



IMI has a long-standing corporate commitment to helping educate students. Not only does our industry depend upon the education of the next generation, but so does our society as a whole. For that reason, we have created these web pages to help educators teach children in the states where we operate.

## **How to use this web site with your students**

1. Find your state standards on the following pages.
2. Note that the specific standard is underlined for each grade level.
3. Instruct your students to our web site: [www.irvmat.com](http://www.irvmat.com) and click on the IMI Classroom link.
4. Choose the Language Arts tab and click “Mystery in the Bog.” After watching a short animated video, prompt your students to choose their appropriate grade level. They will be given a series of clues to read. After that, they will be prompted to write a story to solve the mystery as a Mastodon Detective. You may print these for student instructional use.

## **Additional classroom project**

If you would like to extend this project into a hands-on science experience for your class, here are some ideas to recreate a fossil dig.

1. In a box, mix sand with common organic items found in your area (leaves, seeds, twigs, stones, egg shells, etc.) If you live near a river or creek, many of these items can be found along the shoreline.
2. Add bones to the mix (dried fish or chicken bones work well.) Break the bones apart and scatter them in the box.
3. With a paint brush, have students move the sand away to find items in the box. Instruct them to be gentle with items that may tear or break. (You may want to use toothpicks and cotton swabs.)
4. Have the students label each piece and sort like pieces together.
5. Draw some conclusions about the dig site. For instance, rocks are an indicator of the environment over time. If water is moving, like a river, rocks become rounded. If water is standing, as in a swamp, rocks are angular. The type of leaves are also an indicator of the climate. Fir trees grow in cold climates. The presence of pine cones helped scientist determine the environment was cold at the Kewanna site referenced in the “Mystery in the Bog.” Ask the students to decide what kind of animal they have found based on the bones and environmental clues. Have fun with it!



## **Project Points**

Note that there is a Project Point icon at the end of the page. Project points are additional resources, science experiments and facts that you may find useful in extending your students' learning experience.

Our language arts page is designed to be interactive and engaging, as students solve the mystery of the mastodon. We would welcome your response to our site. Feel free to contact us by e-mail at [info@irvmat.com](mailto:info@irvmat.com).

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# Language Arts Standards

## Illinois

Grade 4, 5, 6 – Stage E

**3B** – Students who meet the standard can compose well-organized and coherent writing for the specific purposes and audiences.

1. Use prewriting strategies to choose a topic and generate ideas (e.g., webbing, brainstorming, listing, note taking, outlining, drafting, graphic organizers).
2. Establish and maintain a focus.
3. Develop a topic sentence that is supported with details.
4. Organize a coherent structure appropriate to purpose (i.e., narration, exposition, persuasion), audience, and context using paragraphs and transition words.
5. Use appropriate transition words to connect ideas.
6. Elaborate ideas through facts, details, description, reasons, narration.
7. Use adjectives, adverbs, and prepositional phrases to enrich written language.
8. Revise and edit (e.g., conference with self, peer, volunteer, teacher).

**3C** - Students who meet the standard can communicate ideas in writing to accomplish a variety of purposes.

1. Use appropriate language, detail, and format for a specified audience.
2. Use the characteristics of a well-developed narrative, expository, and persuasive piece.
3. Write creatively for a specified purpose and audience (e.g., short story, poetry, directions, song, friendly letter).
4. Use available technology to design, produce, and present compositions and multimedia works.
5. Compose a multi-paragraph piece which presents one position of an issue that offers sufficient support.

Grades 5,6, 7 - Stage F

**3A** - Students who meet the standard can use correct grammar, spelling, punctuation, capitalization and structure.

1. Develop multi-paragraph compositions that include an introduction, first and second level support, and a conclusion.
2. Use a variety of sentence structures (e.g., simple, compound/complex) and sentence types (i.e., declarative, interrogative, exclamatory, imperative).
3. Use basic transition words/phrases to connect ideas.
4. Proofread for correct English conventions.
5. Demonstrate appropriate use of the eight parts of speech.

**3B** - Students who meet the standard can compose well-organized and coherent writing for specific purposes and audiences.

