



# **BRAIN-POWER!**

## **NIDA Junior Scientists**

**2 - 3**

NEVADA STANDARDS ALIGNMENT





## About the *Brain Power!* Nevada Standards Alignment Project

The Nevada Prevention Resource Center (NPRC) recently received funding to reach out to Nevada elementary and middle schools to support substance abuse prevention. We have chosen to use an existing free prevention curriculum from the National Institute on Drug Abuse (NIDA) called: Brain Power! The NIDA Junior Scientist Program.

### The Nevada Standards Alignment Packet

This packet is designed to help teachers integrate the Brain Power! program into their regular classroom curriculum.

- Listing of each Nevada science, health, mathematics, and language arts standard covered in each module of the program.
- Standards listed are based on teachers doing the entire module, including the additional and extension activities listed in the modules.
- Standards used are the most recent versions available on the Nevada Department of Education website ([www.doe.nv.gov](http://www.doe.nv.gov)) as of May 2011.
- Includes standards for each of the grades covered in the corresponding *Brain Power!* Kit.
- Pages are color coded to match the color of the corresponding module's tab.
- Standards pages can be placed within their corresponding module or kept as a separate package.

### Project Website

The project website is [www.NevadaPRC.org/education.php](http://www.NevadaPRC.org/education.php). It includes:

- Project information and updates
- Resources for teachers and parents
- Assessments
- Technical Assistance

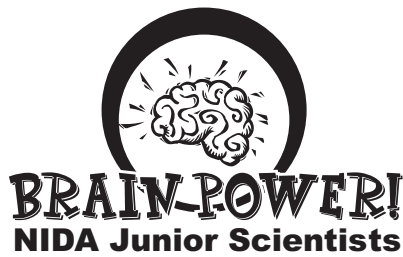
### Special Note to School Counselors

These modules cover the following standards from the *ASCA National Standards for Students*.

- PS:A1.6 Distinguish between appropriate and inappropriate behavior.
- PS:B1.2 Understand consequences of decisions and choices
- PS:B1.8 Know when peer pressure is influencing a decision
- PS:C1.8 Learn about the emotional and physical dangers of substance use and abuse

American School Counselor Association (2004). *ASCA National Standards for Students*. Alexandria, VA: Author.





## **Module 1: Ooey Gooley! Making Sense of Scientific Inquiry Grade 2**

### **Learning Objectives:**

- Students experience the processes of science.
- Students learn how to ask appropriate scientific questions.
- Students learn how to develop investigations to answer their questions.
- Students discover how information is transmitted through their senses.

### **Nevada Science Standards:**

- N.2.A.1 Students know how to make observations and give descriptions using words, numbers, and drawings.
- N.2.B.1 Students know science engages men and women of all ages and backgrounds.
- P.2.A.3 Students know matter can be categorized by observable properties, such as color, size, shape, and weight.

### **Nevada Health Standards:**

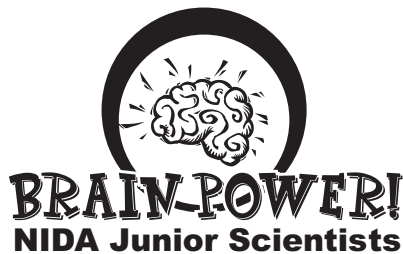
- 1.2.2 Identify basic anatomy.

### **Nevada Math Standards:**

- 1.2.2 Identify and model the unit fractions  $\frac{1}{2}$  and  $\frac{1}{4}$  as equal parts of a whole or sets of objects.
- 5.2.1 Collect, record, and classify data in response to questions posed by teacher and/or students.

### **Nevada Language Arts Standards:**

- 4.2.6 Make predictions based on evidence.
- 5.2.7 Prepare a legible final draft to display or share.
- 6.2.5 Write responses to expository text.
- 7.2.1 Listen for a variety of purposes including gaining information.
- 8.2.3 Communicate information by maintaining a clear focus.



## **Module 1: Ooey Gooley! Making Sense of Scientific Inquiry Grade 3**

### **Learning Objectives:**

- Students experience the processes of science.
- Students learn how to ask appropriate scientific questions.
- Students learn how to develop investigations to answer their questions.
- Students discover how information is transmitted through their senses.

