graphs, & Inequalities (DOK 1 & 2) (MP.2) (MP.4) (MP.5)		Evaluate expressions with 2 variables; Super Yoga (KA)
Simplifying Expressions (DOK 1 & 2) (MP.1) (MP.2) (MP.3) Quadratic Equation I (DOK 1) (MP.1) Quadratic Equation II (DOK 1) (MP.1) Graphing Equations (DOK 1) (MP.2) (MP.3) (MP.5) Factoring Expressions (DOK 2 & 3) (MP.1) (MP.3) (MP.7)		
Solving Equations (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Linear Equation I (DOK 2) (MP.1) (MP.2) (MP.4) Graphing Equations (DOK 1) (MP.2) (MP.3) (MP.5) Functions, Graphs, & Inequalities (DOK 1 & 2) (MP.2) (MP.4) (MP.5) Inequalities (DOK 1) (MP.1)		Polynomials 1; Polynomials 2 (KA)
Graphing Equations (DOK 1) (MP.2) (MP.3) (MP.5) Functions, Graphs, & Inequalities (DOK 1 & 2) (MP.2) (MP.4) (MP.5)		

MATHEMATICAL REASONING		
2014 GED Assessment Targets	Curriculum Design	
	Common Core State Standards	Depth of Knowledge
<b>A.5.b</b>   Determine the slope of a line from a graph, equation, or table.	<b>CCSS.Math.Content.8.F.B.4</b>   Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two (x, y) values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.	Level 2
<b>A.5.c</b>   Interpret unit rate as the slope in a proportional relationship.	<b>CCSS.Math.Content.8.EE.B.5</b>   Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed.	Levels 1–2
<b>A.5.d</b>   Graph two-variable linear equations.	<b>CCSS.Math.Content.HSA-CED.A.2</b>   Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.	Levels 1–2
	<b>CCSS.Math.Content.HSF-IF.C.7</b>   Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.	
<b>A.5.e</b>   For a function that models a linear or nonlinear relationship between two quantities, interpret key features of graphs and tables in terms of quantities, and sketch graphs showing key features of graphs and tables in terms of quantities, and sketch graphs showing key features given a verbal description of the relationship. Key features include: intercepts; intervals where the function is increasing, decreasing, positive, or negative; relative maximums and minimums; symmetries; end behavior, and periodicity.	<b>CCSS.Math.Content.8.F.A.3</b>   Interpret the equation $y = mx + b$ as defining a linear function, whose graph is a straight line; give examples of functions that are not linear. For example, the function $A = s^2$ giving the area of a square as a function of its side length is not linear because its graph contains the points (1,1), (2,4) and (3,9), which are not on a straight line.	Levels 1–2
	<b>CCSS.Math.Content.8.F.B.5</b>   Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.	Levels 1–2
	<b>CCSS.Math.Content.HSF-IF.B.5</b>   Relate the domain of a function to its graph and, where applicable, to the quantitative relationship it describes. For example, if the function $h(n)$ gives the number of person-hours it takes to assemble $n$ engines in a factory, then the positive integers would be an appropriate domain for the function.	Levels 1–2
<b>A.6   Connect coordinates, lines, and equations</b>		
<b>A.6.a</b>   Write the equation of a line with a given slope through a given point.	<b>CCSS.Math.Content.HSA-CED.A.2</b>   Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.	Level 2
<b>A.6.b</b>   Write the equation of a line passing through two given distinct points.	<b>CCSS.Math.Content.HSA-CED.A.2</b>   Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.	Levels 1–2
<b>A.6.c</b>   Use slope to identify parallel and perpendicular lines and to solve geometric problems.	<b>CCSS.Math.Content.HSG-GPE.B.5</b>   Prove the slope criteria for parallel and perpendicular lines and use them to solve geometric problems (e.g., find the equation of a line parallel or perpendicular to a given line that passes through a given point)	Levels 1–2



Section 3: GED® Test Targets, Standards, & Alignments

MATHEMATICAL REASONING		
Resources		
GED Academy Lessons	GED Smart Study Guide	Additional Resources
Solving Equations (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Graphing Equations (DOK 1) (MP.2) (MP.3) (MP.5) Functions, Graphs, & Inequalities (DOK 1 & 2) (MP.2) (MP.4) (MP.5) Analysis with Algebra (ES 6/13)		Exploring linear expressions (KA)
Graphing Equations (DOK 1) (MP.2) (MP.3) (MP.5) Analysis with Algebra (ES 6/13)		Application problem with graph; Interpreting linear relationships (KA)
Solving Equations (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Linear Equation I (DOK 2) (MP.1) (MP.2) (MP.4) Graphing Equations (DOK 1) (MP.2) (MP.3) (MP.5) Functions, Graphs, & Inequalities (DOK 1 & 2) (MP.2) (MP.4) (MP.5)		Evaluate expressions with 2 variables; Super Yoga (KA)
Functions II (ES 6/13)		Functions as graphs (KA)
Graphing Equations (DOK 1) (MP.2) (MP.3) (MP.5) Functions II (ES 6/13)		Constructing a function; Domain and Range 1 (KA)
Analysis with Algebra (ES 6/13)		Function example problems (KA)
Functions II (ES 6/13)		Difference between equations and functions; Domain and range of a relation (KA)
Solving Equations (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Linear Equation I (DOK 2) (MP.1) (MP.2) (MP.4) Graphing Equations (DOK 1) (MP.2) (MP.3) (MP.5) Functions, Graphs, & Inequalities (DOK 1 & 2) (MP.2) (MP.4) (MP.5)		Evaluate expressions with 2 variables; Super Yoga (KA)
Solving Equations (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Linear Equation I (DOK 2) (MP.1) (MP.2) (MP.4) Graphing Equations (DOK 1) (MP.2) (MP.3) (MP.5) Functions, Graphs, & Inequalities (DOK 1 & 2) (MP.2) (MP.4) (MP.5)		Evaluate expressions with 2 variables; Super Yoga (KA)
Geometry with Algebra (ES 6/13)		Equations of parallel and perpendicular lines (KA)

### MATHEMATICAL REASONING

2014 GED Assessment Targets	Curriculum Design	
	Common Core State Standards	Depth of Knowledge
<b>A.7   Compare, represent, and evaluate functions</b>		
<b>A.7.a</b>   Compare two different proportional relationships represented in different ways. Examples include but are not limited to: compare a distance-time graph to a distance-time equation to determine which of two moving objects has a greater speed.	<b>CCSS.Math.Content.8.EE.B.5</b>   Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed.	Level 2
<b>A.7.b</b>   Represent or identify a function in a table or graph as having exactly one output (one element in the range) for each input (each element in the domain).	<b>CCSS.Math.Content.8.F.A.1</b>   Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output.	Levels 1–2
	<b>CCSS.Math.Content.HSF-IF.A.1</b>   Understand that a function from one set (called the domain) to another set (called the range) assigns to each element of the domain exactly one element of the range. If $f$ is a function and $x$ is an element of its domain, then $f(x)$ denotes the output of $f$ corresponding to the input $x$ . The graph of $f$ is the graph of the equation $y = f(x)$ .	Levels 1–2
<b>A.7.c</b>   Evaluate linear and quadratic functions for values in their domain when represented using function notation.	<b>CCSS.Math.Content.HSF-IF.A.2</b>   Use function notation, evaluate functions for inputs in their domains, and interpret statements that use function notation in terms of a context.	Levels 1–2
<b>A.7.d</b>   Compare properties of two linear or quadratic functions each represented in a different way (algebraically, numerically in tables, graphically or by verbal descriptions). Examples include but are not limited to: given a linear function represented by a table of values and a linear function represented by an algebraic expression, determine which function has the greater rate of change.	<b>CCSS.Math.Content.8.F.A.2</b>   Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). For example, given a linear function represented by a table of values and a linear function represented by an algebraic expression, determine which function has the greater rate of change.	Level 2
	<b>CCSS.Math.Content.HSF-IF.C.9</b>   Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). For example, given a graph of one quadratic function and an algebraic expression for another, say which has the larger maximum.	Levels 1–2

## Math Practices

### MP.1 | Building Solution Pathways and Lines of Reasoning

**MP.1.a** | Search for and recognize entry points for solving a problem.

**MP.1.b** | Plan a solution pathway or outline a line of reasoning.

**MP.1.c** | Select the best solution pathway, according to given criteria.

**MP.1.d** | Recognize and identify missing information that is required to solve a problem.

**MP.1.e** | Select the appropriate mathematical technique(s) to use in solving a problem or a line of reasoning.

### MP.2 | Abstracting Problems

**MP.2.a** | Represent real world problems algebraically.

**MP.2.b** | Represent real world problems visually.

**MP.2.c** | Recognize the important and salient attributes of a problem.

MATHEMATICAL REASONING		
Resources		
GED Academy Lessons	GED Smart Study Guide	Additional Resources
Solving Equations (DOK 1 & 2) (MP.1) (MP.2) (MP.4) Linear Equation I (DOK 2) (MP.1) (MP.2) (MP.4) Graphing Equations (DOK 1) (MP.2) (MP.3) (MP.5) Functions, Graphs, & Inequalities (DOK 1 & 2) (MP.2) (MP.4) (MP.5) Analysis with Algebra (ES 6/13)		Application problem with graph; Interpreting linear relationships (KA)
Graphing Equations (DOK 1) (MP.2) (MP.3) (MP.5) Functions, Graphs, & Inequalities (DOK 1 & 2) (MP.2) (MP.4) (MP.5) Functions II (ES 6/13)		Difference between equations and functions (KA)
Graphing Equations (DOK 1) (MP.2) (MP.3) (MP.5) Functions, Graphs, & Inequalities (DOK 1 & 2) (MP.2) (MP.4) (MP.5) Functions II (ES 6/13)		Difference between equations and functions; Domain and range of a relation (KA)
Graphing Equations (DOK 1) (MP.2) (MP.3) (MP.5) Functions, Graphs, & Inequalities (DOK 1 & 2) (MP.2) (MP.4) (MP.5) Functions II (ES 6/13)		Constructing a function; Domain and Range 1 (KA)
Analysis with Algebra (ES 6/13)		Graphical relations and functions; Evaluating a function; Function example problems (KA)
Analysis with Algebra (ES 6/13)		Graphical relations and functions; Evaluating a function; Function example problems (KA)

