

ARKANSAS ALIGNMENT FOR NIH SUPPLEMENT THE SCIENCE OF MENTAL ILLNESS

THE SCIENCE OF MENTAL ILLNESS		
Arkansas Science Standards: Grades 6 – 8		
Grade 6		
Lesson	Standard	Descriptor
1, 2, 3, 4, 5	NS.1.6.1	Verify accuracy of observations.
4	NS.1.6.2	Apply components of <i>experimental design</i> used to produce <i>empirical evidence</i> : <ul style="list-style-type: none"> <li>• <i>hypothesis</i></li> <li>• replication</li> <li>• sample size</li> <li>• appropriate use of <i>control</i></li> <li>• use of standardized <i>variables</i></li> </ul>
3	NS.1.6.4	Construct and interpret scientific data using <ul style="list-style-type: none"> <li>• data tables/charts</li> <li>• bar and double bar graphs</li> <li>• line graphs</li> <li>• <i>stem and leaf plots</i></li> <li>• line graphs</li> </ul>
2, 3, 4	NS.1.6.5	Communicate results and conclusions from scientific inquiry.
All lessons	NS.1.6.7	Distinguish between scientific fact and opinion.
4	NS.1.6.8	Explain the role of prediction in the development of a theory.
2	LS.3.6.6	Differentiate between <i>innate behaviors</i> : <ul style="list-style-type: none"> <li>• <i>migration</i></li> <li>• web spinning</li> <li>• defensive posture</li> <li>• <i>communication</i></li> <li>• <i>imprinting</i></li> </ul> and <i>learned behaviors</i> : <ul style="list-style-type: none"> <li>• speaking a language</li> <li>• using tools</li> <li>• hunting skills</li> </ul>
Grade 7		
Lesson	Standard	Descriptor
1, 2, 3, 4, 5	NS.1.7.1	Interpret <i>evidence</i> based on observations.

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4	NS.1.7.2	Analyze components of <i>experimental design</i> used to produce <i>empirical evidence</i> : <ul style="list-style-type: none"> <li>• <i>hypothesis</i></li> <li>• replication</li> <li>• sample size</li> <li>• appropriate use of <i>control</i></li> <li>• use of standardized <i>variables</i></li> </ul>
3	NS.1.7.4	Construct and interpret scientific data using <ul style="list-style-type: none"> <li>• histograms</li> <li>• circle graphs</li> <li>• <i>scatter plots</i></li> <li>• double line graphs</li> <li>• line graphs by</li> <li>• approximating line of best fit</li> </ul>
2, 3, 4	NS.1.7.5	Communicate results and conclusions from scientific inquiry.
2, 3, 4, 5	NS.1.7.7	Distinguish between questions that can and cannot be answered by science.
4	NS.1.7.8	Explain the role of testability and modification in the development of a theory.
2	LS.2.7.3	Identify <i>organ systems</i> in <i>vertebrates</i> .
2	LS.2.7.6	Identify human body systems: nervous, digestive, circulatory, respiratory, excretory, integumentary, skeletal/muscular, endocrine, and reproductive.
2	LS.2.7.9	Describe interactions between major <i>organ systems</i> .
<b>Grade 8</b>		
<b>Lesson</b>	<b>Standard</b>	<b>Descriptor</b>
1, 2, 3, 4, 5	NS.1.8.1	Justify conclusions based on appropriate and unbiased observations.
4	NS.1.8.2	Evaluate the merits of <i>empirical evidence</i> based on <i>experimental design</i> : <ul style="list-style-type: none"> <li>• <i>hypothesis</i></li> <li>• replication</li> <li>• sample size</li> <li>• appropriate use of <i>control</i></li> <li>• use of standardized <i>independent</i> and <i>dependent variables</i></li> </ul>
4	NS.1.8.5	Suggest <i>solutions</i> to real world problems by analyzing scientific data in <ul style="list-style-type: none"> <li>• data tables/charts</li> <li>• histograms</li> <li>• circle graphs</li> <li>• <i>scatter plots</i></li> <li>• <i>stem and leaf plots</i></li> <li>• line and double line</li> </ul>