1. Use pre-writing strategies (e.g., webbing, brainstorming, listing, note taking, outlining, graphic organizers).

2. Analyze basic audience and purpose for writing and choose the appropriate form (e.g., letters, poems, reports, narratives).
3. Establish and maintain focus/organization within and across paragraphs (coherence/cohesion).
4. Use organizational patterns (e.g., sequence, cause/effect, comparison).
5. Write using organization (e.g. introduction, body, conclusion) and elaboration (second level support) that demonstrate coherence.
6. Use figurative language.
7. Use appropriate transitional words and phrases to connect and unify key ideas.
8. Edit and revise content.
9. Select effective formats for publication.
10. Use available technology (e.g., word processing, desktop publishing, electronic dictionary/glossary, printing).

**3C** - Students who meet the standard can communicate ideas in writing to accomplish a variety of purposes.

1. Use appropriate language, details, and format for a specified audience (e.g., gender, age, prior knowledge, interest).
2. Compose writing that supports a topic or thesis statement with evidence (e.g., newspaper article, pamphlet, report, brochure, manual, business letter).
3. Write a multi-paragraph narrative account (e.g., friendly letter, journal, autobiography, biographical account, memoir) that establishes a context, creates a point of view, and develops a focused impression.
4. Develop a multi-paragraph piece of persuasive writing.
5. Write creatively for a specified purpose and audience (e.g. short story, poetry, radio scripts, directions, TV commercial).
6. Compose a multi-paragraph persuasive piece which presents one position of an issue that offers sufficient support through multiple strategies (e.g., cause/effect, compare/contrast).
7. Use available technology (e.g., web pages, presentations, speeches) to design

Grade 6, 7, 8 -- Stage G

**3A** - Students who meet the standard can use correct grammar, spelling, punctuation, capitalization and structure.

1. Develop compositions that include a variety of sentence structures (i.e., simple, compound, complex, compound/complex) and sentence types (i.e., interrogative, exclamatory, imperative, declarative).
2. Use transitional words and phrases within and between paragraphs.
3. Proofread for correct English conventions.
4. Demonstrate appropriate use of the eight parts of speech.

**3B** - Students who meet the standard can compose well-organized and coherent writing for specific purposes and audiences.

1. Use pre-writing strategies.

2. Analyze audience and purpose for writing, and choose the appropriate form (e.g., letters, editorials, reviews, poems, reports, narratives).
3. Begin to establish a personal voice and style.
4. Use an effective and coherent organizational pattern (e.g., sequence, cause/effect, comparison).
5. Write using organization (i.e., introduction, body, conclusion) and elaboration (second level support) that demonstrate coherence.
6. Use figurative language.
7. Use appropriate internal (within paragraphs) and external (between/among paragraphs) transitional words, phrases, and devices.
8. Edit and revise to maintain a consistent tone and focus throughout a piece of writing.
9. Select effective formats for publication of final product.
10. Use available technology (e.g., word processing, desktop publishing, electronic dictionary/ glossary, printing).

**3C** - Students who meet the standard can communicate ideas in writing to accomplish a variety of purposes.

1. Compose expository writing that supports a topic or thesis statement with evidence (e.g., newspaper article, pamphlet, report, brochure, manual, business letter).
2. Write an expanded narrative account (e.g., friendly letter, journal, autobiography, biographical account, memoir) that establishes a context, creates a point of view, and develops a focused impression.
3. Develop a multi-paragraph piece of persuasive writing.
4. Use appropriate language, details, and format for a specified audience (e.g., gender, age, prior knowledge, interest).
5. Write creatively for a specified purpose and audience (e.g. short story, poetry, radio scripts, play, TV commercial).
6. Compose a multi-paragraph persuasive piece which presents one position of an issue that offers sufficient support through multiple strategies (e.g., cause/effect, compare/contrast).
7. Use available technology (e.g., web pages, presentations, speeches) to design, produce, and present compositions and multi-media works.

# Language Arts Standards

## Indiana

### Grade 4

#### Language Arts

4.4.3 Write informational pieces with multiple paragraphs that:

- provide an introductory paragraph.
- establish and support a central idea with a topic sentence at or near the beginning of the first paragraph.
- include supporting paragraphs with simple facts, details, and explanations.
- present important ideas or events in sequence or in chronological order.
- provide details and transitions to link paragraphs.
- conclude with a paragraph that summarizes the points.
- use correct indentation at the beginning of paragraphs.