**MP.3 | Further Lines of Reasoning**

**MP.3.a** | Build steps of a line a reasoning or solution pathway, based on previous step or givens.

**MP.3.b** | Complete the lines of reasoning of others.

**MP.3.c** | Improve or correct a flawed line of reasoning.

**MP.4 | Mathematical Fluency**

**MP.4.a** | Manipulate and solve arithmetic expressions.

**MP.4.b** | Transform and solve algebraic expressions.

**MP.4.c** | Display data or algebraic expressions graphically.

**MP.5 | Evaluating Reasoning and Solution Pathways**

**MP.5.a** | Recognize flaws in others' reasoning.

**MP.5.b** | Recognize and use counterexamples.

**MP.5.c** | Identify the information required to evaluate a line of reasoning.

## REASONING THROUGH LANGUAGE ARTS—READING

GED Assessment Targets	Curriculum Design	
	Common Core State Standards	Depth of Knowledge
<b>R.2.1</b>   Comprehend explicit details and main ideas in text	<b>CCSS.ELA-Literacy.CCRA.R.2</b>   Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.	Levels 1–2
<b>R.2.2</b>   Summarize details and main ideas in a text.	<b>CCSS.ELA-Literacy.CCRA.R.2</b>   Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.	Level 2
<b>R.2.3</b>   Make sentence level inferences about details that support main ideas.	<b>CCSS.ELA-Literacy.CCRA.R.2</b>   Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.	Levels 2–3
<b>R.2.4</b>   Infer implied main ideas in paragraphs or whole texts	<b>CCSS.ELA-Literacy.CCRA.R.2</b>   Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.	Levels 2–3
<b>R.2.5</b>   Determine which details support a main idea.	<b>CCSS.ELA-Literacy.CCRA.R.2</b>   Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.	Levels 1–3
<b>R.2.6</b>   Identify a theme, or identify which elements in a text support a theme.	<b>CCSS.ELA-Literacy.CCRA.R.2</b>   Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.	Levels 1–3
<b>R.2.7</b>   Make evidence based generalizations or hypotheses based on details in text, including clarifications, extensions, or applications of main ideas to new situations.	<b>CCSS.ELA-Literacy.CCRA.R.2</b>   Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.	Levels 2–3
<b>R.2.8</b>   Draw conclusions or make generalizations that require synthesis of multiple main ideas in text.	<b>CCSS.ELA-Literacy.CCRA.R.2</b>   Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.	Levels 2–3
<b>R.3.1</b>   Order sequence of events in texts	<b>CCSS.ELA-Literacy.CCRA.R.3</b>   Analyze how and why individuals, events, and ideas develop and interact over the course of a text.	Levels 1–2
<b>R.3.2</b>   Make inferences about plot/sequence of events, characters/people, settings, or ideas in texts.	<b>CCSS.ELA-Literacy.CCRA.R.3</b>   Analyze how and why individuals, events, and ideas develop and interact over the course of a text.	Level 2
<b>R.3.3</b>   Analyze relationships within texts, including how events are important in relation to plot and conflict; how people, ideas, or events are connected, developed, or distinguished; how events contribute to theme or relate to key ideas, or how a setting or context shapes structure and meaning.	<b>CCSS.ELA-Literacy.CCRA.R.3</b>   Analyze how and why individuals, events, and ideas develop and interact over the course of a text.	Levels 2–3



REASONING THOUGH LANGUAGE ARTS—READING	
Resources	
GED Academy Lessons	GED Smart Study Guide
Make music with your life (DOK 1–2); Bartlby, The Scrivener: Comprehending Concepts (DOK 1); The Crisis: Paraphrasing a Quote (DOK 1); Rental Agreement: Interpreting a Passage (DOK 1); Gladiator Review: Recall Details (DOK 1); University of Colorado Honor Code Policy: Detail Describing Students (DOK 1); University of Colorado Honor Code Policy: Detail Describing Responsibility (DOK 1); Life of Pi: Recalling Details (DOK 1); The Jungle: Comprehending Details (DOK 1–2); Disciplinary Procedure: Comprehending Details (DOK 1); Disciplinary Procedure: Applying the Policy (DOK 1)	pp.331–342
Make music with your life (DOK 1–2); Bartlby, The Scrivener: Paraphrasing (DOK 1–2); The Crisis: Paraphrasing a Quote (DOK 1); Rental Agreement: Interpreting a Passage (DOK 1); University of Colorado Honor Code Policy: Restating a Concept (DOK 1); Make Music with Your Life: Poem’s Main Idea (DOK 2); Gladiator Review: Main Idea (DOK 1); Good Benito: Comprehending Details (DOK 1–2); The Jungle: Summarizing Information (DOK 2); University of Colorado Honor Code Policy: Inference (DOK 1)	pp.331–342
Bartlby, The Scrivener: Comprehending Concepts (DOK 1); Bartlby, The Scrivener: Paraphrasing (DOK 1–2); The Crisis: Paraphrasing a Quote (DOK 1); Reading: Interpreting Rental Agreements (DOK 1); Barn Burning: Comprehending a Phrase (DOK 1); Gladiator Review: Restating Concept (DOK 1–2); The Horse Dealer’s Daughter: Implication of the Title (DOK 1); The Jungle: Comprehending Details (DOK 2); I Felt a Cleaving in My Mind: Inference (DOK 2)	pp. 352–353
Make music with your life (DOK 1–2); Rental Agreement: Interpreting a Passage (DOK 1); University of Colorado Honor Code Policy: Restating a Concept (DOK 1); University of Colorado Honor Code Policy: Word Meaning (DOK 1–2); Make Music with Your Life: Poem’s Main Idea (DOK 2); Conversation: Main Idea (DOK 2); Good Benito: Comprehending Details (DOK 1–2); Walden: Main Idea (DOK 2); Death of a Salesman: Character Motivation (DOK 2); Hogan’s Goat: Character Motivation (DOK 2); I Felt a Cleaving in My Mind: Effect of the Poem (DOK 2)	pp. 352–353
University of Colorado Honor Code Policy: Restating a Concept (DOK 1); Barn Burning: Comprehending a Detail (DOK 1); University of Colorado Honor Code Policy: Detail Describing Students (DOK 1); Hogan’s Goat: Making an Inference (DOK 1)	
Make Music with Your Life: Poem’s Main Idea (DOK 2); Conversation: Main Idea (DOK 2)	
Life of Pi: Recalling Concepts (DOK 1–2); Bartlby, The Scrivener: Understanding Description (DOK 2); The Jungle: Explaining Implications (DOK 2–3); Death of a Salesman: Applying Character Traits (DOK 2); Death of a Salesman: Biff in a New Context (DOK 2); The Crisis: Application in a New Context (DOK 2); The Crisis: Applying Paine’s Values (DOK 2); Rental Agreement: Applying Terms of Agreement (DOK 2); The Great Gatsby: Synthesizing Character Traits (DOK 2); Gladiator Review: Looking Beyond the Passage (DOK 2); Life of Pi: Synthesizing (DOK 2)	pp. 354–356
Conversation: Main Idea (2); Life of Pi: Recalling an Example (DOK 2); Mission Statements: Applying the Concept (DOK 2); Rental Agreement: Applying Tenant Responsibilities (DOK 2); Rental Agreement: Applying Terms of Agreement (DOK 2); Mission Statements: Outcomes and Consequences (DOK 2)	
The Structure of Fiction (ES 6/13) (DOK 1–2)	
Bartlby The Scrivener: Comprehending Concepts (DOK 1); Life of Pi: Recalling Concepts (DOK 1–2); The Jungle: Comprehending Concepts (DOK 1–2); The Great Gatsby: Summarizing a Relationship (DOK 2); Long Day’s Journey into Night: Summarizing Stage Direction (DOK 2); Death of a Salesman: Biff in a New Context (DOK 2); The Great Gatsby: Applying Character Traits (DOK 2); Death of a Salesman: Analyzing Character (DOK 1–2); Death of a Salesman: Making Inferences (DOK 2); The Great Gatsby: Applying Character Traits (DOK 2); The Horse Dealer’s Daughter: Analyzing Motivation (DOK 2); Death of a Salesman: Character Motivation (DOK 2); Conversation: Character’s Attitude (DOK 2); Good Benito: A Character’s Emotions (DOK 2)	pp. 352–353
The Great Gatsby: Summarizing a Relationship (DOK 2); The Crisis: Application in a New Context (DOK 2); Rental Agreement: Applying Tenant Responsibilities (DOK 2); Good Benito: Making an Inference (DOK 2); Conversation: Character’s Attitude (DOK 2); Long Day’s Journey into Night: Characters’ Relationship (DOK 2); I Felt a Cleaving in My Mind: Effect of the Poem (DOK 2); The Great Gatsby: Narrator’s Point of View (DOK 2); Good Benito: Connecting Parts of the Text (DOK 2); Hogan’s Goat: Characters’ Relationship (DOK 2); Conversation: Compare and Contrast (DOK 3); Long Day’s Journey into Night: Comparing Characters (DOK 3)	