### **Nevada Science Standards:**

- N.5.A.1 Students know scientific progress is made by conducting careful investigations, recording data, and communicating the results in an accurate method.
- N.5.B.1 Students know that, throughout history, people of diverse cultures have provided scientific knowledge and technologies.
- P.5.A.3 Students know materials can be classified by their observable physical and chemical properties (e.g., magnetism, conductivity, density, and solubility).

### **Nevada Health Standards:**

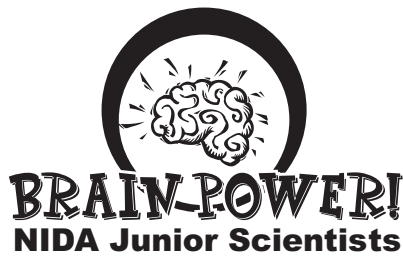
- 1.5.2 Explain the basic structure, function, and developmental processes of human body systems.

### **Nevada Math Standards:**

- 1.3.2 Identify and model the unit fractions  $\frac{1}{2}$ ,  $\frac{1}{3}$ ,  $\frac{1}{4}$ ,  $\frac{1}{6}$ , and  $\frac{1}{8}$  as equal parts of a whole or sets of objects.
- 5.3.1 Pose questions that can be used to guide data collection, organization, and representation.

### **Nevada Language Arts Standards:**

- 4.3.6 Make and revise predictions based on evidence.
- 5.3.7 Prepare a legible final draft to display or share.
- 6.3.5 Write responses to expository text.
- 7.3.1 Listen for a variety of purposes including gaining information.
- 8.3.3 Communicate information by maintaining a clear focus and following a logical sequence.



## **Module 2: Brains in a Box: What Your Brain can Do Grade 2**

### **Learning Objectives:**

- Students learn that the brain has different parts.
- Students create a model of the brain showing its four major parts.
- Students identify the function of each of these parts of the brain.

### **Nevada Science Standards:**

N.2.A.1 Students know how to make observations and give descriptions using words, numbers, and drawings.

L.2.B Students understand that living things have identifiable characteristics.

### **Nevada Health Standards:**

1.2.2 Identify basic anatomy.

### **Nevada Math Standards:**

1.2.8 Generate and solve one-step addition and subtraction problems based on practical situations.

5.2.1 Collect, record, and classify data in response to questions posed by teacher and/or students.

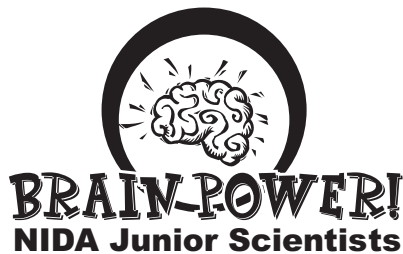
### **Nevada Language Arts Standards:**

4.2.1 Identify the purpose of and gain information from illustrations, diagrams.

4.2.5 Use information to answer specific questions.

6.2.5 Write responses to expository text.

7.2.1 Listen for a variety of purposes including gaining information.



## **Module 2: Brains in a Box: What Your Brain can Do Grade 3**

### **Learning Objectives:**

- Students learn that the brain has different parts.
- Students create a model of the brain showing its four major parts.
- Students identify the function of each of these parts of the brain.

### **Nevada Science Standards:**

- N.5.A.1 Students know scientific progress is made by conducting careful investigations, recording data, and communicating the results in an accurate method.
- N.5.A.6 Students know models are tools for learning about the things they are meant to resemble.
- L.5.B.1 Students know plants and animals have structures that enable them to grow, reproduce, and survive.

### **Nevada Health Standards:**

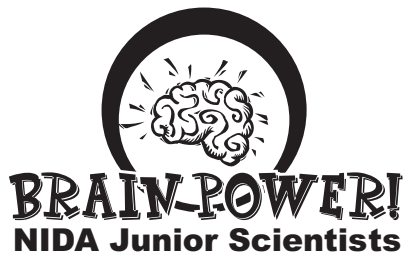
- 1.5.2 Explain the basic structure, function, and developmental processes of human body systems.

### **Nevada Math Standards:**

- 1.3.8 Generate and solve two-step addition and subtraction problems and one-step multiplication problems based on practical situations.
- 5.3.1 Pose questions that can be used to guide data collection, organization, and representation.

### **Nevada Language Arts Standards:**

- 4.3.1 Identify the purpose of and gain information from illustrations, diagrams.
- 4.3.5 Use information to answer specific questions.
- 6.3.5 Write responses to expository text.
- 7.3.1 Listen for a variety of purposes including gaining information.



