

THE BRAIN: OUR SENSE OF SELF

Maryland Voluntary State Curriculum – Science – Grades 6 - 8

Lesson	Standard	Description
3, 4	1.A.1	Design and carry out simple investigations and formulate appropriate conclusions based on data obtained.
2	1.A.1.a	Explain that scientists differ greatly in what phenomena they study and how they go about their work.
1, 2, 3, 4	1.A.1.b	Develop the ability to clarify questions and direct them toward objects and phenomena that can be described, explained, or predicted by scientific investigations.
3, 4	1.A.1.c	Explain and provide examples that hypotheses are valuable, even if they turn out not to be true, if they lead to fruitful investigations.
3, 4	1.A.1.d	Locate information in reference books, back issues of newspapers, magazines and compact disks, and computer databases.
3, 4	1.A.1.e	Explain that if more than one variable changes at the same time in an investigation, the outcome of the investigation may not be clearly attributable to any one of the variables.
4	1.A.1.h	Use mathematics to interpret and communicate data. Determine what units to use, express findings in several forms, decide what degree of precision is adequate, and estimate probabilities of outcomes.
3, 4	1.B.1	Review data from a simple experiment, summarize the data, and construct a logical argument about the cause-and-effect relationships in the experiment.
4	1.C.1.a	Organize information in simple tables and graphs and identify relationships they reveal.
4	1.C.1.b	Read simple tables and graphs produced by others and describe in words what they show.
2, 4	1.C.1.c	Give examples of how scientific knowledge is subject to modification as new information challenges prevailing theories and as a new theory leads to looking at old observations in a new way.
3, 4	1.C.1.e	Explain how different models can be used to represent the same thing. What kind of a model to use and how complex it should be depend on its purpose. Choosing a useful model is one of the instances in which intuition and creativity come into play in science, mathematics, and engineering.
All lessons	1.C.1.f	Participate in group discussions on scientific topics by restating or summarizing accurately what others have said, asking for clarification or elaboration, and expressing alternative positions.
2	1.C.1.g	Recognize that important contributions to the advancement of science, mathematics, and technology have been made by different kinds of people, in different cultures, at different times.
3, 4	1.D.1.a	Explain that the kind of model to use and how complex it should be depends on its purpose and that it is possible to

MARYLAND ALIGNMENT FOR NIH SUPPLEMENT THE BRAIN: OUR SENSE OF SELF

		have different models used to represent the same thing.
3, 4	1.D.1.b	Explain, using examples, that models are often used to think about processes that happen too slowly, too quickly, or on too small a scale to observe directly, or that are too vast to be changed deliberately, or that are potentially dangerous.
3, 4	1.D.1.c	Explain that models may sometimes mislead by suggesting characteristics that are not really shared with what is being modeled.
3, 4	3.B.1.b	Based on data from microscopic studies, readings and designed investigations, cite evidence illustrating that the cell- tissue-organ systems of multicellular organisms (plant and animal) carry out the life functions of those organisms: extracting energy from food, getting rid of wastes, and making new materials. (Grade 7)
2, 3	3.B.2.b	Select several body systems and explain the role of cells, tissues and organs in the systems selected that effectively carry out a vital function for the organism, such as obtaining and providing energy, defense, reproduction, and coordination of body functions. (Grade 7)
4	3.D.1.b	Recognize that adaptations may include variations in structures, behaviors, or physiology, such as spiny leaves on a cactus, birdcalls, and antibiotic resistant bacteria. (Grade 8)
1, 4	3.D.1.c	Recognize and describe that adaptation involves the selection of natural variations in a population. (Grade 8)
Maryland Voluntary State Curriculum – Mathematics – Grades 6 - 8		
Lesson	Standard	Description
4	1.B.2.e	Apply given formulas to a problem-solving situation.
4	1.C.2.a	Identify and describe the change represented in a table of values. (Grades 6 & 7)
4	3.B.1.a	Select and use appropriate tools and units. (Grade 6)
4	4.A.1	Organize and display data.
4	6.A.1.a	Read, write, and represent whole numbers.
4	6.C.1.a	Add, subtract, multiply, and divide integers.
4	7.C.1.a	Use multiple representations to express concepts or solutions.
4	7.C.1.b	Express mathematical ideas orally.
4	7.C.1.c	Explain mathematically ideas in written form.
4	7.C.1.e	Express solutions using pictorial, tabular, graphical, or algebraic methods.