4.4.7 Use multiple reference materials and online information (the Internet) as aids to writing.

4.4.9 Use a computer to draft, revise, and publish writing, demonstrating basic keyboarding skills and familiarity with common computer terminology.

4.5.6. Write for different purposes (information, persuasion, description) and to a specific audience or person.

### Grade 5

#### Language Arts

5.4.2 Write stories with multiple paragraphs that develop a situation or plot, describe the setting, and include an ending.

5.4.3 Write informational pieces with multiple paragraphs that:

- present important ideas or events in sequence or in chronological order.*
- provide details and transitions to link paragraphs.*
- offer a concluding paragraph that summarizes important ideas and details.*

# Language Arts Standards

## Kentucky

Grade 4

English Language Arts: Technology as Communication

<p><b><u>ELA TECH 4 72</u></b> <b><u>Academic Expectations</u></b> 1.16 Students <u>use computers and other kinds of technology to collect, organize, and communicate information and ideas.</u></p>	<p><b><u>Program of Studies</u></b> ELA-4-T-1 Students will <u>use technology to access ideas and information.</u></p>
<p>ELA TECH 4 73 <b><u>Academic Expectations</u></b> 1.16 Students <u>use computers and other kinds of technology to collect, organize, and communicate information and ideas.</u></p>	<p><b><u>Program of Studies</u></b> ELA-4-T-2 Students will <u>explore technology as a means of communication.</u></p>

English Language Arts: Inquiry

<p><b><u>ELA Inquiry 4 4</u></b> <b><u>Academic Expectations</u></b> 1.1 Students <u>use reference tools such as dictionaries, almanacs, encyclopedias, and computer reference programs and research tools.</u></p>	<p><b><u>Program of Studies</u></b> ELA-4-I-1 Students will <u>identify information and resources needed to address student-developed questions.</u></p>
<p><b><u>ELA Inquiry 4 5</u></b> <b><u>Academic Expectations</u></b> 1.1 Students <u>use reference tools such as dictionaries, almanacs, encyclopedias, and computer reference programs and research tools.</u></p>	<p><b><u>Program of Studies</u></b> ELA-4-I-2 Students will <u>take notes from research.</u></p>
<p><b><u>ELA Inquiry 4 6</u></b> <b><u>Academic Expectations</u></b> 1.1 Students <u>use reference tools such as dictionaries, almanacs, encyclopedias, and computer reference programs and research tools.</u></p>	<p><b><u>Program of Studies</u></b> ELA-4-I-3 Students will <u>use technology as a research tool to explore and gather ideas and information for authentic tasks.</u></p>

## Writing

<p><b><u>ELA- Writing - 4 31</u></b> <b><u>Academic Expectations</u></b></p> <p><b>1.1</b> Students use reference tools such as dictionaries, almanacs, encyclopedias, and computer reference programs and research tools such as interviews and surveys to find the information they need to meet specific demands, explore interests, or solve specific problems.</p> <p><b>1.11</b> Students write using appropriate forms, conventions, and styles to communicate ideas and information to different audiences for different purposes.</p> <p><b>5.1</b> Students use critical thinking skills such as analyzing, prioritizing, categorizing, evaluating, and comparing to solve a variety of problems in real-life situations.</p>	<p><b><u>Program of Studies</u></b></p> <p>ELA-4-W-2 Students will <u>use information from technology and other resources to produce writing that develops and supports independent ideas</u> (additional supporting Academic Expectation 5.1).</p>	<p><b><u>Core Content</u></b></p> <p><b>WR-E-1 WRITING CRITERIA (Assessed in all types of writing)</b></p> <p><b>Purpose/Audience</b> The writer establishes and maintains a focused purpose to communicate with an audience by narrowing the topic to establish a focus, analyzing and addressing the needs of the intended audience, adhering to the characteristics (e.g., format, organization) of the form, employing a suitable tone and allowing voice to emerge when appropriate</p> <p><b>Idea Development</b> The writer develops and supports main ideas and deepens the audience's understanding by using logical, justified, and suitable explanation, relevant elaboration, related connections and reflections, idea development strategies (e.g., bulleted lists, definitions) appropriate for the form</p> <p><b>Organization</b> The writer creates unity and coherence to accomplish the focused purpose by engaging the audience and establishing a context for reading. placing ideas and support in a meaningful order, guiding the reader through the piece with transitions and transitional elements and providing effective closure</p> <p><b>Sentences</b> The writer creates effective sentences that are varied in structure and length, complete and correct</p> <p><b>Language</b> The writer demonstrates effective word choice, strong verbs and nouns, concrete and/or sensory details, language appropriate to the content, purpose, and audience, concise use of language, correct usage/grammar</p> <p><b>Correctness</b> The writer demonstrates; correct spelling, correct punctuation, correct capitalization, appropriate documentation (e.g., citing authors or titles within the text, listing sources) of ideas and information from outside sources</p>
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Grade 5

