
EOC
Algebra
I

# STAAR GUIDE
## to Success



Everything you need to know about
**STAAR**
All at your fingertips!

- STAAR Rigor and Depth of Knowledge (DOK)
- Assessed Standards with DOK Levels
- DOK Question Stems, Sentence Frames, Activities, etc.
- DOK and Bloom's Taxonomy Alignment
- English Language Proficiency Standards
- Information on All STAAR Assessment Versions
- ELL Accommodations for Each Assessment
- ***And Much More!***

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# STAAR's Increased Rigor

## FOCUS

### DESIGN ATTRIBUTES

- A distinction has been made between "readiness" and "supporting" standards from the TEKS content standards eligible for assessment.
- A set of readiness standards has been identified for each subject and grade or course drawn from the TEKS content standards eligible for assessment.
- Readiness standards will be emphasized annually in the STAAR assessments.

### READINESS STANDARDS

- They are essential for success in the current grade or course.
- They are important for preparedness for the next grade or course.
- They support college and career readiness.
- They necessitate in-depth instruction.
- They address broad and deep ideas.

### SUPPORTING STANDARDS

- Although introduced in the current grade or course, they may be emphasized in a subsequent year.
- Although reinforced in the current grade or course, they may be emphasized in a previous year.
- They play a role in preparing students for the next grade or course but not a central role.
- They address more narrowly defined ideas.



## CLARITY

### DESIGN ATTRIBUTES

- Assessments focus on readiness standards and course-specific content standards.
- The majority of the assessments will test content studied that year.
- In reading, greater emphasis will be given to critical analysis than literal understanding.

## DEPTH

### DESIGN ATTRIBUTES

- Includes a greater number of items that have a higher cognitive complexity level.
- Items will more closely match the cognitive complexity level evident in the TEKS.
- In writing, students will be required to write two essays rather than one. The writing prompts will support analytical, persuasive, and expository writing in addition to literary writing.
- In social studies, science, and mathematics, process skills will be assessed in context, not in isolation, which will allow for a more integrated and authentic assessment of these content areas.
- In science and mathematics, the number of open-ended (griddable) items will increase to allow students more opportunity to derive an answer independently.