## **Module 3: Sending and Receiving Messages Grade 2**

### **Learning Objectives:**

- Students simulate neurotransmission.
- Students discover how messages travel throughout the body.
- Students learn about the relationship between the brain and the rest of the nervous system.

### **Nevada Science Standards:**

N.2.A.1 Students know how to make observations and give descriptions using words, numbers, and drawings.

N.2.B.2 Students know that, in science, it is helpful to work in a team and share findings with others.

L.2.B Students understand that living things have identifiable characteristics.

### **Nevada Health Standards:**

1.2.2 Identify basic anatomy.

### **Nevada Math Standards:**

1.2.6 Estimate the number of objects in a set to 20 and verify by counting.

5.2.1 Collect, record, and classify data in response to questions posed by teacher and/or students.

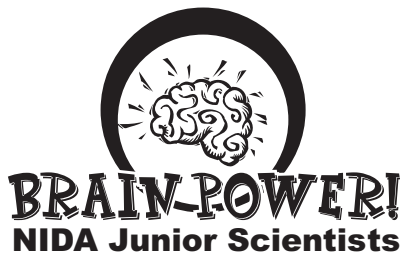
### **Nevada Language Arts Standards:**

4.2.1 Identify the purpose of and gain information from illustrations, diagrams.

4.2.5 Use information to answer specific questions.

6.2.5 Write responses to expository text.

7.2.1 Listen for a variety of purposes including gaining information.



## **Module 3: Sending and Receiving Messages Grade 3**

### **Learning Objectives:**

- Students simulate neurotransmission.
- Students discover how messages travel throughout the body.
- Students learn about the relationship between the brain and the rest of the nervous system.

### **Nevada Science Standards:**

- N.5.A.1 Students know scientific progress is made by conducting careful investigations, recording data, and communicating the results in an accurate method.
- N.5.B.3 Students know the benefits of working with a team and sharing findings.
- L.5.B.1 Students know plants and animals have structures that enable them to grow, reproduce, and survive.

### **Nevada Health Standards:**

- 1.5.2 Explain the basic structure, function, and developmental processes of human body systems.

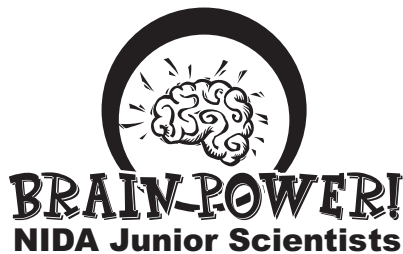
### **Nevada Math Standards:**

- 1.3.6 Estimate the number of objects in a set using various techniques.
- 5.3.1 Pose questions that can be used to guide data collection, organization, and representation.

### **Nevada Language Arts Standards:**

- 4.3.1 Identify the purpose of and gain information from illustrations, diagrams.
- 4.3.5 Use information to answer specific questions and summarize information.
- 6.3.5 Write responses to expository text.
- 7.3.1 Listen for a variety of purposes including gaining information.





## **Module 4: Medicines and Drugs: What's Helpful, What's Harmful**

### **Grade 2**

#### **Learning Objectives:**

- Students learn about different drugs and how they affect the body.
- Students classify drugs and their effect on the body into two groups: helpful medicines and harmful drugs.
- Students think about whether any drugs can be both helpful and harmful.

#### **Nevada Science Standards:**

- N.2.A.1 Students know how to make observations and give descriptions using words, numbers, and drawings.
- n.2.A.3 Students know observable patterns can be used to predict future events or sort items.
- N.2.B.2 Students know that, in science, it is helpful to work in a team and share findings with others.

#### **Nevada Health Standards:**

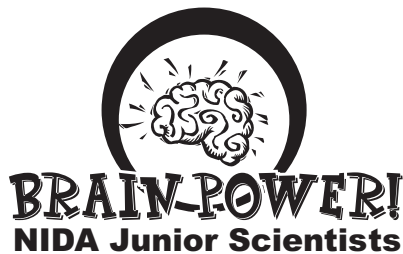
- 1.2.6 Identify helpful and harmful substances.
- 5.2.2 Identify resources/individuals that would aid in healthy decision-making.

#### **Nevada Math Standards:**

- 4.2.9 Sort and classify objects by two or more attributes.