## REASONING THROUGH LANGUAGE ARTS—READING

GED Assessment Targets	Curriculum Design	
	Common Core State Standards	Depth of Knowledge
<b>R.3.4</b>   Infer relationships between ideas in a text. (implicit cause and effect, parallel, or contrasting relationship).	<b>CCSS.ELA-Literacy.CCRA.R.3</b>   Analyze how and why individuals, events, and ideas develop and interact over the course of a text.	Levels 2–3
<b>R.3.5</b>   Analyze the roles that details play in complex literary or informational texts.	<b>CCSS.ELA-Literacy.CCRA.R.3</b>   Analyze how and why individuals, events, and ideas develop and interact over the course of a text.	Levels 2–3
<b>R.4.1</b>   Determine the meaning of words and phrases as they are used in a text, including determining connotative and figurative meanings from context.	<b>CCSS.ELA-Literacy.CCRA.R.4</b>   Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative means, and analyze how specific word choices shape meaning or tone.	Levels 1–3
<b>R.4.2</b>   Analyze how meaning or tone is affected when one word is replaced with another.	<b>CCSS.ELA-Literacy.CCRA.R.4</b>   Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative means, and analyze how specific word choices shape meaning or tone.	Level 2
<b>R.4.3</b>   Analyze the impact of specific words, phrases, or figurative language in text with a focus on an author's intent to convey information or construct an argument.	<b>CCSS.ELA-Literacy.CCRA.R.4</b>   Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative means, and analyze how specific word choices shape meaning or tone.	Levels 2–3
<b>R.5.1</b>   Analyze how a particular sentence, paragraph, chapter, or section fits into the overall structure of a text and contributes to the development of the ideas.	<b>CCSS.ELA-Literacy.CCRA.R.5</b>   Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g. a section, chapter, scene, or standard) relate to each other and the whole.	Levels 2–3
<b>R.5.2</b>   Analyze the structural relationship between adjacent sections of text (e.g., how one paragraph develops or refines a key concept or how one idea is distinguished from another).	<b>CCSS.ELA-Literacy.CCRA.R.5</b>   Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g. a section, chapter, scene, or standard) relate to each other and the whole.	Levels 2–3
<b>R.5.3</b>   Analyze transitional language or signal words (words that indicate structural relationships, such as consequently, nevertheless, otherwise)	<b>CCSS.ELA-Literacy.CCRA.R.5</b>   Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g. a section, chapter, scene, or standard) relate to each other and the whole.	Level 2
<b>R.5.4</b>   Analyze how the structure of a paragraph, section, or passage shapes meaning, emphasizes key ideas, or supports an author's purpose.	<b>CCSS.ELA-Literacy.CCRA.R.5</b>   Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g. a section, chapter, scene, or standard) relate to each other and the whole.	Levels 2–3
<b>R.6.1</b>   Determine an author's point of view or purpose of a text.	<b>CCSS.ELA-Literacy.CCRA.R.6</b>   Assess how point of view or purpose shapes the content and style of a text.	Levels 1–2
<b>R.6.2</b>   Analyze how the author distinguishes his or her position from that of others or how an author acknowledges and responds to conflicting evidence or viewpoints.	<b>CCSS.ELA-Literacy.CCRA.R.6</b>   Assess how point of view or purpose shapes the content and style of a text.	Levels 2–3
<b>R.6.3</b>   Infer an author's implicit as well as explicit purposes based on details in text.	<b>CCSS.ELA-Literacy.CCRA.R.6</b>   Assess how point of view or purpose shapes the content and style of a text.	Level 2
<b>R.6.4</b>   Analyze how an author uses rhetorical techniques to advance his or her point of view or purpose of a text.	<b>CCSS.ELA-Literacy.CCRA.R.6</b>   Assess how point of view or purpose shapes the content and style of a text.	Levels 2–3
<b>R.7.1</b>   Draw specific comparisons between two texts that address similar themes or topics or between information presented in different formats.	<b>CCSS.ELA-Literacy.CCRA.R.7</b>   Integrate and evaluate content presented in diverse formats and media, including visually and quantitatively	Levels 2–3

REASONING THROUGH LANGUAGE ARTS—READING	
Resources	
GED Academy Lessons	GED Smart Study Guide
Conversation: Compare and Contrast (DOK 3); Long Day’s Journey into Night: Comparing Characters (DOK 2)	pp. 352–353
University of Colorado Honor Code Policy: Restating a Concept (DOK 1); Barn Burning: Comprehending a Detail (DOK 1); University of Colorado Honor Code Policy: Detail Describing Students (DOK 1); Hogan’s Goat: Making an Inference (DOK 1)	
Good Benito: A Word in Context (DOK 1–2); The Great Gatsby: A Word in Context (1–2); University of Colorado Honor Code Policy: Word Meaning (DOK 1–2); I Felt a Cleaving in My Mind: Word Meaning (DOK 1); Disciplinary Procedure: Meaning of “Disciplinary” (DOK 1); Disciplinary Procedure: Meaning of “Procedure” (DOK 1); Walden: Word Meaning in Context (DOK 1); The Jungle: Inferring a Meaning (DOK 2); Conversation: Metaphor (DOK 2); Barn Burning: Analyzing Imagery (DOK 2)	pp. 327–330 pp. 343–345
Make Music with Your Life: Poet’s Tone (DOK 2); Bartlby, The Scrivener: Tone (DOK 2); The Great Gatsby: Narrator’s Point of View (DOK 2); I Felt a Cleaving in My Mind: Tone (DOK 2)	pp. 349–351
Disciplinary Procedure: Meaning of “Procedure” (DOK 1); Barn Burning: Analyzing Imagery (DOK 2); Barn Burning: Figurative Language (DOK 2); The Horse Dealer’s Daughter: Figurative Language (DOK 2); In Just: Effect of Children’s Names (DOK 2); In Just: Effect of “balloonMan” (DOK 2)	
Make Music with Your Life: Poem’s Form (DOK 2); In Just: Poem’s Structure (DOK 1); In Just: Effect of “balloonMan” (DOK 2); Life of Pi: Point of View (DOK 2)	
In Just: Effect of “balloonMan” (DOK 2); Life of Pi: Point of View (DOK 2)	
The structure of fiction (ES 6/13). (DOK 1–2); Strategies for comprehending fiction (ES 6/13) (DOK 1–2); Navigating an informational text (ES 6/13) (DOK 1–2)	
In Just: Effect of Children’s Names (DOK 2); Make Music with Your Life: Poem’s Audience (DOK 2)	
Make Music with Your Life: Poet’s Tone (DOK 1); Mission Statements: Author’s Purpose (DOK 1); The Great Gatsby: Tone of Narration (DOK 1); In Just: Poem’s Point of View (DOK 1)	pp. 346–348
Determining author’s purpose/point of view (DOK 1–3) (ES 6/13); Comparing opposing arguments (DOK 2–3) (ES 6/13)	pp. 346–348
The Crisis: Applying Paine’s Values (DOK 2); Reading: Interpreting Thomas Paine (DOK 2); Disciplinary Procedure: Purpose (DOK 2)	pp. 346–348 pp. 352–353
Determining an author’s purpose/point of view (DOK 2–3) (ES 6/13); Navigating an informational text (DOK 2–3) (ES 6/13); Determining meaning (DOK 2–3) (ES 6/13)	pp. 346–348
Comparing songs (DOK 2–3) (ES 6/13); Comparing opposing arguments (DOK 2–3) (ES 6/13); Compare and contrast texts in different formats (DOK 2–3) (ES 6/13)	

## REASONING THROUGH LANGUAGE ARTS—READING

GED Assessment Targets	Curriculum Design	
	Common Core State Standards	Depth of Knowledge
<b>R.7.2</b>   Analyze how data or quantitative and/or visual information extends, clarifies, or contradicts information in text, or determine how data supports an author's argument.	<b>CCSS.ELA-Literacy.CCRA.R.7</b>   Integrate and evaluate content presented in diverse formats and media, including visually and quantitatively	Levels 2–3
<b>R.7.3</b>   Compare two passages that present related ideas or themes in different genre or formats in order to evaluate differences in scope, purpose, emphasis, intended audience, or overall impact when comparing	<b>CCSS.ELA-Literacy.CCRA.R.7</b>   Integrate and evaluate content presented in diverse formats and media, including visually and quantitatively	Levels 2–3
<b>R.7.4</b>   Compare two passages that present related ideas or themes in different genre or formats in order to synthesize details, draw conclusions or apply information to new situations.	<b>CCSS.ELA-Literacy.CCRA.R.7</b>   Integrate and evaluate content presented in diverse formats and media, including visually and quantitatively	Levels 2–3
<b>R.8.1</b>   Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.	<b>CCSS.ELA-Literacy.CCRA.R.8</b>   Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the elements.	Levels 2–3
<b>R.8.2</b>   Identify specific pieces of evidence an author uses in support of claims and conclusions	<b>CCSS.ELA-Literacy.CCRA.R.8</b>   Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the elements.	Levels 1–3
<b>R.8.3</b>   Evaluate the relevance and sufficiency of evidence offered in support of a claim	<b>CCSS.ELA-Literacy.CCRA.R.8</b>   Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the elements.	Levels 2–3
<b>R.8.4</b>   Distinguish claims that are supported by reasons and evidence from claims that are not	<b>CCSS.ELA-Literacy.CCRA.R.8</b>   Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the elements.	Levels 2–3
<b>R.8.5</b>   Assess whether the reasoning is valid; identify fallacious reasoning in an argument and evaluate its impact.	<b>CCSS.ELA-Literacy.CCRA.R.8</b>   Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the elements.	Levels 2–3
<b>R.8.6</b>   Identify an underlying premise or assumption in an argument and evaluate the logical support and evidence provided.	<b>CCSS.ELA-Literacy.CCRA.R.8</b>   Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the elements.	Levels 2–3
<b>R.9.1</b>   Draw specific comparisons between two texts that address similar themes or topic or between information presented in different formats (e.g. between info presented in text and info or data summarized in a table or timeline).	<b>CCSS.ELA-Literacy.CCRA.R.9</b>   Analyze how two or more texts address similar themes or topic in order to build knowledge or to compare the approaches the authors take.	Levels 2–3
<b>R.9.2</b>   Compare two passages in similar or closely related genre that share ideas or themes, focusing on similarities and/or differences in perspective, tone, style, structure, purpose, or overall impact.	<b>CCSS.ELA-Literacy.CCRA.R.9</b>   Analyze how two or more texts address similar themes or topic in order to build knowledge or to compare the approaches the authors take.	Levels 2–3
<b>R.9.3</b>   Compare two argumentative passages on the same topic that present opposing claims and analyze how each text emphasizes different evidence or advances a different interpretation of facts.	<b>CCSS.ELA-Literacy.CCRA.R.9</b>   Analyze how two or more texts address similar themes or topic in order to build knowledge or to compare the approaches the authors take.	Levels 2–3