# Algebra I Readiness and Supporting Standards

| Readiness Standards | | Supporting Standards | |
|---|---|---|---|
| **Reporting Category 1**: Functional Relationships. Student will describe functional relationships in a variety of ways. | | | |
| 1.D | represent relationships among quantities using [concrete] models, tables, graphs, diagrams, verbal descriptions, equations, and inequalities; **DOK 2** | 1.A | describe independent and dependent quantities in functional relationships; **DOK 1** |
| 1.E | interpret and make decisions, predictions, and critical judgments from functional relationships. **DOK 3** | 1.B | gather and record data and use data sets to determine functional relationships between quantities; **DOK 2** |
| | | 1.C | describe functional relationships for given problem situations and write equations or inequalities to answer questions arising from the situations; **DOK 2** |
| **Reporting Category 2**: Properties and Attributes of Functions. Student will demonstrate an understanding of the properties and attributes of functions. | | | |
| 2.B | identify mathematical domains and ranges and determine reasonable domain and range values for given situations, both continuous and discrete; **DOK 2** | 2.A | identify and sketch the general forms of linear (y = x) and quadratic (y = x2) parent functions; **DOK 2** |
| 2.D | collect and organize data, make and interpret scatterplots (including recognizing positive, negative, or no correlation for data approximating linear situations), and model, predict, and make decisions and critical judgments in problem situations. **DOK 3** | 2.C | interpret situations in terms of given graphs or create situations that fit given graphs; **DOK 2** |
| 4.A | find specific function values, simplify polynomial expressions, transform and solve equations, and factor as necessary in problem situations; **DOK 2** | 3.A | use symbols to represent unknowns and variables; **DOK 1** |
| | | 3.B | look for patterns and represent generalizations algebraically. **DOK 2** |
| | | 4.B | use the commutative, associative, and distributive properties to simplify algebraic expressions; **DOK 1** |
| | | 4.C | connect equation notation with function notation, such as y = x and f (x) = x + 1. **DOK 1** |
| **Reporting Category 3**: Linear Functions. Student will demonstrate an understanding of linear functions. | | | |
| 5.C | use, translate, and make connections among algebraic, tabular, graphical, or verbal descriptions of linear functions. **DOK 2** | 5.A | determine whether or not given situations can be represented by linear functions; **DOK 2** |
| 6.B | interpret the meaning of slope and intercepts in situations using data, symbolic representations, or graphs; **DOK 2** | 5.B | determine the domain and range for linear functions in given situations; **DOK 2** |
| 6.C | investigate, describe, and predict the effects of changes in m and b on the graph of y = mx + b; **DOK 2** | 6.A | develop the concept of slope as rate of change and determine slopes from graphs, tables, and algebraic representations; **DOK 2** |
| 6.F | interpret and predict the effects of changing slope and y-intercept in applied situations; **DOK 2** | 6.D | graph and write equations of lines given characteristics such as two points, a point and a slope, or a slope and y-intercept; **DOK 2** |
| | | 6.E | determine the intercepts of the graphs of linear functions and zeros of linear functions from graphs, tables, and algebraic representations; **DOK 2** |
| | | 6.G | relate direct variation to linear functions and solve problems involving proportional change. **DOK 2** |
| **Reporting Category 4**: Linear Equations and Inequalities. Student will formulate and use linear equations and inequalities. | | | |
| 7.B | investigate methods for solving linear equations and inequalities using [concrete] models, graphs, and the properties of equality, select a method, and solve the equations and inequalities; **DOK 2** | 7.A | analyze situations involving linear functions and formulate linear equations or inequalities to solve problems; **DOK 2** |
| 8.B | solve systems of linear equations using [concrete] models, graphs, tables, and algebraic methods; **DOK 2** | 7.C | interpret and determine the reasonableness of solutions to linear equations and inequalities. **DOK 2** |
| | | 8.A | analyze situations and formulate systems of linear equations in two unknowns to solve problems; **DOK 2** |
| | | 8.C | interpret and determine the reasonableness of solutions to systems of linear equations. **DOK 2** |
| **Reporting Category 5**: Quadratic and Other Nonlinear Functions. Student will demonstrate an understanding of quadratic and other nonlinear functions. | | | |
| 9.D | analyze graphs of quadratic functions and draw conclusions. **DOK 2** | 9.A | determine the domain and range for quadratic functions in given situations; **DOK 1** |
| 10.A | solve quadratic equations using [concrete] models, tables, graphs, and algebraic methods; **DOK 2** | 9.B | investigate, describe, and predict the effects of changes in a on the graph of y = ax2 + c; **DOK 3** |
| | | 9.C | investigate, describe, and predict the effects of changes in c on the graph of y = ax2 + c; **DOK 3** |

## Depth of Knowledge (DOK) Level 1

Level 1 tasks involve comprehension and application at a surface level which do not require any further mental manipulation or processing of the information beyond recall or reproduction. There is little transformation or extended processing of the target knowledge required. Evaluation at this level would require recall or recognition of a fact, information, concept, or procedure.

### Key Characteristics

- Basic recall of facts, vocabulary, and attributes of objects
- Application of simple procedures or formulas
- Common tasks include listing, identifying, and defining

### Student Roles

| | | |
|---|---|---|
| Memorizes | Interprets | Responds |
| Describes | Restates | Demonstrates |
| Explains | Remembers | Recognizes |

### Question Stems for Teachers

- Can you recall ____?
- When did ____ happen?
- Who was ____?
- How can you recognize ____?
- What is____?
- How can you find the meaning of____?
- How would you write ____?
- What might you include on a list about____?
- Can you identify____?
- How would you describe____?

### Sentence Frames for Students

- ____ is when ____.
- ____ happened because ____.
- ____ was the person/character that ____.
- I recognize ____ by looking at/thinking about ____.
- ____ means ____.
- I can find the meaning of ____ by ____.
- I would write ____ like this ____.
- I would include ____ because ____.
- ____ has ____ and ____.
- ____ looks/feels/smells/sounds/tastes like ____.

