Sections for Content Standards:

Reading
Math
Science

Grade-Level Indicators Corresponding to the Iowa Tests for Grades 3-12

Reading Content Standards:

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A. Students can comprehend what they read in a variety of literary and informational texts.

Grade 3 Indicators:

1. Understand stated information
2. Determine the meaning of new words from their context
3. Draw conclusions, make inferences, and deduce meaning
4. Infer traits, feelings, and motives of characters
5. Interpret information in new contexts
6. Interpret nonliteral language
7. Determine the main idea of a text
8. Identify the author’s views or purpose
9. Analyze the style or structure of a text

Grade 4 Indicators:

1. Understand stated information
2. Determine the meaning of new words from their context
3. Draw conclusions, make inferences, and deduce meaning
4. Infer traits, feelings, and motives of characters
5. Interpret information in new contexts
6. Interpret nonliteral language

7. Determine the main idea of a text
8. Identify the author’s views or purpose
9. Analyze the style or structure of a text

Grade 5 Indicators:

1. Understand stated information
2. Determine the meaning of new words from their context
3. Draw conclusions, make inferences, and deduce meaning
4. Infer traits, feelings, and motives of characters
5. Interpret information in new contexts
6. Interpret nonliteral language
7. Determine the main idea of a text
8. Identify the author’s views or purpose
9. Analyze the style or structure of a text

Grade 6 Indicators:

1. Understand stated information
2. Determine the meaning of new words from their context
3. Draw conclusions, make inferences, and deduce meaning
4. Infer traits, feelings, and motives of characters
5. Interpret information in new contexts
6. Interpret nonliteral language
7. Determine the main idea of a text
8. Identify the author’s views or purpose
9. Analyze the style or structure of a text

Grade 7 Indicators:

1. Understand stated information
2. Determine the meaning of new words from their context
3. Draw conclusions, make inferences, and deduce meaning
4. Infer traits, feelings, and motives of characters
5. Interpret information in new contexts
6. Interpret nonliteral language
7. Determine the main idea of a text
8. Identify the author’s views or purpose
9. Analyze the style or structure of a text

Grade 8 Indicators:

1. Understand stated information
2. Determine the meaning of new words from their context
3. Draw conclusions, make inferences, and deduce meaning
4. Infer traits, feelings, and motives of characters
5. Interpret information in new contexts
6. Interpret nonliteral language
7. Determine the main idea of a text
8. Identify the author’s views or purpose
9. Analyze the style or structure of a text

Grade 9 Indicators:

1. Understand stated information
2. Determine the literal meaning of specific words

3. Draw conclusions and make inferences and generalizations

4. Infer traits, feelings, and motives of characters or individuals

5. Make predictions based on stated information

6. Interpret nonliteral language used in a text

7. Determine the main idea, topic, or theme

8. Identify the author’s views or purposes

9. Distinguish among facts, opinions, and assumptions

10. Recognize aspects of a passage’s style and structure and recognize literary techniques.

Grade 10 Indicators:

1. Understand stated information

2. Determine the literal meaning of specific words

3. Draw conclusions and make inferences and generalizations

4. Infer traits, feelings, and motives of characters or individuals

5. Make predictions based on stated information

6. Interpret nonliteral language used in a text

7. Determine the main idea, topic, or theme

8. Identify the author’s views or purposes

9. Distinguish among facts, opinions, and assumptions

10. Recognize aspects of a passage’s style and structure and recognize literary techniques.

Grade 11 Indicators:

1. Understand stated information

2. Determine the literal meaning of specific words

3. Draw conclusions and make inferences and generalizations

4. Infer traits, feelings, and motives of characters or individuals

5. Make predictions based on stated information

6. Interpret nonliteral language used in a text

7. Determine the main idea, topic, or theme

8. Identify the author's views or purposes

9. Distinguish among facts, opinions, and assumptions

10. Recognize aspects of a passage's style and structure and recognize literary techniques.

Grade 12 Indicators:

1. Understand stated information

2. Determine the literal meaning of specific words

3. Draw conclusions and make inferences and generalizations

4. Infer traits, feelings, and motives of characters or individuals

5. Make predictions based on stated information

6. Interpret nonliteral language used in a text

7. Determine the main idea, topic, or theme

8. Identify the author's views or purposes

9. Distinguish among facts, opinions, and assumptions

10. Recognize aspects of a passage's style and structure and recognize literary techniques.

Math Content Standards:

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A. Students can understand and apply a variety of math concepts.

