

Introducing the New Iowa Assessments Science Levels 15-17/18



ITP Assessment Tools

Math Interim Assessments: Grades 3 – 8

- Administered online

Constructed Response Supplements

- Reading, Language Arts, Mathematics at Levels 9 – 17/18
- Available free of charge in fall 2011

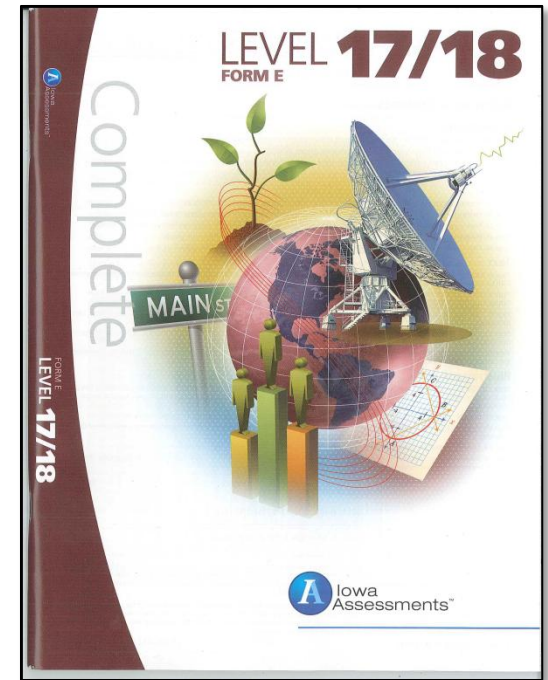
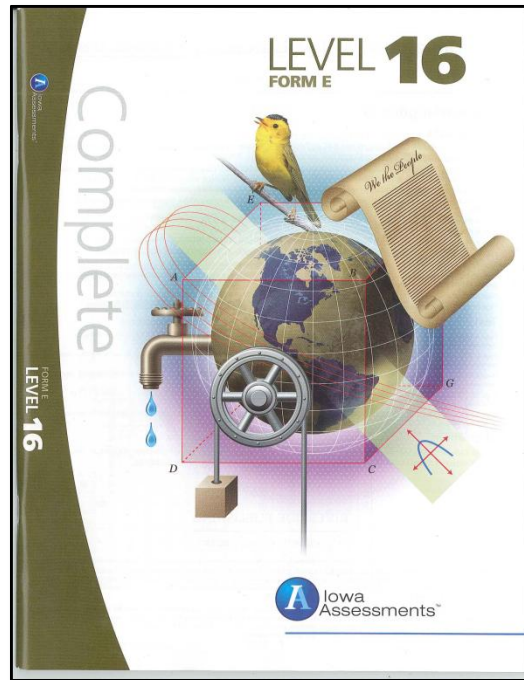
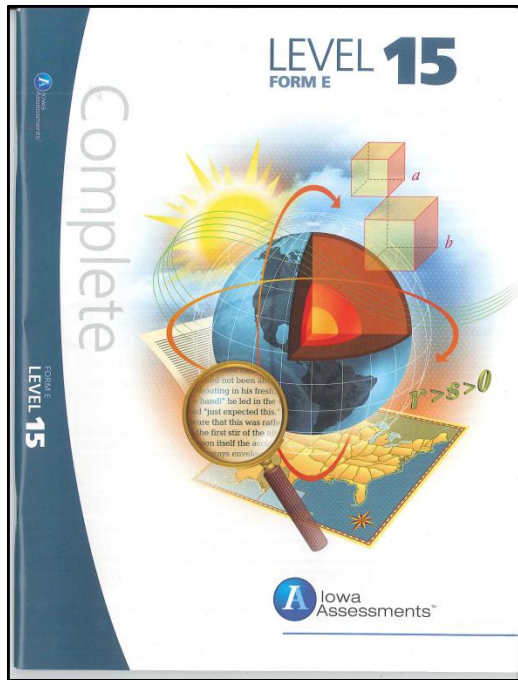
Iowa Algebra Readiness Assessment (IARA)