REASONING THROUGH LANGUAGE ARTS—READING	
Resources	
GED Academy Lessons	GED Smart Study Guide
Compare and contrast texts in different formats (DOK 2–3) (ES 6/13); Compare two texts with related themes. (DOK 2–3) (ES 6/13); Navigating an informational text (DOK 2–3) (ES 6/13)	
Compare two texts with related themes. (DOK 2–3) (ES 6/13); Compare and contrast texts in different formats (DOK 2–3) (ES 6/13)	
Mission Statements: Outcomes and Consequences (DOK 2); Compare two texts with related themes. (DOK 2–3) (ES 6/13); Compare and contrast texts in different formats (DOK 2–3) (ES 6/13)	
Affirmative Action: Identifying a Conclusion (DOK 1); Affirmative Action: Identifying Assumptions (DOK 2)	
Affirmative Action: Identifying Support for the Conclusion (DOK 1)	
Affirmative Action: Evaluating Evidence (DOK 2); Life of Pi: Evaluating Information (DOK 2–3)	
Affirmative Action: Identifying Support for the Conclusion (DOK 2)	
Affirmative Action: Applying Concepts to a New Argument (DOK 2–3); Affirmative Action: Identifying Support for the Conclusion (DOK 2)	
Affirmative Action: Identifying Assumptions (DOK 2)	
Mission Statements: Outcomes and Consequences (DOK 2)	
Compare two texts with related themes (DOK 2–3) (ES 6/13); Comparing songs (DOK 2–3) (ES 6/13); Comparing two movies with related themes (DOK 2–3) (ES 6/13)	
Compare two texts with related themes (DOK 2–3) (ES 6/13); Compare two cover letters (DOK 2–3) (ES 6/13); Comparing opposing arguments (DOK 2–3) (ES 6/13)	

## REASONING THOUGH LANGUAGE ARTS—Writing &amp; Language

GED Assessment Targets	Curriculum Design	
	Common Core State Standards	Depth of Knowledge
<b>W.1</b>   Determine the details of what is explicitly stated and make logical inferences or valid claim that square with the textual evidence.	<b>CCSS.ELA-Literacy.CCRA.R.1</b>   Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.	Levels 1–3
<b>W.2</b>   Produce an extended analytic response in which the writer introduces the ideas or claims clearly; creates an organization that logically sequences information; develops the ideas or claims thoroughly with well-chosen examples, facts, or details from the text and maintains a coherent focus.	<b>CCSS.ELA-Literacy.CCRA.W.1</b>   Write arguments to support claims in an analysis of substantive topics or texts using valid reasoning and relevant and sufficient evidence.	Levels 2–3
	<b>CCSS.ELA-Literacy.CCRA.W.2</b>   Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.	
	<b>CCSS.ELA-Literacy.CCRA.W.4</b>   Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	
<b>W.3</b>   Write clearly and demonstrate standard command of English conventions	<b>CCSS.ELA-Literacy.CCRA.W.5</b>   Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.	Levels 1–2
	<b>CCSS.ELA-Literacy.CCRA.L.1</b>   Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.	
	<b>CCSS.ELA-Literacy.CCRA.L.2</b>   Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.	
	<b>CCSS.ELA-Literacy.CCRA.L.3</b>   Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.	

REASONING THROUGH LANGUAGE ARTS—Writing & Language	
Resources	
GED Academy Lessons	GED Smart Study Guide
What Is Good Support? (DOK 2–3) (ES 6/13); Evaluating Arguments (DOK 2–3) (ES 6/13); Citing Evidence (DOK 2–3) (ES 6/13); Connecting Main Ideas with Evidence (DOK 2–3) (ES 6/13); Drawing Conclusions (DOK 2–3) (ES 6/13)	
What Is Good Support? (DOK 2–3) (ES 6/13); Evaluating Arguments (DOK 2–3) (ES 6/13); Citing Evidence (DOK 2–3) (ES 6/13); Connecting Main Ideas with Evidence (DOK 2–3) (ES 6/13); Drawing Conclusions (DOK 2–3) (ES 6/13)	
Essay Prompt: Future Dreams (DOK 3); Essay Prompt: Courage (DOK 3); Essay Prompt: Free Time (DOK 3); Essay Prompt: Excelling (DOK 3); Essay Prompt: Time Capsule (DOK 3); Essay Prompt: An Important Invention (DOK 3); Essay Prompt: The Value of Education (DOK 3); Essay Prompt: Trucks versus Cars (DOK 3); Essay Prompt: Cats versus Dogs (DOK 3); Essay Prompt: Pictures and Images (DOK 3); Essay Prompt: A Favorite Place (DOK 3); Essay Prompt: Obesity (DOK 3); Essay Prompt: Heroes (DOK 3); Essay Prompt: Qualities of a Friend (DOK 3); Essay Prompt: The Perfect Job (DOK 3); Essay Prompt: Television's Influence on Children (DOK 3); Essay Prompt: Reasons to Get the GED (DOK 3); Essay Prompt: Our Country's Problems (DOK 3); Essay Prompt: The Internet (DOK 3); Essay Prompt: An Eye for an Eye (DOK 3); Organizing Paragraphs (DOK 1); Organizing Articles & Essays (DOK 1–2); Organizing Letters (DOK 1); Review of Organization (DOK 2); Farwest Memorandum V (DOK 1); Resolution Letter II (DOK 1); District Representative Letter V (DOK 1)	pp. 374–419*
Editing Practice: “Most Proud Of” Essay (DOK 3); Editing Practice: Environment Essay (DOK 3); Editing Practice: School versus Experience (DOK 3); Editing Practice: Preserving Nature (DOK 3); Editing Practice: What I’m Most Proud Of (DOK 3); Editing Practice: Learning from Television (DOK 3); Editing Practice: Nuclear Weapons (DOK 3); Editing Practice: Goals in Life (DOK 3); Editing Practice: Learning from Life versus the Classroom (DOK 3); Writing: Editing a Student Essay (DOK 3); Organizing Paragraphs (DOK 1); Organizing Articles & Essays (DOK 1–2); Organizing Letters (DOK 1); Review of Organization (DOK 2); Farwest Memorandum V (DOK 1); Resolution Letter II (DOK 1); District Representative Letter V (DOK 1)	pp. 374–419* pp. 420–421
Editing Practice: “Most Proud Of” Essay (DOK 3); Editing Practice: Environment Essay (DOK 3); Editing Practice: School versus Experience (DOK 3); Editing Practice: Preserving Nature (DOK 3); Editing Practice: What I’m Most Proud Of (DOK 3); Editing Practice: Learning from Television (DOK 3); Editing Practice: Nuclear Weapons (DOK 3); Editing Practice: Goals in Life (DOK 3); Editing Practice: Learning from Life versus the Classroom (DOK 3); Writing: Editing a Student Essay (DOK 3)	pp. 374–419* pp. 420–421
Sentence Structure Review of Subjects and Verbs (DOK 2); Sentence Structure Review (DOK 2); Shifts in Person (DOK 2); Cliches and Awkwardness (DOK 2); District Representative Letter VII (DOK 1); Pronouns (DOK 1–2); Resolution Letter VII (DOK 1); District Representative Letter I (DOK 2); District Representative Letter II (DOK 1); Resolution Letter IV (DOK 2); Subject-Verb Agreement (DOK 1); Using the Correct Verb with Groups and Titles (DOK 1); District Representative Letter III (DOK 1); Farwest Memorandum VIII (DOK 2); Regular & Irregular Verbs (DOK 1); Verb Shifts in Time (DOK 1); Introduction to Subjects and Verbs (DOK 1–2); Verb Phrases (DOK 1–2); Verbs (DOK 1–2); Prepositional Phrases (DOK 1–2); Transitive and Intransitive Verbs (DOK 1); Sentence Patterns (DOK 1–2); Sentence Fragments (DOK 1–2); Farwest Memorandum IX (DOK 1); Run-on Sentences (DOK 1–2); Resolution Letter IX (DOK 1); Clauses (DOK 2); Farwest Memorandum I (DOK 1); Resolution Letter III (DOK 1); Resolution Letter IV (DOK 1); Dangling Modifiers (DOK 2); Farwest Memorandum VII (DOK 1); Parallel Structure (DOK 2)	pp. 374–419* pp. 431–444
District Representative Letter IV (DOK 2); Farwest Memorandum III (DOK 2); Resolution Letter I (DOK 2); How to Spell Better (DOK n/a); Commonly Confused Words (DOK 1); Spelling: i before e (DOK 1); Spelling: "y" endings (DOK 1); Spelling: silent e (DOK 1); Spelling: end consonants (DOK 1); Spelling: Contractions (DOK 1); Spelling: Possessives (DOK 1); Spelling Review (DOK 2); Farwest Memorandum II (DOK 2); Farwest Memorandum IV (DOK 2); Farwest Memorandum VI (DOK 2); Capitalization of First Words, Titles, and Proper Nouns (DOK 1); Capitalization of Months and Days, Titles, and the Pronoun "I" (DOK 1); Capitalization Review (DOK 1–2); District Representative Letter VI (DOK 1); Resolution Letter V (DOK 1); Resolution Letter VIII (DOK 2); End of Sentence Punctuation (DOK 1); Colons, Semicolons, and Dashes (DOK 1); Commas in Compound Sentences, Series, and Introductory and Ending Expressions (DOK 1–2); Commas around Inessential Phrases (DOK 1); Quotes, Underlines, and Italics (DOK 1); Punctuation Review (DOK 2)	pp. 374–419* pp. 431–444
A Writer's Voice (DOK 2–3) (ES 6/13); Writing Tone (DOK 2–3) (ES 6/13); Fluidity (DOK 2–3) (ES 6/13); Clarity (DOK 2–3) (ES 6/13); Rhythm in Writing (DOK 2–3) (ES 6/13)	pp. 374–419*