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		<ul style="list-style-type: none"> <li>graphs by approximating line of best fit</li> </ul>
2, 3, 4	NS.1.8.6	Formulate inferences based on scientific data.
2	NS.1.8.7	Communicate results and conclusions from scientific inquiry following peer review.
2, 3, 4, 5	NS.1.8.9	Generate questions that can and cannot be answered by science.
<b>Arkansas Mathematics Standards: Grades 6 – 8</b>		
<b>Grade 6</b>		
<b>Lesson</b>	<b>Standard</b>	<b>Descriptor</b>
2	DAP.14.6.2	Collect data and select appropriate graphical representations to display the data including <i>Venn diagrams</i> .
2, 3, 4	DAP.16.6.1	Use observations about differences in data to make justifiable inferences.
<b>Grade 7</b>		
3, 4	DAP.15.7.1	Analyze data displays, including ways that they can be misleading.
<b>Grade 8</b>		
2, 3, 4	DAP.16.8.1	Use observations about differences between sets of data to make <i>conjectures</i> about the populations from which the data was taken.
<b>Arkansas English Language Arts Standards: Grades 6 – 8</b>		
<b>Grade 6</b>		
<b>Lesson</b>	<b>Standard</b>	<b>Descriptor</b>
All lessons	OV.1.6.1	Develop vocabulary from content area texts and personal reading.
All lessons	OV.1.6.2	Use standard English in classroom discussion.
All lessons	OV.1.6.3	Use appropriate oral communication for various purposes and audiences.
All lessons	OV.1.6.6	Contribute appropriately to class discussion.
6	OV.1.6.7	Deliver oral <i>presentations</i> using standard English, appropriate vocabulary, and organization.
All lessons	OV.2.6.1	Demonstrate effective listening skills by exhibiting appropriate body language.
All lessons	OV.2.6.2	Establish purpose for listening.
All lessons	OV.2.6.3	Listen attentively for main ideas and detail.
All lessons	OV.3.6.1	View a variety of media (e.g., posters, film clips, periodicals, charts, cartoons, graphs, statistics, etc.) to enhance and show understanding of a specific topic.
6	OV.3.6.3	Create <i>visual aids</i> that convey information.
All lessons	W.4.6.3	Demonstrate an awareness of purpose and audience for all modes of written <i>discourse</i> .

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All lessons	W.4.6.6	Organize <i>expository</i> paragraphs that include a topic sentence, supporting details, and a concluding sentence.
All lessons	W.5.6.1	Write to describe, to inform, to entertain, to explain, and to persuade.
All lessons	W.5.6.2	Select the form of writing that addresses the intended audience.
All lessons	W.5.6.3	Create <i>expository</i> , narrative, descriptive, and persuasive writings.
6	W.5.6.5	Write research reports using a variety of sources, summarizing, and paraphrasing.
All lessons	W.5.6.10	Write across the curriculum.
All lessons	W.6.6.2	Use different <i>kinds of sentences</i> <ul style="list-style-type: none"> <li>• Declarative</li> <li>• Interrogative</li> <li>• Imperative</li> <li>• Exclamatory</li> </ul>
All lessons	W.6.6.8	Apply correct spelling to commonly misspelled words.
All lessons	R.9.6.1	Use previewing, activating prior knowledge, predicting content of text, formulating questions, and establishing purposes for reading.
All lessons	R.9.6.2	Analyze the interrelationships of text and world issues/events by applying connection strategies.
All lessons	R.9.6.6	Connect own background knowledge and personal experience to make inferences and to respond to new information presented in text.
All lessons	R.9.6.10	Distinguish among facts and inferences supported by evidence and opinions in text.
All lessons	R.9.6.11	Use text information and background knowledge to draw conclusions and to make inferences (e.g., theme, etc.).
All lessons	R.9.6.18	Summarize the content of a text.
All lessons	R.9.6.20	Evaluate personal, social, and political issues as presented in text.
All lessons	R.10.6.13	Read and utilize functional/ <i>practical texts</i> , including advertisements, slogans, brochures, and timelines.
All lessons	R.11.6.6	Use resources to determine meaning of technical and specialized vocabulary.
6	IR.12.6.1	Generate questions to explore and select a specific topic for research.
All lessons	IR.12.6.3	Use print and electronic sources, including computer databases, to locate information.
All lessons	IR.12.6.5	Interpret information from graphic sources.
6	IR.12.6.8	Use research to create one or more oral, written, or visual <i>presentations</i> /products.
<b>Grade 7</b>		
<b>Lesson</b>	<b>Standard</b>	<b>Descriptor</b>
All lessons	OV.1.7.1	Use vocabulary from content area texts and personal reading.
All lessons	OV.1.7.2	Use standard English in classroom discussion and <i>presentations</i> .
All lessons	OV.1.7.3	Speak for and to various purposes and audiences.
All lessons	OV.1.7.6	Contribute appropriately to class discussion.