English Language Arts: Technology as Communication

<p><b><u>ELA TECH 5 74</u></b>  <b><u>Academic Expectations</u></b>  <b>1.16</b> Students use computers and other kinds of technology to collect, organize, and communicate information and ideas.</p>	<p><b><u>Program of Studies</u></b>  <b>ELA-5-T-1</b> Students will use technology to access ideas and information.</p>
<p><b><u>ELA TECH 5 75</u></b>  <b><u>Academic Expectations</u></b>  <b>1.16</b> Students use computers and other kinds of technology to collect, organize, and communicate information and ideas.</p>	<p><b><u>Program of Studies</u></b>  <b>ELA-5-T-2</b> Students will explore technology as a means of communications.</p>

English Language Arts: Inquiry

<p><b><u>ELA Inquiry 5 7</u></b>  <b><u>Academic Expectations</u></b>  <b>1.1</b> Students use reference tools such as dictionaries, almanacs, encyclopedias, and computer reference programs and research tools.</p>	<p><b><u>Program of Studies</u></b>  <b>ELA-5-I-1</b> Students will develop questions to obtain ideas and information for authentic tasks.</p>
<p><b><u>ELA Inquiry 5 8</u></b>  <b><u>Academic Expectations</u></b>  <b>1.1</b> Students use reference tools such as dictionaries, almanacs, encyclopedias, and computer reference programs and research tools.</p>	<p><b><u>Program of Studies</u></b>  <b>ELA-5-I-2</b> Students will identify types of resources for a variety of tasks and select resources appropriate for specific tasks (additional supporting Academic Expectation 5.4).</p>
<p><b><u>ELA Inquiry 5 9</u></b>  <b><u>Academic Expectations</u></b>  <b>1.1</b> Students use reference tools such as dictionaries, almanacs, encyclopedias, and computer reference programs and research tools.</p>	<p><b><u>Program of Studies</u></b>  <b>ELA-5-I-3</b> Students will explore research tools to gather ideas and information for a variety of authentic tasks.</p>

Writing

<p><b><u>ELA- Writing –5 37</u></b> <b><u>Academic Expectations</u></b> <b>1.1</b> Students use reference tools such as dictionaries, almanacs, encyclopedias, and <u>computer reference programs and research tools</u> such as interviews and surveys to find the information they need to meet specific demands, explore interests, or solve specific problems. <b>1.11</b> Students write using appropriate forms, conventions, and styles to communicate ideas and information to different audiences for different purposes. <b>5.1</b> Students use critical thinking skills such as analyzing, prioritizing, categorizing, evaluating, and comparing to solve a variety of problems in real-life situations.</p>	<p><b><u>Core Content</u></b> <b>WR-M-1 WRITING CRITERIA (Assessed in all types of writing)</b> <b>Purpose/Audience</b> The writer establishes and maintains a focused purpose to communicate with an audience by narrowing the topic to establish a focus, analyzing and addressing the needs of the intended audience, adhering to the characteristics (e.g., format, organization) of the form, employing a suitable tone, allowing voice to emerge when appropriate. <b>Idea Development</b> The writer develops and supports main ideas and deepens the audience's understanding by using logical, justified, and suitable explanation, relevant elaboration, related connections and reflections, idea development strategies (e.g., bulleted lists, anecdotes, examples, graphics) appropriate for the form. <b>Organization</b> The writer creates unity and coherence to accomplish the focused purpose by engaging the audience and establishing a context for reading, placing ideas and support in a meaningful order, guiding the reader through the piece with transitions and transitional elements, providing effective closure. <b>Sentences</b> The writer creates effective sentences that are varied in structure and length, complete and correct. <b>Language</b> The writer demonstrates effective word choice (strong verbs and nouns – concrete and/or sensory details – language appropriate to the content, purpose, and intended audience), concise use of language, correct usage/grammar. <b>Correctness</b> The writer demonstrates correct spelling, correct punctuation, correct capitalization, appropriate documentation (e.g., citing authors or titles within the text, listing sources) of ideas and information from outside sources.</p>	<p><b><u>Program of Studies</u></b> <b>ELA-5-W-2</b> Students will use <u>information from technology and other resources to produce writing that develops and supports independent ideas</u> and contains source citations (additional supporting Academic Expectation 5.1).</p>
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Grade 6  
 English Language Arts: Technology as Communication