## REASONING THROUGH LANGUAGE ARTS—Writing &amp; Language

GED Assessment Targets	Curriculum Design	
	Common Core State Standards	Depth of Knowledge
<b>L1.1</b>   Edit to correct errors involving frequently confused words and homonyms, including contractions (passed, past; two, to; there, their, they're; knew, new; it's its)	<b>L1</b>   Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.	Levels 1–2
<b>L1.2</b>   Edit to correct errors in straightforward subject-verb agreement	<b>L1</b>   Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.	Levels 1–2
<b>L1.3</b>   Edit to correct errors in pronoun usage, including pronoun-antecedent agreement, unclear pronoun references, and pronoun cases.	<b>L1</b>   Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.	Levels 1–2
<b>L1.4</b>   Edit to eliminate non-standard or informal usage.	<b>L1</b>   Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.	Levels 1–2
<b>L1.5</b>   Edit to eliminate dangling or misplaced modifiers or illogical word order.	<b>L1</b>   Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.	Levels 1–2
<b>L1.6</b>   Edit to ensure parallelism and proper subordination and coordination.	<b>L1</b>   Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.	Levels 1–2
<b>L1.7</b>   Edit to correct errors in subject-verb or pronoun antecedent agreement in more complicated situations.	<b>L1</b>   Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.	Levels 1–2
<b>L1.8</b>   Edit to eliminate wordiness or awkward sentence construction.	<b>L1</b>   Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.	Levels 1–2
<b>L1.9</b>   Edit to ensure effective use of transitional words, conjunctive adverbs, and other words and phrases that support logic and clarity.	<b>L1</b>   Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.	Levels 1–2
<b>L2.1</b>   Edit to ensure correct use of capitalization (proper nouns, titles, and beginnings of sentences)	<b>L2</b>   Demonstrate command of the conventions of standard English capitalization and punctuation when writing.	Levels 1–2
<b>L2.2</b>   Edit to eliminate run-on sentences, fused sentences, or sentence fragments.	<b>L2</b>   Demonstrate command of the conventions of standard English capitalization and punctuation when writing.	Levels 1–2
<b>L2.3</b>   Edit to ensure correct use of apostrophes with possessive nouns.	<b>L2</b>   Demonstrate command of the conventions of standard English capitalization and punctuation when writing.	Levels 1–2
<b>L2.4</b>   Edit to ensure correct use of punctuation (e.g. commas in a series or appositives and other non-essential elements, end marks, and appropriate punctuation for clause separation.	<b>L2</b>   Demonstrate command of the conventions of standard English capitalization and punctuation when writing.	Levels 1–2



REASONING THROUGH LANGUAGE ARTS—Writing & Language	
Resources	
GED Academy Lessons	GED Smart Study Guide
District Representative Letter IV (DOK 2); Farwest Memorandum III (DOK 2); Resolution Letter I (DOK 2); How to Spell Better (DOK n/a); Commonly Confused Words (DOK 1); Spelling: Contractions (DOK 1); Spelling: Possessives (DOK 1); Spelling Review (DOK 2)	pp. 425–430 pp. 431–444
Subject-Verb Agreement (DOK 1); Using the Correct Verb with Groups and Titles (DOK 1); Introduction to Subjects and Verbs (DOK 1–2)	pp. 425–430 pp. 431–444
District Representative Letter VII (DOK 1); Pronouns (DOK 1–2)	pp. 431–444
Casual Language (DOK 1–3) (ES 6/13)	
Farwest Memorandum I (DOK 1); Resolution Letter III (DOK 1); Resolution Letter IV (DOK 1); Dangling Modifiers (DOK 2); Sentence Patterns (DOK 1–2)	pp. 431–444
Resolution Letter IX (DOK 1); Clauses (DOK 2); Farwest Memorandum VII (DOK 1); Parallel Structure (DOK 2)	pp. 431–444
District Representative Letter VII (DOK 1); Pronouns (DOK 1–2); Resolution Letter VII (DOK 1); District Representative Letter I (DOK 2); District Representative Letter II (DOK 1); Resolution Letter IV (DOK 2); Subject-Verb Agreement (DOK 1); Using the Correct Verb with Groups and Titles (DOK 1)	pp. 431–444
Cliches and Awkwardness (DOK 2)	
Transitions (DOK 1–3) (ES 6/13)	
Farwest Memorandum II (DOK 2); Farwest Memorandum IV (DOK 2); Farwest Memorandum VI (DOK 2); Capitalization of First Words, Titles, and Proper Nouns (DOK 1); Capitalization of Months and Days, Titles, and the Pronoun "I" (DOK 1); Capitalization Review (DOK 1–2)	pp. 431–444
Sentence Fragments (DOK 1–2); Farwest Memorandum IX (DOK 1); Run-on Sentences (DOK 1–2)	pp. 425–430 pp. 431–444
Spelling: Contractions (DOK 1); Spelling: Possessives (DOK 1); Spelling Review (DOK 2)	pp. 431–444
District Representative Letter VI (DOK 1); Resolution Letter V (DOK 1); Resolution Letter VIII (DOK 2); End of Sentence Punctuation (DOK 1); Colons, Semicolons, and Dashes (DOK 1); Commas in Compound Sentences, Series, and Introductory and Ending Expressions (DOK 1–2); Commas around Inessential Phrases (DOK 1); Quotes, Underlines, and Italics (DOK 1); Punctuation Review (DOK 2)	pp. 425–430 pp. 431–444

\*These GED Smart sections contain useful information for the new Extended Response question, but students will need to be made aware of the differences between the old and new GED essay requirements.

SCIENCE		
GED Academy Lessons	GED Smart Study Guide	GED Test Science Practices
Protein—Animal vs. Vegetable		SP.1.a, SP.3.b
Gene Summary		SP.1.a, SP.1.b, SP.1.c, SP.3.b
Skin Diagram		SP.1.a, SP.1.b, SP.1.c, SP.3.b
Phase Diagram		SP.1.a, SP.1.b, SP.1.c, SP.3.b
Atom Pattern		SP.1.a, SP.1.b, SP.1.c, SP.3.b
Fossil Skulls		SP.1.a, SP.1.b, SP.1.c
Energy Summary		SP.1.a, SP.1.b, SP.1.c, SP.2.c, SP.3.b, SP.3.c, SP.4.a, SP.6.c, SP.7.a
Earth Systems	pp. 495–498	SP.1.a, SP.3.b
Absorbed Energy		SP.1.a, SP.1.b, SP.1.c, SP.2.c, SP.3.b, SP.3.c, SP.4.a, SP.6.c, SP.7.a
Which Way's the Sun Moving?		SP.1.a, SP.1.b, SP.1.c, SP.2.c, SP.3.b, SP.3.c, SP.4.a, SP.6.c, SP.7.a, SP.7.b
Polar Bears		SP.1.a, SP.3.b
Genetics and Heredity	pp. 485–488	SP.1.a, SP.1.b, SP.1.c, SP.3.b
Cells	pp. 482–485	SP.1.a, SP.1.b, SP.1.c, SP.3.b
Energy Conclusions		SP.1.a, SP.1.b, SP.1.c, SP.2.c, SP.3.b, SP.3.c, SP.4.a, SP.6.c, SP.7.a, SP.7.b
The Dark Ages		SP.1.a, SP.1.b, SP.1.c, SP.2.c, SP.3.b, SP.3.c, SP.4.a, SP.6.c, SP.7.a, SP.7.b
Forces, Motion, and Work	pp. 476–482	SP.1.a, SP.1.b, SP.1.c, SP.3.b
Matter	pp. 469–473	SP.1.a, SP.1.b, SP.1.c, SP.3.b
Energy	pp. 473–476	SP.1.a, SP.1.b, SP.1.c, SP.3.b
Ecosystems	pp. 492–495	SP.1.a, SP.1.b, SP.1.c, SP.3.b
Yawning		SP.1.a, SP.1.b, SP.1.c, SP.2.c, SP.3.b, SP.3.c, SP.4.a, SP.6.c, SP.7.a, SP.7.b
Absorbing Light		SP.1.a, SP.1.b, SP.1.c, SP.2.c, SP.3.b, SP.3.c, SP.4.a, SP.6.c, SP.7.a, SP.7.b
Rocks		SP.1.a, SP.1.b, SP.1.c, SP.3.b
Sherpa Dude		SP.1.a, SP.1.b, SP.1.c, SP.2.c, SP.3.b, SP.3.c, SP.4.a, SP.6.c, SP.7.a, SP.7.b
Wrong Textbooks		SP.1.a, SP.1.b, SP.1.c, SP.3.b
Isaac Newton		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
Evolution	pp. 488–491	SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
Sound Waves		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
Charles's Law		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
General Relativity		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
Photosynthesis		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
DNA Inference		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
Our Place in Space		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
Too Cerebral!		SP.1.a, SP.1.b, SP.1.c, SP.2.c, SP.3.b, SP.3.c, SP.4.a, SP.6.c, SP.7.a, SP.7.b
Defining DNA		SP.1.a, SP.1.b, SP.1.c, SP.2.c, SP.3.b, SP.3.c, SP.4.a, SP.6.c, SP.7.a, SP.7.b
Dinosaur Relatives		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
Sleep Deprivation		SP.1.a, SP.1.b, SP.1.c, SP.2.c, SP.3.b, SP.3.c, SP.4.a, SP.6.c, SP.7.a, SP.7.b
Sunlight		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
Understanding Data and Evidence	pp. 458–461	SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a, SP.6.a, SP.6.b
Science Experiments	pp. 449–457	SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a, SP.6.a, SP.6.b
Disappearing Ions		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a, SP.6.a, SP.6.b
Hypothesis		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a, SP.6.a, SP.6.b