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6	OV.1.7.7	Deliver oral <i>presentations</i> using standard English, appropriate vocabulary, examples and/or analogies.
All lessons	OV.2.7.1	Demonstrate effective listening skills by exhibiting appropriate body language.
All lessons	OV.2.7.2	Establish purpose for listening.
All lessons	OV.2.7.3	Listen attentively for main ideas, details, and organization.
All lessons	OV.3.7.1	View a variety of visually presented materials for understanding of a specific topic.
All lessons	W.4.7.3	Determine a focus and an <i>organizational structure</i> based on purpose, audience, length, and required format for <i>expository</i> , narrative, and descriptive writing
All lessons	W.5.7.1	Write to develop narrative, <i>expository</i> , descriptive, and persuasive pieces.
All lessons	W.5.7.2	Select the form of writing that addresses the intended audience.
All lessons	W.5.7.3	Create <i>expository</i> , narrative, descriptive, and persuasive writings.
6	W.5.7.5	Write research reports and document sources, summarizing, and paraphrasing.
All lessons	W.5.7.10	Write across the curriculum.
All lessons	W.6.7.1	Vary sentence structure by using simple, compound, and complex sentences and different <i>kinds of sentences</i> <ul style="list-style-type: none"> <li>• Declarative</li> <li>• Interrogative</li> <li>• Imperative</li> <li>• Exclamatory</li> </ul>
All lessons	W.6.7.7	Spell words correctly in all writing.
All lessons	R.9.7.1	Use previewing, activating prior knowledge, predicting content of text, formulating questions, and establishing purposes for reading.
All lessons	R.9.7.2	Analyze the interrelationships of text and world issues/events by applying connection strategies.
All lessons	R.9.7.6	Connect own background knowledge and personal experience to make inferences and to respond to new information presented in text.
All lessons	R.9.7.19	Evaluate personal, social, and political issues as presented in text.
All lessons	R.10.7.11	Read and utilize functional/ <i>practical texts</i> , including forms, reports, cover letters, letterheads, and business letters.
All lessons	R.11.7.6	Use resources to determine meaning of technical and specialized vocabulary.
6	IR.12.7.1	Formulate original questions to select a topic for research.
All lessons	IR.12.7.3	Use print and electronic sources, such as card catalogs and computer databases, to locate information.
All lessons	IR.12.7.6	Use information presented in graphic sources to draw conclusions.
6	IR.12.7.9	Use research to create one or more oral, written, or visual <i>presentations /products</i> .
<b>Grade 8</b>		
<b>Lesson</b>	<b>Standard</b>	<b>Descriptor</b>
All lessons	OV.1.8.1	Use vocabulary from content area texts and reading/literature.