MARYLAND ALIGNMENT FOR NIH SUPPLEMENT THE BRAIN: OUR SENSE OF SELF

4	7.C.1.f	Explain solutions in written form.
4	7.C.1.g	Ask questions about mathematical ideas or problems.
4	7.C.1.h	Give or use feedback to revise mathematical thinking.
4	7.D.1.b	Identify mathematical concepts in relationship to other disciplines.
4	7.D.1.c	Identify mathematical concepts in relationship to life.
Maryland Voluntary State Curriculum – Reading/English Language Arts – Grades 6 - 8		
Lesson	Standard	Description
3, 4	1.D.1.a	Acquire new vocabulary through listening to, independently reading, and discussing a variety of literary and informational texts.
3, 4	1.D.1.b	Discuss words and word meanings daily as they are encountered in texts, instruction, and conversation.
3, 4	1.D.3.d	Use new vocabulary in speaking and writing to gain and extend content knowledge and clarify expression.
3, 4, 5	1.E.3.a	Select and apply appropriate strategies to make meaning from text during reading
2, 3, 4, 5	1.E.4.b	Identify and explain information directly stated in the text.
All lessons	1.E.4.c	Draw inferences and/or conclusions and make generalizations.
3, 4, 5	1.E.4.e	Summarize or paraphrase.
2, 3, 4, 5	1.E.4.f	Connect the text to prior knowledge or personal experience.
2, 3, 4, 5	4.A.1.a	Use a variety of self-selected prewriting strategies to generate, select, narrow, and develop ideas.
2, 3, 4, 5	4.A.1.b	Select, organize, and develop ideas appropriate to topic, audience, and purpose.
2, 3, 4, 5	4.A.2.c	Compose to inform using relevant support and a variety of appropriate organizational structures and signal words within and between paragraphs.
4	4.A.2.d	Compose to persuade by supporting, modifying, or disagreeing with a position, using effective rhetorical strategies.
2, 3, 4, 5	4.A.4.a	Use precise word choice, formal to informal, based on audience, situation, or purpose.
2, 3, 4, 5	4.A.7.a	Identify, evaluate, and use sources of information on a self-selected and/or given topic.
1, 3, 4, 5	4.A.7.b	Use various information retrieval sources (traditional and/or electronic) to obtain information on a self-selected and/or given topic.
All lessons	6.A.1.a	Attend to the speaker. (Grade 6)

MARYLAND ALIGNMENT FOR NIH SUPPLEMENT THE BRAIN: OUR SENSE OF SELF

All lessons	6.A.1.b	Ask appropriate questions. (Grade 6)
All lessons	6.A.1.c	Contribute relevant comments. (Grade 6)
All lessons	6.A.1.d	Relate prior knowledge. (Grade 6)
All lessons	6.A.1.e	Use note taking to assist listening when appropriate. (Grade 6)
All lessons	6.A.1.f	Maintain visual contact with the speaker. (Grade 6)
All lessons	6.A.1.g	Maintain focus by identifying and managing barriers to listening. (Grade 6)
2, 3, 4, 5	7.A.1	Demonstrate appropriate organizational strategies and delivery techniques to plan for a variety of oral presentation purposes.

Maryland Voluntary State Curriculum – Health – Grades 6 - 8

Lesson	Standard	Description
All lessons	1.A.1	Recognize and apply effective communication skills.
4	1.A.3.b	Explain the importance of assuming responsibilities of personal health behavior. (Grade 8)
4	3.A.1	Demonstrate the ability to access, describe, and evaluate health information, products, and services in order to become health literate consumers. (Grade 7 & 8)
4	3.A.2	Demonstrate the ability to identify and practice health-enhancing behaviors and reduce health risks to live safer, healthier lives. (Grades 6 & 8)