SCIENCE								
Depth of Knowledge Level			Human Health and Living Systems			Energy and Related Systems		
Level 1: Recall	Level 2: Applying	Level 3: Strategic Thinking	Life Science	Physical Science	Earth and Space Science	Life Science	Physical Science	Earth and Space Science
X	X		X					
X	X	X	X					
X	X		X					
X	X	X		X				
X	X						X	
X	X							X
X	X	X	X					X
X	X		X					X
X	X	X						X
X	X	X						X
X	X		X					
X	X	X	X					
X	X		X					
X	X	X						X
X	X	X						X
X	X						X	
X	X						X	
X	X						X	
X	X	X	X					
X	X	X	X					
X	X	X		X				
X	X			X				
X	X		X					
X	X	X			X			
X	X	X						
X	X	X	X					
X	X	X	X					
X	X		X					
X	X		X					
X	X	X		X				
X	X	X		X				
X	X	X		X				
X	X	X					X	
X	X	X					X	
X	X	X						X
X	X	X	X					
X	X	X	X					
X	X	X					X	
X	X	X					X	

SCIENCE		
GED Academy Lessons	GED Smart Study Guide	GED Test Science Practices
Experimental Design		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a, SP.6.a, SP.6.b
Temperature vs. Time		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a, SP.6.a, SP.6.b
Electric Bean Car		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
Measuring Time		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
Charts, Graphs, Tables, and Diagrams	pp. 461–467	SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
Smoking and Health		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
The Age of the Universe		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a, SP.6.a, SP.6.b
Explaining Bat		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
Hot Air		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
Phase Difference		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a, SP.6.a, SP.6.b
It's An Ollie		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a, SP.6.a, SP.6.b
What's a Theory		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a, SP.6.a, SP.6.b
Best Exercise		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
Lunar Eclipse		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
Eruption Effects		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
Water Pressure		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
Tree Rings		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
Smart Animals		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a, SP.6.a, SP.6.b
Disappearing Predators		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a, SP.6.a, SP.6.b
Gold Geysers		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a, SP.6.a, SP.6.b
Electron Shell		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
What's in a Body		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
Rapper Dude		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a, SP.6.a, SP.6.b
Electronics		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
Soap Box Derby		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
Pendulum		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a, SP.6.a, SP.6.b
High Altitudes		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
Frog Effects		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
Newtonian Principle		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
Painting a House		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a, SP.6.a, SP.6.b
Plants and the Carbon Cycle		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a, SP.6.a, SP.6.b
Virus Reproduction		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a, SP.6.a, SP.6.b
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Galileo's Evidence		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
Bread Mold		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
Food Chain		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a, SP.6.a, SP.6.b
Steam Power		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
More TV, Less Smarts		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
The Moon Landing		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a, SP.6.a, SP.6.b
Pulley Problem		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
Outer Limits		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a





SCIENCE		
GED Academy Lessons	GED Smart Study Guide	GED Test Science Practices
Types of Levers		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a, SP.6.a, SP.6.b
Second Class Levers		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
Third Class Levers		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
Technology	pp. 467–468	SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
LDL and HDL		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
Who's messing with My Genes?		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
Virus		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
Cigarette Smoke		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
Immune System		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
Safety		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
A Favorite Breakfast		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
Rachel Carson		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
The Greenhouse Effect		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a, SP.6.a, SP.6.b
Airborne Chemicals		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
Healthy Soil		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
Organic Fertilizer		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
Building Muscle		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a
Practice Questions		SP.1.a, SP.1.b, SP.1.c, SP.3.b, SP.4.a, SP.5.a, SP.7.a, SP.6.a, SP.6.b

## Science Practices

### SP.1 | Comprehending Scientific Presentations

**SP.1.a** | Understand and explain textual scientific presentations

**SP.1.b** | Determine the meaning of symbols, terms and phrases as they are used in scientific presentations

**SP.1.c** | Understand and explain a non-textual scientific presentations

### SP.2 | Investigation Design (Experimental and Observational)

**SP.2.a** | Identify possible sources of error and alter the design of an investigation to ameliorate that error

**SP.2.b** | Identify and refine hypotheses for scientific investigations

**SP.2.c** | Identify the strength and weaknesses of one or more scientific investigation (i.e. experimental or observational) designs

**SP.2.d** | Design a scientific investigation

**SP.2.e** | Identify and interpret independent and dependent variables in scientific investigations

### SP.3 | Reasoning from Data

**SP.3.a** | Cite specific textual evidence to support a finding or conclusion

**SP.3.b** | Reason from data or evidence to a conclusion

**SP.3.c** | Make a prediction based upon data or evidence

SCIENCE								
Depth of Knowledge Level			Human Health and Living Systems			Energy and Related Systems		
Level 1: Recall	Level 2: Applying	Level 3: Strategic Thinking	Life Science	Physical Science	Earth and Space Science	Life Science	Physical Science	Earth and Space Science
		X					X	
X	X						X	
X	X						X	
X	X						X	
X	X		X					
X	X		X					
X	X	X	X					
X	X		X					
X	X		X					
X	X			X				
X	X		X					
X	X	X			X			
X	X		X					
X	X		X					
X	X		X					
X	X		X					
X	X	X	X	X	X	X	X	X

**SP.3.d** | Using sampling techniques to answer scientific questions

**SP.4 | Evaluating Conclusions with Evidence**

**SP.4.a** | Evaluate whether a conclusion or theory is supported or challenged by particular data or evidence

**SP.5 | Working with Findings**

**SP.5.a** | Reconcile multiple findings, conclusions or theories.

**SP.6 | Expressing Scientific Information**

**SP.6.a** | Express scientific information or findings visually

**SP.6.b** | Express scientific information or findings numerically or symbolically.

**SP.6.c** | Express scientific information or findings verbally

**SP.7 | Scientific Theories**

**SP.7.a** | Understand and apply scientific models, theories and processes

**SP.7.b** | Apply formulas from scientific theories

**SP.8 | Probability & Statistics\***

**SP.8.a** | Describe a data set statistically

**SP.8.b** | Use counting and permutations to solve scientific problems

**SP.8.c** | Determine the probability of events

\*See also GED Academy math lessons: Simple Probability; Dependent Probability; Independent Probability; Tables and Charts; Review of Using Data

SOCIAL STUDIES		
GED Academy Lessons	GED Smart Study Guide	GED Test Social Studies Practices
Flat Screen TV I		SSP.1.a, SSP.2.a, SSP.3.c, SSP.4.a, SSP.6.b, SSP.10.a
China Tech Growth		SSP.1.a, SSP.1.b, SSP.2.a, SSP.3.c, SSP.3.d, SSP.4.a, SSP.6.a, SSP.6.b, SSP.7.a, SSP.7.b, SSP.8.a, SSP.10.a, SSP.10.b
Surplus		SSP.1.a, SSP.1.b, SSP.2.a, SSP.3.c, SSP.3.d, SSP.4.a, SSP.6.a, SSP.6.b, SSP.7.a, SSP.7.b, SSP.8.a, SSP.10.a, SSP.10.c
State of the World		SSP.1.a, SSP.1.b, SSP.2.a, SSP.3.c, SSP.3.d, SSP.4.a, SSP.6.a, SSP.6.b, SSP.7.a, SSP.7.b, SSP.8.a, SSP.10.a, SSP.10.c
Charts and Graphs	pp. 520–524	SSP.1.a, SSP.2.a, SSP.3.c, SSP.4.a, SSP.6.b, SSP.10.a
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Depth of Knowledge Level			Development of Modern Liberties and Democracy				Energy and Related Systems			
Level 1: Recall	Level 2: Applying	Level 3: Strategic Thinking	Civics and Government	U.S. History	Economics	Geography and the World	Civics and Government	U.S. History	Economics	Geography and the World
X	X								X	
X	X	X							X	
X	X	X							X	
X	X	X				X				
X	X							X	X	
X	X			X						
X	X		X							
X	X	X	X							
X	X	X		X						
X	X									X
X	X			X						
X	X		X							
X	X		X							
X	X		X							
X	X		X							
X	X		X							
X	X			X						
X	X									X
X	X									X
X	X			X						
X	X									X
X	X		X							
X	X								X	
X	X	X		X						
X	X			X						
X	X		X							
X	X			X						
X	X	X	X							
X	X	X	X							
X	X	X							X	