B. Students can understand and apply methods of estimation.

C. Students can solve a variety of math problems.

D. Students can interpret data presented in a variety of ways.

Grade 3 Indicators:

A. Students can understand and apply a variety of math concepts.

1. Represent, compare, and order numbers
2. Describe and apply properties of numbers
3. Classify numbers by divisibility
4. Demonstrate ways of performing operations
5. Use place value; write numbers in standard, expanded, and exponential form
6. Use and interpret operational and relational symbols
7. Solve equations and inequalities
8. Use variable expressions to model situations
9. Explore numerical patterns
10. Identify, classify, and compare geometric figures
11. Describe geometric properties, patterns, and relationships
12. Apply the concepts of perimeter, area, and volume
13. Measure length/distance, time, temperature, weight, mass, and volume
14. Estimate measurements with appropriate precision
15. Identify and use appropriate units of measurement
16. Apply probability concepts and counting rules

17. Understand and apply measures of central tendency and variability

B. Students can understand and apply methods of estimation.

1. Use standard rounding to estimate

2. Use order of magnitude to estimate

3. Use number sense to estimate

C. Students can solve a variety of math problems.

1. Solve single-step and multiple-step math problems

2. Identify extraneous or insufficient information in problems

3. Choose a method for solving a problem

D. Students can interpret data presented in a variety of ways.

1. Read amounts on scales of bar and line graphs

2. Locate amounts in specific cells of a table

3. Compare quantities to determine ranks, sums, or differences and to find ratios

4. Use tables and graphs to determine rates or identify trends, understand underlying or functional relationships, and generalize or draw conclusions

Grade 4 Indicators:

A. Students can understand and apply a variety of math concepts.

1. Represent, compare, and order numbers

2. Describe and apply properties of numbers

3. Classify numbers by divisibility

4. Demonstrate ways of performing operations

5. Use place value; write numbers in standard, expanded, and exponential form

6. Use and interpret operational and relational symbols

7. Solve equations and inequalities

8. Use variable expressions to model situations

9. Explore numerical patterns

10. Identify, classify, and compare geometric figures

11. Describe geometric properties, patterns, and relationships

12. Apply the concepts of perimeter, area, and volume

13. Measure length/distance, time, temperature, weight, mass, and volume

14. Estimate measurements with appropriate precision

15. Identify and use appropriate units of measurement

16. Apply probability concepts and counting rules

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2. Describe and apply properties of numbers

3. Classify numbers by divisibility

4. Demonstrate ways of performing operations

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6. Use and interpret operational and relational symbols

7. Solve equations and inequalities

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A. Students can understand and apply a variety of math concepts.

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2. Describe and apply properties of numbers
3. Classify numbers by divisibility
4. Demonstrate ways of performing operations
5. Use place value; write numbers in standard, expanded, and exponential form
6. Use and interpret operational and relational symbols
7. Solve equations and inequalities
8. Use variable expressions to model situations
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Grade 7 Indicators:

A. Students can understand and apply a variety of math concepts.

1. Represent, compare, and order numbers

2. Describe and apply properties of numbers

3. Classify numbers by divisibility

4. Demonstrate ways of performing operations

5. Use place value; write numbers in standard, expanded, and exponential form

6. Use and interpret operational and relational symbols

7. Solve equations and inequalities

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Grade 8 Indicators:

A. Students can understand and apply a variety of math concepts.

1. Represent, compare, and order numbers

2. Describe and apply properties of numbers

3. Classify numbers by divisibility

4. Demonstrate ways of performing operations

5. Use place value; write numbers in standard, expanded, and exponential form

6. Use and interpret operational and relational symbols

7. Solve equations and inequalities

8. Use variable expressions to model situations

9. Explore numerical patterns

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3. Compare quantities to determine ranks, sums, or differences and to find ratios

4. Use tables and graphs to determine rates or identify trends, understand underlying or functional relationships, and generalize or draw conclusions

Grade 9 Indicators:

A. Students can understand and apply a variety of math concepts.

1. Understand and apply number properties and operations

2. Understand and apply concepts and procedures of algebra

3. Understand and apply concepts of geometry and measurement

4. Understand and apply concepts in probability and statistics

B. Students can understand and apply methods of estimation.

1. Understand and apply concepts and procedures of standard rounding, order of magnitude, and number sense

2. Evaluate reasonableness of solutions

C. Students can solve a variety of math problems.

1. Solve math problems requiring multiple steps and operations

2. Reason quantitatively

D. Students can interpret data presented in a variety of ways.

1. Make inferences based on data presented in a variety of ways

2. Interpret data from a variety of sources

Grade 10 Indicators:

A. Students can understand and apply a variety of math concepts.

1. Understand and apply number properties and operations

2. Understand and apply concepts and procedures of algebra

3. Understand and apply concepts of geometry and measurement

4. Understand and apply concepts in probability and statistics

B. Students can understand and apply methods of estimation.

1. Understand and apply concepts and procedures of standard rounding, order of magnitude, and number sense

2. Evaluate reasonableness of solutions

C. Students can solve a variety of math problems.

1. Solve math problems requiring multiple steps and operations

2. Reason quantitatively

D. Students can interpret data presented in a variety of ways.

1. Make inferences based on data presented in a variety of ways

2. Interpret data from a variety of sources

Grade 11 Indicators:

A. Students can understand and apply a variety of math concepts.

1. Understand and apply number properties and operations

2. Understand and apply concepts and procedures of algebra

3. Understand and apply concepts of geometry and measurement

4. Understand and apply concepts in probability and statistics

B. Students can understand and apply methods of estimation.

1. Understand and apply concepts and procedures of standard rounding, order of magnitude, and number sense

2. Evaluate reasonableness of solutions

C. Students can solve a variety of math problems.

1. Solve math problems requiring multiple steps and operations

2. Reason quantitatively

D. Students can interpret data presented in a variety of ways.

1. Make inferences based on data presented in a variety of ways

2. Interpret data from a variety of sources

Grade 12 Indicators:

A. Students can understand and apply a variety of math concepts.

1. Understand and apply number properties and operations

2. Understand and apply concepts and procedures of algebra

3. Understand and apply concepts of geometry and measurement

4. Understand and apply concepts in probability and statistics

B. Students can understand and apply methods of estimation.

1. Understand and apply concepts and procedures of standard rounding, order of magnitude, and number sense

2. Evaluate reasonableness of solutions

C. Students can solve a variety of math problems.

1. Solve math problems requiring multiple steps and operations

2. Reason quantitatively

D. Students can interpret data presented in a variety of ways.

1. Make inferences based on data presented in a variety of ways

2. Interpret data from a variety of sources

Science Content Standards:

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A. Students can understand and apply skills used in scientific inquiry.

B. Students can understand concepts and relationships in life science.

C. Students can understand concepts and relationships in Earth/space sciences.

D. Students can understand concepts and relationships in physical science.

Grade 3 Indicators:

A. Students can understand and apply skills used in scientific inquiry.

1. Understand and apply the processes and skills of investigation
2. Analyze and interpret information from scientific studies

B. Students can understand concepts and relationships in life science.

1. Understand the structures of living things
2. Describe and understand life cycles
3. Identify and explain the roles of environmental interactions and adaptations

C. Students can understand concepts and relationships in Earth/space sciences.

1. Describe and understand Earth's composition and structure
2. Identify and explain changes in and around Earth
3. Understand concepts and relationships of the universe

D. Students can understand concepts and relationships in physical science.

1. Describe and explain concepts related to mechanics, forces, and motion
2. Understand the concept of energy and its various forms

3. Identify and explain the properties and changes of matter

Grade 4 Indicators:

A. Students can understand and apply skills used in scientific inquiry.

1. Understand and apply the processes and skills of investigation
2. Analyze and interpret information from scientific studies

B. Students can understand concepts and relationships in life science.

1. Understand the structures of living things
2. Describe and understand life cycles
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C. Students can understand concepts and relationships in Earth/space sciences.

1. Describe and understand Earth's composition and structure
2. Identify and explain changes in and around Earth
3. Understand concepts and relationships of the universe

D. Students can understand concepts and relationships in physical science.

1. Describe and explain concepts related to mechanics, forces, and motion
2. Understand the concept of energy and its various forms
3. Identify and explain the properties and changes of matter

Grade 5 Indicators:

A. Students can understand and apply skills used in scientific inquiry.

1. Understand and apply the processes and skills of investigation
2. Analyze and interpret information from scientific studies

B. Students can understand concepts and relationships in life science.

1. Understand the structures of living things
2. Describe and understand life cycles
3. Identify and explain the roles of environmental interactions and adaptations

C. Students can understand concepts and relationships in Earth/space sciences.

1. Describe and understand Earth's composition and structure
2. Identify and explain changes in and around Earth
3. Understand concepts and relationships of the universe

D. Students can understand concepts and relationships in physical science.

1. Describe and explain concepts related to mechanics, forces, and motion
2. Understand the concept of energy and its various forms
3. Identify and explain the properties and changes of matter

<u>Grade 6 Indicators:</u>

A. Students can understand and apply skills used in scientific inquiry.

1. Understand and apply the processes and skills of investigation

2. Analyze and interpret information from scientific studies

B. Students can understand concepts and relationships in life science.

1. Understand the structures of living things
2. Describe and understand life cycles
3. Identify and explain the roles of environmental interactions and adaptations

C. Students can understand concepts and relationships in Earth/space sciences.

1. Describe and understand Earth's composition and structure
2. Identify and explain changes in and around Earth
3. Understand concepts and relationships of the universe

D. Students can understand concepts and relationships in physical science.

1. Describe and explain concepts related to mechanics, forces, and motion
2. Understand the concept of energy and its various forms
3. Identify and explain the properties and changes of matter