### Possible Products

| | | |
|---|---|---|
| Quiz | Example | Definition |
| Podcast | Commenting | Collection |
| Wiki | Explanation | Label |
| Fact Highlights | Show and Tell | Categorize |

### Activities Across Bloom's Taxonomy

#### Reading

| | |
|---|---|
| Remember | Recite a fact related to . . . |
| Understand | Paraphrase a chapter in the book. |
| Apply | Prepare a flow chart that illustrates the sequence of events. |
| Analyze | Identify missing points in outline. |
| Evaluate | Recommend a book and justify recommendation. |
| Create | Modify the ending of the story. |

#### Math

| | |
|---|---|
| Remember | Recognize a property. |
| Understand | Outline main points. |
| Apply | Use basic calculation tasks to solve one step problems. |
| Analyze | Identify missing points in formula. |
| Evaluate | Justify process of using formula. |
| Create | Make a chart showing how to solve a given problem. |

#### Science

| | |
|---|---|
| Remember | Recall scientific steps in a process. |
| Understand | Illustrate a relationship between . . . |
| Apply | Follow simple instructions to complete a lab. |
| Analyze | Retrieve information from an illustration or chart. |
| Evaluate | Review peer description of topic for accuracy. |
| Create | Brainstorm ideas related to . . . |



*The Depth of Knowledge levels along with its principal components have been adapted from Dr. Norman Webb's research and work.*

## Algebra I

### RC 1 - FUNCTIONAL RELATIONSHIPS

| | |
|---|---|
| critical judgment | opinión crítica |
| data ✪☆ | datos |
| data set | conjunto de dato |
| decision ☆ | decisión |
| dependent quantity ☆ | cantidad dependiente |
| describe ✪☆ | describir |
| diagram ★☆ | diagrama |
| equation ✪☆ | ecuación |
| functional relationship ✪☆ | relación funcional |
| gather data | recolectar datos |
| graph ✪★☆ | gráfica |
| independent quantity ☆ | cantidad independiente |
| inequality ✪ | desigualdad |
| interpret ✪☆ | interpretar |
| model ★☆ | modelo |
| prediction ☆ | predicción |
| problem situation ✪☆ | situación problemática |
| quantity | cantidad |
| record data | anotar datos |
| relationship | relación |
| represent ☆ | representar |
| situation ✪☆ | situación |
| table ✪★☆ | tabla |
| verbal description ☆ | descripción verbal |

### RC 2 - PROPERTIES AND ATTRIBUTES OF FUNCTIONS

| | |
|---|---|
| algebraic expression ☆ | expresión algebraica |
| algebraically ☆ | algebraicamente |
| approximating ☆ | aproximando |
| associative property ☆ | propiedad asociativa |
| collect data | recaudar datos |
| commutative property ☆ | propiedad comunicativa |
| connect ☆ | conectar |
| continuous ☆ | continuo |
| create ☆ | crear |
| critical judgment | opinión crítica |
| data ✪☆ | datos |
| decision ☆ | decisión |
| determine ✪☆ | determinar |
| discrete situation ☆ | situación discreta |
| distributive property ☆ | propiedad distributiva |
| domain ✪☆ | dominio |
| equation notation ☆ | ecuación notación |
| factor ☆ | factores |
| function notation ☆ | notación funcional |
| function values ☆ | valores funcionales |
| generalization ☆ | generalización |
| graph ✪★☆ | gráfica |
| identify ☆ | identificar |
| interpret ✪☆ | interpretar |
| linear function ✪☆ | función lineal |
| linear situation ☆ | situación lineal |
| domain ☆ | dominio |
| model ★☆ | modelo |
| negative ★☆ | negativo |
| no correlation | sin correlación |
| organize data ☆ | organizar datos |
| parent function | función madre |
| pattern ☆ | patrón |
| polynomial ☆ | polinomial |
| positive ★☆ | positivo |
| predict ✪☆ | predecir |
| problem situation ✪☆ | situación problemática |
| property ✪☆ | propiedad |
| quadratic function ✪☆ | función cuadrática |
| range ✪★ | gama |
| reasonableness | razonable |
| recognize ☆ | reconoce |
| represent ☆ | representar |
| scatterplot | diagrama de dispersión |
| simplify ✪☆ | simplificar |
| situation ✪☆ | situación |
| sketch ★ | bosquejo |
| symbol ☆ | símbolo |
| transform ☆ | transformar |
| value ☆ | valor |
| variable ☆ | variable |

### RC 3 - LINEAR FUNCTIONS

| | |
|---|---|
| algebraic representation ☆ | representación algebraica |
| apply ☆ | aplicar |
| characteristic ☆ | característica |
| concept of slope | el concepto de una inclinación |
| connection ☆ | conexión |
| data ✪☆ | datos |

✪ High-frequency (appears more than 3 times) ★ Multiple-meaning ☆ Cognate