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Fluoridation of Drinking Water		SSP.1.a, SSP.2.a, SSP.3.c, SSP.4.a, SSP.6.b, SSP.10.a
Massacre in the Temple		SSP.1.a, SSP.1.b, SSP.2.a, SSP.3.c, SSP.3.d, SSP.4.a, SSP.6.a, SSP.6.b, SSP.7.a, SSP.7.b, SSP.8.a, SSP.10.a, SSP.10.c
Carolus Coins		SSP.1.a, SSP.2.a, SSP.3.c, SSP.4.a, SSP.6.b, SSP.10.a
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Freedom March		SSP.1.a, SSP.2.a, SSP.3.c, SSP.4.a, SSP.6.b, SSP.10.a
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SOCIAL STUDIES										
Depth of Knowledge Level			Development of Modern Liberties and Democracy				Energy and Related Systems			
Level 1: Recall	Level 2: Applying	Level 3: Strategic Thinking	Civics and Government	U.S. History	Economics	Geography and the World	Civics and Government	U.S. History	Economics	Geography and the World
X	X	X								X
X	X	X								X
X	X	X								
X	X		X							
X	X					X				
X	X	X	X							
X	X		X							
X	X				X					
X	X	X				X				
X	X									X
X	X								X	
X	X	X	X							
X	X	X							X	
X	X	X								X
X	X			X						
X	X	X						X		
X	X	X								X
X	X	X								X
X	X			X						
X	X								X	
X	X	X								X
X	X	X	X							
X	X	X	X							
X	X			X						
X	X								X	
X	X	X	X							
X	X	X	X							
X	X									X

SOCIAL STUDIES		
GED Academy Lessons	GED Smart Study Guide	GED Test Social Studies Practices
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Opinion of Hitler		SSP.1.a, SSP.1.b, SSP.2.a, SSP.3.c, SSP.3.d, SSP.4.a, SSP.6.a, SSP.6.b, SSP.7.a, SSP.7.b, SSP.8.a, SSP.10.a, SSP.10.b
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Did You Vote?		SSP.1.a, SSP.1.b, SSP.2.a, SSP.3.c, SSP.3.d, SSP.4.a, SSP.6.a, SSP.6.b, SSP.7.a, SSP.7.b, SSP.8.a, SSP.10.a, SSP.10.b
Guards at the Gate		SSP.1.a, SSP.2.a, SSP.3.c, SSP.4.a, SSP.6.b, SSP.10.a
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Ralph Nader		SSP.1.a, SSP.1.b, SSP.2.a, SSP.3.c, SSP.3.d, SSP.4.a, SSP.6.a, SSP.6.b, SSP.7.a, SSP.7.b, SSP.8.a, SSP.10.a, SSP.10.c
Apartheid		SSP.1.a, SSP.1.b, SSP.2.a, SSP.3.c, SSP.3.d, SSP.4.a, SSP.6.a, SSP.6.b, SSP.7.a, SSP.7.b, SSP.8.a, SSP.10.a, SSP.10.c
Free At Last		SSP.1.a, SSP.1.b, SSP.2.a, SSP.3.c, SSP.3.d, SSP.4.a, SSP.6.a, SSP.6.b, SSP.7.a, SSP.7.b, SSP.8.a, SSP.10.a, SSP.10.c
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Hitler the Dictator		SSP.1.a, SSP.1.b, SSP.2.a, SSP.3.c, SSP.3.d, SSP.4.a, SSP.6.a, SSP.6.b, SSP.7.a, SSP.7.b, SSP.8.a, SSP.10.a, SSP.10.c
Subsidy Pyramid		SSP.1.a, SSP.1.b, SSP.2.a, SSP.3.c, SSP.3.d, SSP.4.a, SSP.5.a, SSP.5.b, SSP.5.c, SSP.5.d, SSP.6.a, SSP.6.b, SSP.7.a, SSP.7.b, SSP.8.a, SSP.10.a, SSP.10.c
Enlightening Dude		SSP.1.a, SSP.2.a, SSP.3.c, SSP.4.a, SSP.6.b, SSP.10.a
Globalization		SSP.1.a, SSP.2.a, SSP.3.c, SSP.4.a, SSP.6.b, SSP.10.a





SOCIAL STUDIES		
GED Academy Lessons	GED Smart Study Guide	GED Test Social Studies Practices
Who's Driving the Bus		SSP.1.a, SSP.1.b, SSP.2.a, SSP.3.c, SSP.3.d, SSP.4.a, SSP.5.a, SSP.5.b, SSP.5.c, SSP.5.d, SSP.6.a, SSP.6.b, SSP.7.a, SSP.7.b, SSP.8.a, SSP.10.a, SSP.10.c
Stock Crash Argument		SSP.1.a, SSP.1.b, SSP.2.a, SSP.3.c, SSP.3.d, SSP.4.a, SSP.5.a, SSP.5.b, SSP.5.c, SSP.5.d, SSP.6.a, SSP.6.b, SSP.7.a, SSP.7.b, SSP.8.a, SSP.10.a, SSP.10.c
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Role of the Citizen		SSP.1.a, SSP.1.b, SSP.2.a, SSP.3.c, SSP.3.d, SSP.4.a, SSP.5.a, SSP.5.b, SSP.5.c, SSP.5.d, SSP.6.a, SSP.6.b, SSP.7.a, SSP.7.b, SSP.8.a, SSP.10.a, SSP.10.c
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Civil War		SSP.1.a, SSP.2.a, SSP.3.c, SSP.4.a, SSP.6.b, SSP.10.a
Egypt's Pyramids		SSP.1.a, SSP.2.a, SSP.3.c, SSP.4.a, SSP.6.b, SSP.10.a
Picture of Freedom		SSP.1.a, SSP.1.b, SSP.2.a, SSP.3.c, SSP.3.d, SSP.4.a, SSP.5.a, SSP.5.b, SSP.5.c, SSP.5.d, SSP.6.a, SSP.6.b, SSP.7.a, SSP.7.b, SSP.8.a, SSP.10.a, SSP.10.c
Which Amendment?		SSP.1.a, SSP.2.a, SSP.3.c, SSP.4.a, SSP.6.b, SSP.10.a
Declaring Independence		SSP.1.a, SSP.1.b, SSP.2.a, SSP.3.c, SSP.3.d, SSP.4.a, SSP.5.a, SSP.5.b, SSP.5.c, SSP.5.d, SSP.6.a, SSP.6.b, SSP.7.a, SSP.7.b, SSP.8.a, SSP.10.a, SSP.10.c
The Invisible Man		SSP.1.a, SSP.1.b, SSP.2.a, SSP.3.c, SSP.3.d, SSP.4.a, SSP.5.a, SSP.5.b, SSP.5.c, SSP.5.d, SSP.6.a, SSP.6.b, SSP.7.a, SSP.7.b, SSP.8.a, SSP.10.a, SSP.10.c
Flat Screen III		SSP.1.a, SSP.1.b, SSP.2.a, SSP.3.c, SSP.3.d, SSP.4.a, SSP.5.a, SSP.5.b, SSP.5.c, SSP.5.d, SSP.6.a, SSP.6.b, SSP.7.a, SSP.7.b, SSP.8.a, SSP.10.a, SSP.10.c
Credit Reports		SSP.1.a, SSP.2.a, SSP.3.c, SSP.4.a, SSP.6.b, SSP.10.a
Who Would You Hire?		SSP.1.a, SSP.2.a, SSP.3.c, SSP.4.a, SSP.6.b, SSP.10.a
Constitution Values		SSP.1.a, SSP.1.b, SSP.2.a, SSP.3.c, SSP.3.d, SSP.4.a, SSP.5.a, SSP.5.b, SSP.5.c, SSP.5.d, SSP.6.a, SSP.6.b, SSP.7.a, SSP.7.b, SSP.8.a, SSP.10.a, SSP.10.c
How Values and Beliefs Affect Decisions	pp. 557–562	SSP.1.a, SSP.2.a, SSP.3.c, SSP.4.a, SSP.6.b, SSP.10.a
Why's They Drop the Bomb?		SSP.1.a, SSP.1.b, SSP.2.a, SSP.3.c, SSP.3.d, SSP.4.a, SSP.5.a, SSP.5.b, SSP.5.c, SSP.5.d, SSP.6.a, SSP.6.b, SSP.7.a, SSP.7.b, SSP.8.a, SSP.10.a, SSP.10.c

SOCIAL STUDIES										
Depth of Knowledge Level			Development of Modern Liberties and Democracy				Energy and Related Systems			
Level 1: Recall	Level 2: Applying	Level 3: Strategic Thinking	Civics and Government	U.S. History	Economics	Geography and the World	Civics and Government	U.S. History	Economics	Geography and the World
X	X	X	X							
X	X	X			X					
X	X			X						
X	X	X	X							
X	X	X		X						
X	X	X			X					
X	X								X	
X	X	X							X	
X	X							X		
X	X									X
X	X	X								X
X	X		X							
X	X	X					X			
X	X	X						X		
X	X	X							X	
X	X								X	
X	X								X	
X	X	X					X			
X	X									X
X	X	X						X		