#### **Nevada Language Arts Standards:**

- 4.2.1 Identify the purpose of and gain information from illustrations, diagrams.
- 4.2.5 Use information to answer specific questions.
- 6.2.3 Write poetry.
- 6.2.5 Write responses to expository text.
- 7.2.1 Listen for a variety of purposes including gaining information.



## **Module 4: Medicines and Drugs: What's Helpful, What's Harmful**

### **Grade 3**

#### **Learning Objectives:**

- Students learn about different drugs and how they affect the body.
- Students classify drugs and their effect on the body into two groups: helpful medicines and harmful drugs.
- Students think about whether any drugs can be both helpful and harmful.

#### **Nevada Science Standards:**

- N.5.A.4 Students know graphic representations of recorded data can be used to make predictions.
- N.5.A.7 Students know observable patterns can be used to organize items and ideas.
- N.5.B.3 Students know the benefits of working with a team and sharing findings.

#### **Nevada Health Standards:**

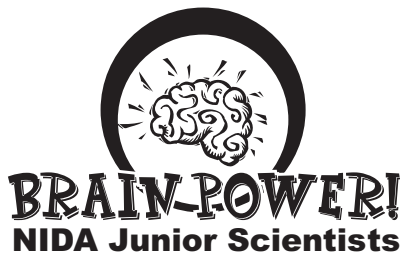
- 1.5.6 Explain how substances can affect the way people make decisions and perform tasks.
- 3.5.2 Describe situations requiring professional health services.

#### **Nevada Math Standards:**

- 4.3.9 Use the quantifiers of some, all, and none to describe the characteristics of a set.

#### **Nevada Language Arts Standards:**

- 4.3.1 Identify the purpose of and gain information from illustrations, diagrams.
- 4.3.5 Use information to answer specific questions and summarize information.
- 6.3.3 Write poetry.
- 6.3.5 Write responses to expository text.
- 7.3.1 Listen for a variety of purposes including gaining information.



## **Module 5: The Science Behind Smoking Grade 2**

### **Learning Objectives:**

- Students perform a controlled experiment to discover the effect that tobacco has on the body.
- Students discuss the effect that nicotine has on the body.
- Students gain experience developing a hypothesis, performing a controlled experiment, and drawing conclusions from the experiment.

### **Nevada Science Standards:**

- N.2.A.1 Students know how to make observations and give descriptions using words, numbers, and drawings.
- N.2.A.3 Student know observable patterns can be used to predict future events or sort items.
- N.2.B.2 Students know that, in science, it is helpful to work in a team and share findings with others.
- L.2.B Students understand that living things have identifiable characteristics.

### **Nevada Health Standards:**

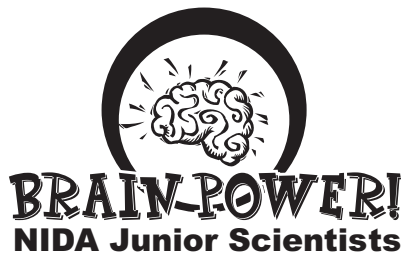
- 1.2.1 Identify health behaviors that impact personal health.
- 5.2.1 Discuss healthy options vs. unhealthy options.

### **Nevada Math Standards:**

- 5.2.1 Collect, record, and classify data in response to questions posed by teacher and/or students. Use tables, pictographs, and bar graphs to represent data.

### **Nevada Language Arts Standards:**

- 4.2.3 Identify cause and effect.
- 4.2.5 Use information to answer specific questions.
- 4.2.6 Make predictions based on evidence.
- 6.2.5 Write responses to expository text.
- 7.2.1 Listen for a variety of purposes including gaining information.



## **Module 5: The Science Behind Smoking Grade 3**

### **Learning Objectives:**

- Students perform a controlled experiment to discover the effect that tobacco has on the body.
- Students discuss the effect that nicotine has on the body.
- Students gain experience developing a hypothesis, performing a controlled experiment, and drawing conclusions from the experiment.

### **Nevada Science Standards:**

- N.5.A.1 Students know scientific progress is made by conducting careful investigations, recording data, and communicating the results in an accurate method.
- N.5.A.7 Students know observable patterns can be used to organize items and ideas.
- N.5.B.3 Students know the benefits of working with a team and sharing findings.
- L.5.B.1 Students know plants and animals have structures that enable them to grow, reproduce, and survive.