- Administered online

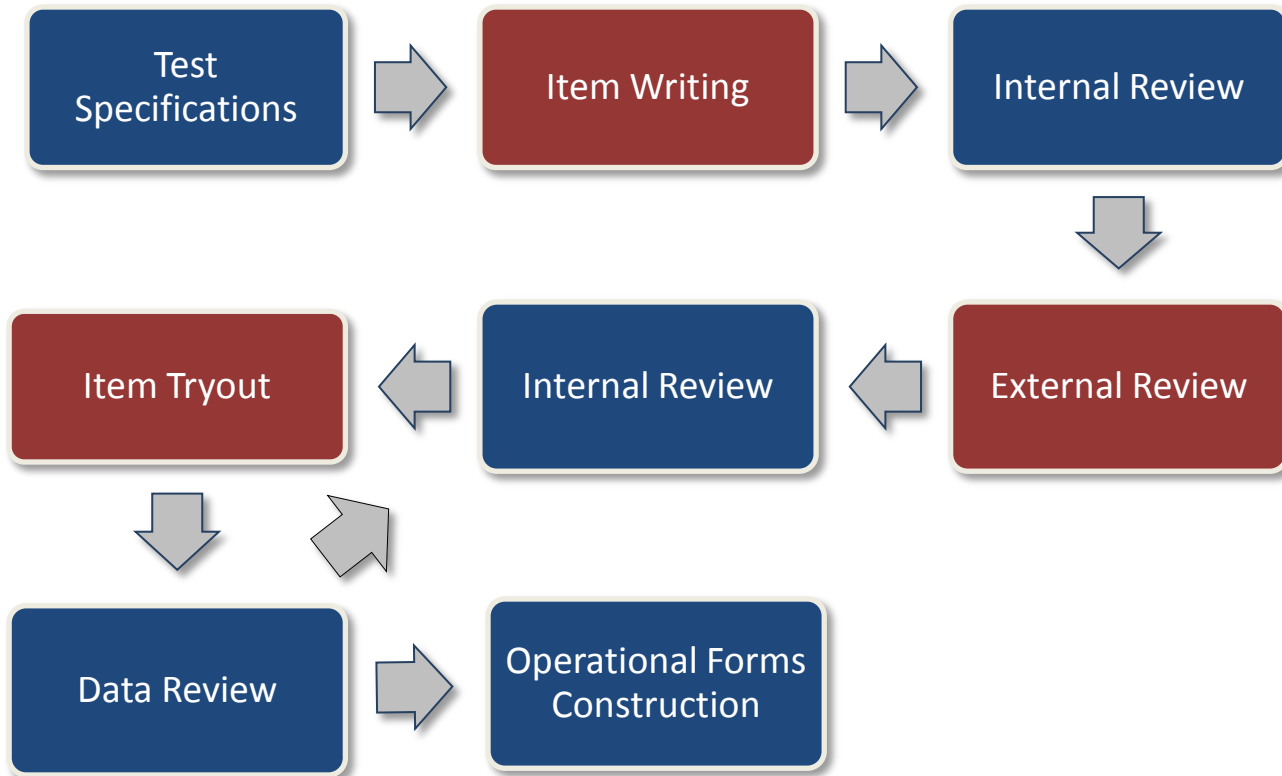
Iowa End of Course Assessments (IEOC)

- Administered online
- Algebra I, Algebra II, Geometry, Matrix Algebra, Probability & Statistics, English Language Arts, Physical Science, Biology, Chemistry, U.S. History, U.S. Government

The Iowa Assessments™



Test Development



New Iowa Assessments™

- New forms
- New items
- Items written and reviewed by Iowa educators
- Items field tested on Iowa students
- Items align to the Iowa Core

<http://www.corecurriculum.iowa.gov/>

Major Changes from Current Forms

All Levels

- New order of tests within the booklet
- Adjusted number of items and administration times
- New page layouts in full color

Levels 15 – 17/18

- Spelling and Sources of Information tests have been dropped

Administration Times: Levels 15 – 17/18

Subject Area	Administration Time
Reading	40
Written Expression	40
Mathematics	40
Science	40
Social Studies	40
Vocabulary	15
Computation	20

Science: Levels 15 – 17/18

- Includes both stimulus-based (e.g., descriptions of experiments, diagrams, charts, tables, and graphs) and discrete items
- Material is drawn from the areas of life science, earth & space science, and physical science
- Scientific inquiry embedded throughout the test

Science Domains & Standards

Life Science

- Organisms & their habitats
- Changes in organisms
- Interactions in an ecosystem
- Human body, health, & safety

Earth & Space Science

- Structure of Earth
- Natural resources
- Climate & weather
- Natural events
- The universe

Physical Science

- Types & properties of matter
- Forces & motion
- Forms of & changes in energy
- Physical & chemical changes
- Scientific measurement