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All lessons	OV.1.8.2	Use standard English in classroom discussion and <i>presentations</i> .
All lessons	OV.1.8.3	Speak for and to various purposes and audiences.
All lessons	OV.1.8.6	Contribute appropriately to class discussion.
6	OV.1.8.7	Deliver oral <i>presentations</i> using available technology.
All lessons	OV.2.8.1	Demonstrate effective listening skills by exhibiting appropriate body language.
All lessons	OV.2.8.2	Establish purpose for listening
All lessons	OV.2.8.3	Listen attentively to summarize.
All lessons	OV.3.8.1	View a variety of visually presented materials for understanding of a specific topic.
All lessons	W.4.8.1	Self select and apply an appropriate prewriting strategy for a variety of writing purposes across the curriculum, with emphasis on interviewing, note-taking, and gathering data.
All lessons	W.4.8.3	Select a focus and an <i>organizational structure</i> based on purpose, audience, length, and required format for <i>expository</i> , narrative, descriptive, and persuasive writing.
All lessons	W.5.8.1	Develop multiple works in a variety of modes of <i>discourse</i> .
All lessons	W.5.8.2	Select the form of writing that addresses the intended audience.
All lessons	W.5.8.3	Create <i>expository</i> , narrative, descriptive, and persuasive writings.
6	W.5.8.5	Write research reports that include a thesis and use a variety of sources.
All lessons	W.5.8.10	Write across the curriculum.
All lessons	W.6.8.1	Vary sentence structure by using simple, compound, and complex sentences and different <i>kinds of sentences</i> <ul style="list-style-type: none"> <li>• Declarative</li> <li>• Interrogative</li> <li>• Imperative</li> <li>• Exclamatory</li> </ul>
All lessons	W.6.8.7	Spell words correctly in all writing.
All lessons	R.9.8.1	Use previewing, activating prior knowledge, predicting content of text, formulating questions, and establishing purposes for reading.
All lessons	R.9.8.2	Analyze the interrelationships of text and world issues/events by applying connection strategies.
All lessons	R.9.8.6	Connect own background knowledge and personal experience to make inferences and to respond to new information presented in text.
All lessons	R.9.8.22	Evaluate personal, social, and political issues as presented in text.
All lessons	R.10.8.12	Read and utilize functional/ <i>practical texts</i> , including manuals, memos, job applications, and career guides.
All lessons	R.11.8.6	Use resources to determine meaning of technical and specialized vocabulary.
6	IR.12.8.1	Formulate original questions to explain and select a topic for research.
All lessons	IR.12.8.3	Use print and electronic sources independently to locate information.
6	IR.12.8.6	Create visual graphics to interpret information.

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6	IR.12.8.9	Use research to create one or more oral, written, or visual <i>presentations</i> /products.
<b>Arkansas Physical Education and Health Standards: Grades 6 – 8</b>		
<b>Grade 6</b>		
<b>Lesson</b>	<b>Standard</b>	<b>Descriptor</b>
3	HW.6.6.2	Identify risky behaviors that increase the possibility of developing diseases.
4, 5, 6	HW.7.6.2	List resources that provide health services and situations requiring health care services.
2, 3, 4, 5, 6	HW.10.6.3	Recognize the warning signs of <i>depression</i> and suicidal thoughts.
<b>Grade 7</b>		
2, 3, 4	HW.5.7.1	Discuss and examine the interaction between the body systems.
2	HW.6.7.1	Compare and contrast <i>communicable</i> and <i>non-communicable diseases</i> .
3, 4, 5, 6	HW.10.7.1	Identify skills necessary to manage <i>mental</i> and <i>emotional health</i> : defense mechanisms, self talk, coping skills, and <i>stress management</i> .
2, 3, 4, 5, 6	HW.10.7.3	Recognize the warning signs of <i>depression</i> and suicidal thoughts.
3, 4, 5, 6	HW.10.7.4	Identify and practice <i>depression</i> coping strategies.
5, 6	HW.10.7.5	Identify suicide <i>prevention</i> strategies: counseling, hot-line, and trusted adult.
<b>Grade 8</b>		
2, 3, 4, 5	HW.5.8.1	Analyze the interaction between the body systems to promote <i>health</i> and <i>wellness</i> (e.g., obesity’s impact on specific body systems).
3, 4, 5	HW.5.8.2	Identify responsible behaviors and consequences related to physical, social, and emotional changes during adolescence.
3, 4, 5, 6	HW.10.8.1	Discuss and demonstrate skills necessary to manage <i>mental</i> and <i>emotional health</i> : defense mechanisms, self talk, coping skills, and stress management.
2, 3, 5, 6	HW.10.8.2	Distinguish personal responsibility in making choices affecting individual <i>health and wellness</i> .
2, 3, 4, 5, 6	HW.10.8.3	Discuss the warning signs of <i>depression</i> and suicidal thoughts.
3, 4, 5, 6	HW.10.8.4	Identify and practice <i>depression</i> coping strategies.
5, 6	HW.10.8.5	Identify and discuss suicide <i>prevention</i> strategies: counseling, hot-line, and trusted adult.