<u>Grade 7 Indicators:</u>

A. Students can understand and apply skills used in scientific inquiry.

1. Understand and apply the processes and skills of investigation
2. Analyze and interpret information from scientific studies

B. Students can understand concepts and relationships in life science.

1. Understand the structures of living things

2. Describe and understand life cycles

3. Identify and explain the roles of environmental interactions and adaptations

C. Students can understand concepts and relationships in Earth/space sciences.

1. Describe and understand Earth's composition and structure

2. Identify and explain changes in and around Earth

3. Understand concepts and relationships of the universe

D. Students can understand concepts and relationships in physical science.

1. Describe and explain concepts related to mechanics, forces, and motion

2. Understand the concept of energy and its various forms

3. Identify and explain the properties and changes of matter

<u>Grade 8 Indicators:</u>

A. Students can understand and apply skills used in scientific inquiry.

1. Understand and apply the processes and skills of investigation

2. Analyze and interpret information from scientific studies

B. Students can understand concepts and relationships in life science.

1. Understand the structures of living things

2. Describe and understand life cycles

3. Identify and explain the roles of environmental interactions and adaptations

C. Students can understand concepts and relationships in Earth/space sciences.

1. Describe and understand Earth's composition and structure
2. Identify and explain changes in and around Earth
3. Understand concepts and relationships of the universe

D. Students can understand concepts and relationships in physical science.

1. Describe and explain concepts related to mechanics, forces, and motion
2. Understand the concept of energy and its various forms
3. Identify and explain the properties and changes of matter

Grade 9 Indicators:

A. Students can understand and apply skills used in scientific inquiry.

1. Understand and apply the processes and skills of scientific inquiry
2. Analyze and interpret scientific information

B. Students can understand concepts and relationships in biological science.

1. Make inferences and predictions using fundamental biological concepts
2. Analyze biological investigations
3. Analyze and evaluate the adequacy and accuracy of biological information

C. Students can understand concepts and relationships in Earth/space sciences.

1. Make inferences and predictions using fundamental Earth/space concepts
2. Analyze Earth/space investigations

3. Analyze and evaluate the adequacy and accuracy of Earth/space information

D. Student can understand concepts and relationships in physical science.

1. Make inferences and predictions using fundamental physical science concepts
2. Analyze physical science investigations
3. Analyze and evaluate the adequacy and accuracy of physical science information

Grade 10 Indicators:

A. Students can understand and apply skills used in scientific inquiry.

1. Understand and apply the processes and skills of scientific inquiry
2. Analyze and interpret scientific information

B. Students can understand concepts and relationships in biological science.

1. Make inferences and predictions using fundamental biological concepts
2. Analyze biological investigations
3. Analyze and evaluate the adequacy and accuracy of biological information

C. Students can understand concepts and relationships in Earth/space sciences.

1. Make inferences and predictions using fundamental Earth/space concepts
2. Analyze Earth/space investigations

3. Analyze and evaluate the adequacy and accuracy of Earth/space information

D. Student can understand concepts and relationships in physical science.

1. Make inferences and predictions using fundamental physical science concepts
2. Analyze physical science investigations
3. Analyze and evaluate the adequacy and accuracy of physical science information

Grade 11 Indicators:

A. Students can understand and apply skills used in scientific inquiry.

1. Understand and apply the processes and skills of scientific inquiry
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1. Make inferences and predictions using fundamental biological concepts
2. Analyze biological investigations
3. Analyze and evaluate the adequacy and accuracy of biological information

C. Students can understand concepts and relationships in Earth/space sciences.

1. Make inferences and predictions using fundamental Earth/space concepts
2. Analyze Earth/space investigations

3. Analyze and evaluate the adequacy and accuracy of Earth/space information

D. Student can understand concepts and relationships in physical science.

1. Make inferences and predictions using fundamental physical science concepts
2. Analyze physical science investigations
3. Analyze and evaluate the adequacy and accuracy of physical science information

Grade 12 Indicators:

A. Students can understand and apply skills used in scientific inquiry.

1. Understand and apply the processes and skills of scientific inquiry
2. Analyze and interpret scientific information

B. Students can understand concepts and relationships in biological science.

1. Make inferences and predictions using fundamental biological concepts
2. Analyze biological investigations
3. Analyze and evaluate the adequacy and accuracy of biological information

C. Students can understand concepts and relationships in Earth/space sciences.

1. Make inferences and predictions using fundamental Earth/space concepts
2. Analyze Earth/space investigations

3. Analyze and evaluate the adequacy and accuracy of Earth/space information

D. Student can understand concepts and relationships in physical science.

1. Make inferences and predictions using fundamental physical science concepts
2. Analyze physical science investigations
3. Analyze and evaluate the adequacy and accuracy of physical science information