Scientific inquiry is embedded throughout the assessment

Science: Number of Items by Domains and Cognitive Levels

Domain	Level 15 Total Items	Level 16 Total Items	Level 17/18 Total Items
Life	21	19	20
Earth & Space	9	11	12
Physical	18	18	16
Total	48	48	48

Cognitive Levels of Items Above	Level 15 Total Items	Level 16 Total Items	Level 17/18 Total Items
Essential Competencies	6	6	8
Conceptual Understanding	28	26	22
Extended Reasoning	14	16	18

Cognitive Level—Essential Competencies

- Identify scientific information such as facts, definitions, terminology, basic principles, and relationships
- Recognize fundamental components of the scientific process

Cognitive Level—Conceptual Understanding

- Understand scientific concepts and apply them to explain phenomena
- Analyze, interpret, and present data
- Make inferences and predictions

Cognitive Level—Extended Reasoning

- Propose solutions to scientific problems
- Evaluate the appropriateness of scientific findings, conclusions, and experimental design
- Integrate ideas from various scientific disciplines and phenomena



Directions Questions 1 and 2 are based on the information below.

Students in a biology class performed an experiment to study the digestion of starch by amylase. Amylase is an enzyme found in saliva that breaks down starch into sugar. The students added the ingredients shown in the table below to five test tubes, incubated the tubes (maintained at constant conditions), and then added iodine to test for the presence of starch. Iodine turns black in the presence of starch and stays brown when starch is absent. The students' results are shown in the table below.

Tube	Saliva Volume (mL)	Starch Suspension (mL)	Distilled Water (mL)	Incubation Temperature (°C)	Incubation Time (minutes)	Color after Adding Iodine
1	5	5	0	25	15	black
2	5	5	0	25	30	black
3	5	5	0	37	30	brown
4	5	0	5	37	30	brown
5	0	5	5	37	30	black

- 1** To determine whether incubation temperature influences the digestion of starch, which of the tubes should be compared?
- A Tubes 1 and 2
 - B Tubes 1 and 5
 - C Tubes 2 and 3
 - D Tubes 4 and 5



Life—Human body—Extended reasoning

CORE: Life—Functions & chemical reactions—Think logically to make the relationships between evidence and explanations

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5	0	5	5	37	30	black

2 Do the data support the hypothesis that saliva helps the digestion of starch?

J Yes, because Tube 1 appeared black and Tube 3 appeared brown.

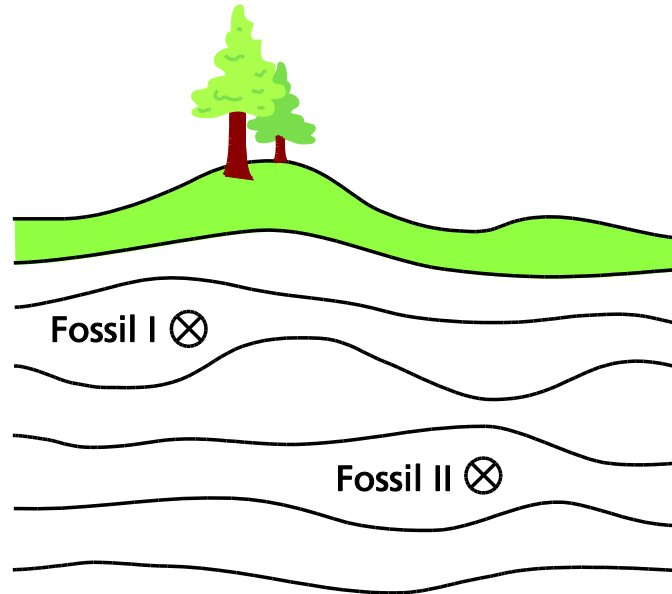
K Yes, because Tube 3 appeared brown and Tube 5 appeared black.

L No, because both Tubes 1 and 2 appeared black.

M No, because both Tubes 3 and 4 appeared brown.



- 3 Two fossils were found in different layers of rock as shown in the diagram below:



Which of the following statements is most likely to be true?