<p><b><u>ELA TECH 6 76</u></b>  <b><u>Academic Expectations</u></b>  <b>1.16</b> Students <u>use computers and other kinds of technology to collect, organize, and communicate information and ideas.</u></p>	<p><b><u>Program of Studies</u></b>  <b>ELA-6-T-1</b> Students will <u>use technology to access ideas and information</u> for authentic tasks.</p>
<p><b><u>ELA TECH 6 77</u></b>  <b><u>Academic Expectations</u></b>  <b>1.16</b> Students <u>use computers and other kinds of technology to collect, organize, and communicate information and ideas.</u></p>	<p><b><u>Program of Studies</u></b>  <b>ELA-6-T-2</b> Students will explore <u>technology as a means of communication.</u></p>

English Language Arts: Inquiry

<p><b><u>ELA Inquiry 6 11</u></b>  <b><u>Academic Expectations</u></b>  <b>1.1</b> Students <u>use reference tools such as dictionaries, almanacs, encyclopedias, and computer reference programs and research tools.</u></p>	<p><b><u>Program of Studies</u></b>  <b>ELA-6-I-1</b> Students will <u>develop questions to obtain ideas and information</u> for authentic tasks (additional supporting Academic Expectation 6.3).</p>
<p><b><u>ELA Inquiry 6 12</u></b>  <b><u>Academic Expectations</u></b>  <b>1.1</b> Students <u>use reference tools such as dictionaries, almanacs, encyclopedias, and computer reference programs and research tools.</u></p>	<p><b><u>Program of Studies</u></b>  <b>ELA-6-I-2</b> Students will <u>identify different types of resources to accomplish a variety of tasks.</u></p>
<p><b><u>ELA Inquiry 6 13</u></b>  <b><u>Academic Expectations</u></b>  <b>1.1</b> Students <u>use reference tools such as dictionaries, almanacs, encyclopedias, and computer reference programs and research tools.</u></p>	<p><b><u>Program of Studies</u></b>  <b>ELA-6-I-3</b> Students will explore and <u>use research tools to gather information and ideas</u> for authentic tasks.</p>

# Language Arts Standards

## **Ohio**

Grades 3-4

Writing Process Standard

- A. Determine audience and purpose for self-selected and assigned writing tasks.
- D. Spend the necessary amount of time to revisit, rework and refine pieces of writing.
- E. Use revision strategies to improve the coherence of ideas, clarity of sentence structure and effectiveness of word choices.

Grades 5-8

Writing Process Standard

- B. Determine audience and purpose for self-selected and assigned writing tasks.
- C. Use revision strategies to improve the overall organization, the clarity and consistency of ideas within and among paragraphs and the logic and effectiveness of word choices.

Grades 3-4

Writing Applications Standard

- A. Write narrative accounts that develop character, setting and plot.

Grades 5-8

Writing Applications Standard

- E. Use persuasive strategies, including establishing a clear position in support of a proposition or a proposal with organized and relevant evidence.

# Language Arts Standards

## **Tennessee**

### Grade 4

#### Writing

- 2.07 Write narrative accounts.
- 2.08 Write frequently across all content areas.
- 2.09 Write expressively using original ideas, reflections, and observations.

### Grade 5

#### Writing

- 2.07 Write narrative accounts.
- 2.08 Write frequently across all content areas.
- 2.09 Write expressively using original ideas, reflections, and observations.