### **Nevada Health Standards:**

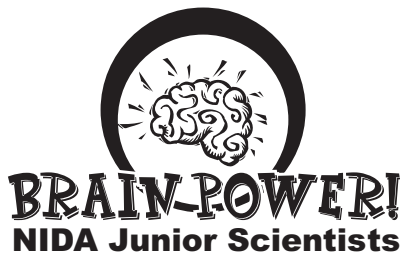
- 1.5.1 Discuss the relationship between health behaviors and personal health.
- 5.5.2 Predict how decisions about substance use and abuse have consequences for self and others.

### **Nevada Math Standards:**

- 5.3.1 Pose questions that can be used to guide data collection, organization, and representation. Use graphical representations, including number lines, frequency tables, and pictographs to represent data.

### **Nevada Language Arts Standards:**

- 4.3.3 Identify a cause and its effect on events and/or relationships.
- 4.3.5 Use information to answer specific questions.
- 4.3.6 Make and revise predictions based on evidence.
- 6.3.5 Write responses to expository text.
- 7.3.1 Listen for a variety of purposes including gaining information.



## **Module 6: How Drugs Affect the Brain Grade 2**

### **Learning Objectives:**

- Students review information about four drugs – cocaine, marijuana, alcohol, and nicotine.
- Students apply what they have learned in the previous modules to explain how these drugs affect the brain and the rest of the nervous system.
- Students present their findings to members of their class.

### **Nevada Science Standards:**

- N.2.A.1 Students know how to make observations and give descriptions using words, numbers, and drawings.
- N.2.A.3 Student know observable patterns can be used to predict future events or sort items.
- L.2.B Students understand that living things have identifiable characteristics.

### **Nevada Health Standards:**

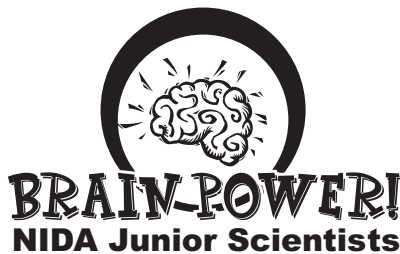
- 1.2.1 Identify health behaviors that impact personal health.
- 1.2.6 Identify helpful and harmful substances.
- 5.2.1 Discuss healthy options vs. unhealthy options.
- 8.2.1 Identify ways to promote personal and family health.

### **Nevada Math Standards:**

- 5.2.1 Collect, record, and classify data in response to questions posed by teacher and/or students. Use tables, pictographs, and bar graphs to represent data.

### **Nevada Language Arts Standards:**

- 4.2.3 Identify cause and effect.
- 4.2.5 Use information to answer specific questions.
- 4.2.6 Make predictions based on evidence.
- 5.2.7 Prepare a legible final draft to display or share.
- 7.2.1 Listen for a variety of purposes including gaining information.



## **Module 6: How Drugs Affect the Brain**

### **Grade 3**

#### **Learning Objectives:**

- Students review information about four drugs – cocaine, marijuana, alcohol, and nicotine.
- Students apply what they have learned in the previous modules to explain how these drugs affect the brain and the rest of the nervous system.
- Students present their findings to members of their class.

#### **Nevada Science Standards:**

- N.5.A.1 Students know scientific progress is made by conducting careful investigations, recording data, and communicating the results in an accurate method.
- N.5.A.3 Students know how to draw conclusions from scientific evidence.
- N.5.A.7 Students know observable patterns can be used to organize items and ideas.
- L.5.B.1 Students know plants and animals have structures that enable them to grow, reproduce, and survive.

#### **Nevada Health Standards:**

- 1.5.1 Discuss the relationship between health behaviors and personal health.
- 5.5.2 Predict how decisions about substance use and abuse have consequences for self and others.
- 8.5.1 Describe ways to influence and support others to make positive health choices.

#### **Nevada Math Standards:**

- 5.3.1 Pose questions that can be used to guide data collection, organization, and representation. Use graphical representations, including number lines, frequency tables, and pictographs to represent data.

#### **Nevada Language Arts Standards:**

- 4.3.3 Identify a cause and its effect on events and/or relationships.
- 4.3.5 Use information to answer specific questions.
- 4.3.6 Make and revise predictions based on evidence.
- 5.3.7 Prepare a legible final draft to display or share.
- 7.3.1 Listen for a variety of purposes including gaining information.