SOCIAL STUDIES		
GED Academy Lessons	GED Smart Study Guide	GED Test Social Studies Practices
Logical Fallacy		SSP.1.a, SSP.1.b, SSP.2.a, SSP.3.c, SSP.3.d, SSP.4.a, SSP.5.a, SSP.5.b, SSP.5.c, SSP.5.d, SSP.6.a, SSP.6.b, SSP.7.a, SSP.7.b, SSP.8.a, SSP.10.a, SSP.10.c
Long Hair Is Okay		SSP.1.a, SSP.1.b, SSP.2.a, SSP.3.c, SSP.3.d, SSP.4.a, SSP.5.a, SSP.5.b, SSP.5.c, SSP.5.d, SSP.6.a, SSP.6.b, SSP.7.a, SSP.7.b, SSP.8.a, SSP.10.a, SSP.10.c
A Deal You Can't Refuse		SSP.1.a, SSP.1.b, SSP.2.a, SSP.3.c, SSP.3.d, SSP.4.a, SSP.5.a, SSP.5.b, SSP.5.c, SSP.5.d, SSP.6.a, SSP.6.b, SSP.7.a, SSP.7.b, SSP.8.a, SSP.10.a, SSP.10.c
Information Evaluation		SSP.1.a, SSP.1.b, SSP.2.a, SSP.3.c, SSP.3.d, SSP.4.a, SSP.5.a, SSP.5.b, SSP.5.c, SSP.5.d, SSP.6.a, SSP.6.b, SSP.7.a, SSP.7.b, SSP.8.a, SSP.10.a, SSP.10.c
Colonial Africa		SSP.1.a, SSP.2.a, SSP.3.c, SSP.4.a, SSP.6.b, SSP.10.a
Persuasive Arguments	pp. 552–555	SSP.1.a, SSP.2.a, SSP.3.c, SSP.4.a, SSP.6.b, SSP.10.a
Important Historical Documents	pp. 563–578	SSP.1.a, SSP.2.a, SSP.3.c, SSP.4.a, SSP.6.b, SSP.10.a
Practice Questions	pp. 579–592	SSP.1.a, SSP.1.b, SSP.2.a, SSP.3.c, SSP.3.d, SSP.4.a, SSP.5.a, SSP.5.b, SSP.5.c, SSP.5.d, SSP.6.a, SSP.6.b, SSP.7.a, SSP.7.b, SSP.8.a, SSP.10.a, SSP.10.c

## Social Studies Practices

### SSP.1 | Drawing Conclusions and Making Inferences

**SSP.1.a** | Determine the details of what is explicitly stated in primary and secondary sources and make logical inferences or valid claims based on evidence.

**SSP.1.b** | Cite or identify specific evidence to support inferences or analyses of primary and secondary sources, attending to the precise details of explanations or descriptions of a process, event, or concept.

### SSP.2 | Determining Central Ideas, Hypotheses and Conclusions

**SSP.2.a** | Determine the central ideas or information of a primary or secondary source document, corroborating or challenging conclusions with evidence.

**SSP.2.b** | Describe people, places, environments, processes, and events, and the connections between and among them.

### SSP.3 | Analyzing Events and Ideas

**SSP.3.a** | Identify the chronological structure of a historical narrative and sequence steps in a process.

**SSP.3.b** | Analyze in detail how events, processes, and ideas develop and interact in a written document; determine whether earlier events caused later ones or simply preceded them.

**SSP.3.c** | Analyze cause-and-effect relationships and multiple causation, including action by individuals, natural and societal processes, and the influence of ideas.

**SSP.3.d** | Compare differing sets of ideas related to political, historical, economic, geographic, or societal contexts; evaluate the assumptions and implications inherent in differing positions.

SOCIAL STUDIES										
Depth of Knowledge Level			Development of Modern Liberties and Democracy				Energy and Related Systems			
Level 1: Recall	Level 2: Applying	Level 3: Strategic Thinking	Civics and Government	U.S. History	Economics	Geography and the World	Civics and Government	U.S. History	Economics	Geography and the World
X	X	X								X
X	X	X	X							
X	X	X	X							
X	X	X						X		
X	X									X
X	X	X						X		
X	X		X							
X	X	X	X	X	X	X	X	X	X	X

**SSP.4 | Interpreting Meaning of Symbols, Words and Phrases**

**SSP.4.a** | Determine the meaning of words and phrases as they are used in context, including vocabulary that describes historical, political, social, geographic, and economic aspects of social studies.

**SSP.5 | Analyzing Purpose and Point of View**

**SSP.5.a** | Identify aspects of a historical document that reveal an author’s point of view or purpose (e.g., loaded language, inclusion or avoidance of particular facts).

**SSP.5.b** | Identify instances of bias or propagandizing.

**SSP.5.c** | Analyze how a historical context shapes an author’s point of view.

**SSP.5.d** | Evaluate the credibility of an author in historical and contemporary political discourse.

**SSP.6 | Integrating Content Presented in Different Ways**

**SSP.6.a** | Integrate quantitative or technical analysis (e.g., charts, research data) with qualitative analysis in print or digital text.

**SSP.6.b** | Analyze information presented in a variety of maps, graphic organizers, tables, and charts; and in a variety of visual sources such as artifacts, photographs, political cartoons.

**SSP.6.c** | Translate quantitative information expressed in words in a text into visual form (e.g., table or chart); translate information expressed visually or mathematically into words.

**SSP.7 | Evaluating Reasoning and Evidence**

**SSP.7.a** | Distinguish among fact, opinion, and reasoned judgment in a primary or secondary source document.



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**SSP.7.b** | Distinguish between unsupported claims and informed hypotheses grounded in social studies evidence.

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### **SSP.8 | Analyzing Relationships between Texts**

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**SSP.8.a** | Distinguish among fact, opinion, and reasoned judgment in a primary or secondary source document.

---

**SSP.8.b** | Distinguish between unsupported claims and informed hypotheses grounded in social studies evidence.

---

### **SSP.9 | Writing Analytic Responses to Source Texts**

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**SSP.9.a** | Produce writing that develops the idea(s), claim(s) and/or argument(s) thoroughly and logically, with well-chosen examples, facts, or details from primary and secondary source documents.

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**SSP.9.b** | Produce writing that introduces the idea(s) or claim(s) clearly; creates an organization that logically sequences information; and maintains a coherent focus.

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**SSP.9.c** | Write clearly and demonstrate sufficient command of standard English conventions.

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### **SSP.10 | Reading and Interpreting Graphs, Charts and Other Data Representation\***

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**SSP.10.a** | Interpret, use, and create graphs (e.g., scatterplot, line, bar, circle) including proper labeling. Predict reasonable trends based on the data (e.g., do not extend trend beyond a reasonable limit).

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**SSP.10.b** | Represent data on two variables (dependent and independent) on a graph; analyze and communicate how the variables are related.

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**SSP.10.c** | Distinguish between correlation and causation.

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### **SSP.11 | Measuring the Center of a Statistical Dataset\*\***

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**SSP.11.a** | Calculate the mean, median, mode, and range of a dataset.

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\*See also GED Academy math lessons: Tables and Charts; Review of Using Data

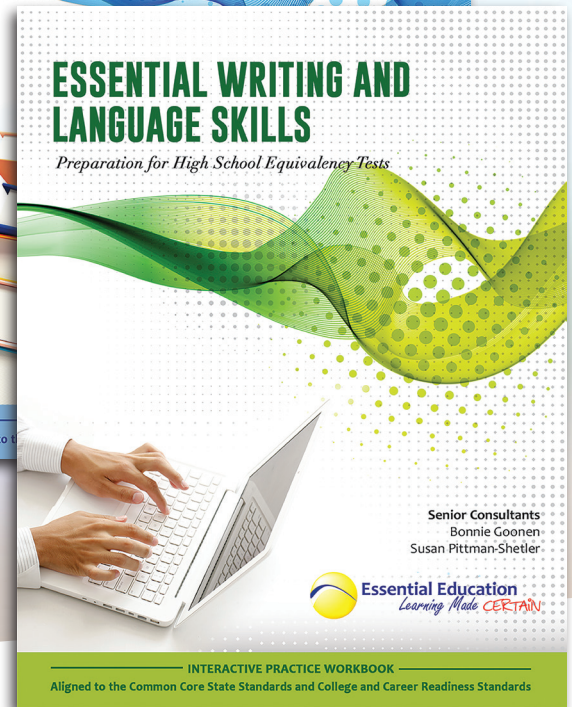
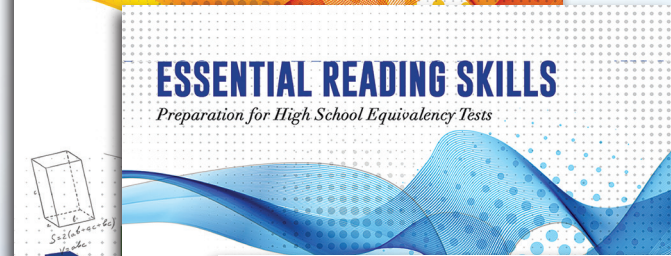
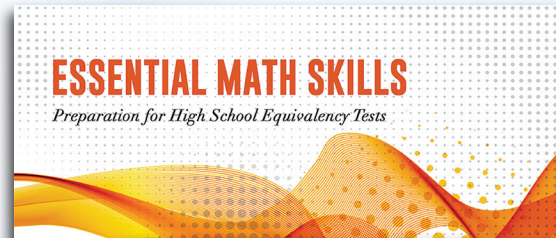
\*\*See also GED Academy math lessons: Mean, Median, and Mode; Data Analysis/Median; Math Formulas for Central Tendency; Review of Using Data

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Everything You Need to Prepare Students for the 2014 GED® Test

## 01

### Section

- An overview of the key challenges educators face in preparing students for the 2014 GED® Test
- What Digital Literacy skills are required for the Computer-Based Test version of the 2014 GED® Test
- An overview of the content and format of the 2014 GED® Test for each subject area

## 02

### Section

- Depth of Knowledge Lesson Guide
- Lesson resources to build a 2014 GED® Test preparation program
- Sample lesson plans and suggested instructional activities
- An overview of GED Academy

## 03

### Section

- A detailed examination of the CCSS/CCR standards for each subject area and how they shape the 2014 GED® Test preparation curriculum
- A distillation of the skills required to excel on the 2014 GED® Test