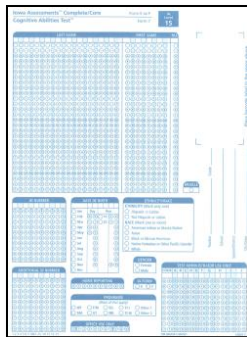
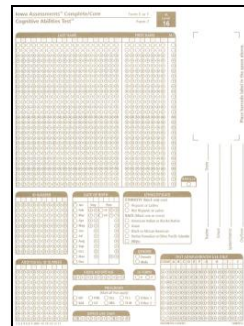
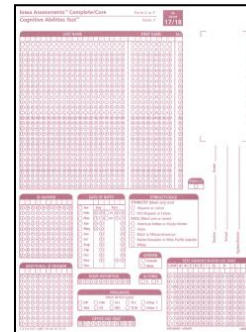
- A Fossil II is heavier than Fossil I.
- B Fossil I is heavier than Fossil II.
- C Fossil II is older than Fossil I.
- D Fossil I is older than Fossil II.



- 4** If an object is moving in an artificial environment where no forces whatsoever are acting on the object, which of the following would be observed?
- J** The object would continue to move at the same speed in the same direction.
 - K** The object would continue to move at the same speed, but would change directions.
 - L** The object would speed up, but continue to move in the same direction.
 - M** The object would slow down, but continue to move in the same direction.

Answer Folder Changes

- Colors are being used to help teachers more easily verify that the correct form is being used.
- The optional section for Tryout Items is now located in the interior of the answer folders. Use the adjacent “Other Information” box to grid in the Tryout Form number.

A blue-themed answer folder form with a large grid for marking answers. It includes sections for 'Other Information' and 'Tryout Items'.A gold-themed answer folder form with a large grid for marking answers. It includes sections for 'Other Information' and 'Tryout Items'.A red-themed answer folder form with a large grid for marking answers. It includes sections for 'Other Information' and 'Tryout Items'.



Calculator Use

- Calculators are **NOT ALLOWED** on the science test.
- Calculators may be used on the mathematics test.



Scratch paper

- Each student should have a supply of scratch paper for all testing sessions.
- Collect all scratch paper after each session.
- Destroy all used scratch paper.

Security

- Test booklets are **SECURE** materials.
- **No** booklets are to be retained at the district or school level.



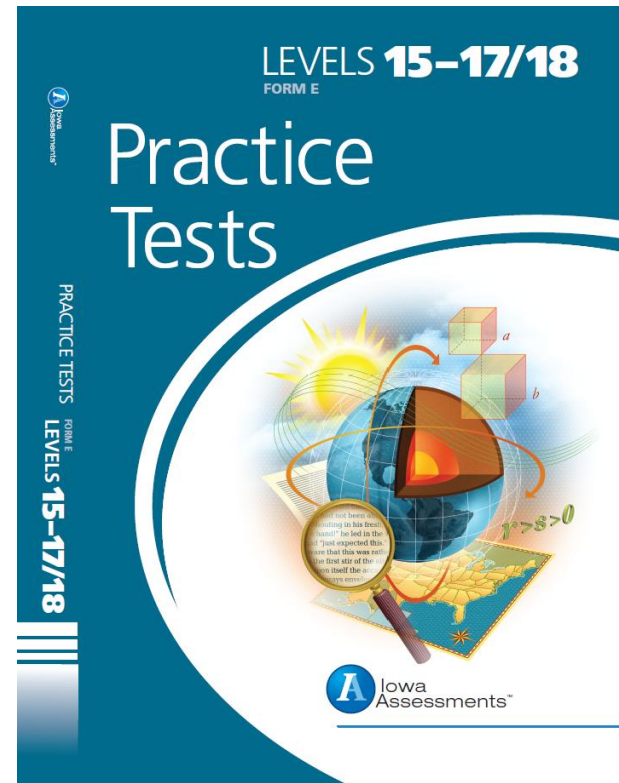
Security

For security reasons, tests may be viewed on only two occasions:

1. When students are taking an assessment
 - Order only enough materials to test your students.
2. When educators are reviewing Item Analysis Reports (Item Response Record)
 - Contact ITP for review copies.

Content Included on Level 15 – 17/18 Practice Tests

- Reading
- Written Expression
- Mathematics
- Science
- Social Studies
- Vocabulary
- Computation



Details

- Presentation will be available on the Iowa Testing Programs website at <http://itp.education.uiowa.edu>.
 - Contact your testing coordinator if you need assistance accessing materials.
- A Frequently-Asked-Questions (FAQ) is posted on our website and will be updated frequently.
- Contact iowa-testing-programs@uiowa.edu with any additional questions.