



## Kansas Science Education Standards Exploring MyPyramid with Professor Popcorn

The Kansas Science Education Standards provide a guide to assist Kansas educators in selecting and developing curricula that will best serve to meet the high expectations of learning. We have linked the Kansas Science Education Standards (KSES) August 9, 2005 to the objectives in the Exploring MyPyramid with Professor Popcorn curriculum for grades 1- 6. Professor Popcorn meets specific objectives of the KSES. The use of this curriculum will enable teachers and administrators to accomplish meeting these objectives. **(An indicator with a delta ▲ will be on the new Kansas Science Assessments)**

### **GRADES K-2**

#### **Standard 1:** Science as Inquiry

The student will experience science as full inquiry. In the elementary grades, students begin to develop the physical and intellectual abilities of scientific inquiry.

**Benchmark 1:** The student will be involved in activities that develop skills necessary to conduct scientific inquiries.

Indicator 1: The student identifies properties of objects.

Indicator 2: The student classifies and arranges groups of objects by a variety of properties, one property at a time.

Indicator 3: The student uses appropriate materials, tools, and safety procedures to collect information.

Indicator 4: The student asks and answers questions about objects, organisms, and events in his/her environment.

Indicator 5: The student describes an observation orally or pictorially.

#### **Standard 2:** Physical Science

The student will explore the world by observing and manipulating common objects and materials in their environment.

**Benchmark 1:** The student will develop skills to describe objects.

Indicator 1: The student observes properties and measures or describes those properties using age-appropriate tools and materials.

Indicator 2: The student separates or sorts a group of objects or materials by properties.

Indicator 3: The student compares solids and liquids.

#### **Standard 3:** Life Science

The student will begin to develop an understanding of biological concepts.

**Benchmark 1:** The student will develop an understanding of the characteristics of living things.

Indicator: 1: The student discusses that organisms live only in environments in which their needs can be met.

Indicator 4: The student examines the structure/parts of living things.

### **Standard 6: Science In Personal And Environmental Perspectives**

The student will have a variety of experiences that provide understanding for various science-related personal and environmental challenges.

#### **Benchmark 1: The student will demonstrate responsibility for their own health.**

Indicator 1: The student engages in personal care.

Indicator 2: The student discusses healthy foods.

Indicator 3: The student discusses that safety is a basic human need.

### **Standard 7: History And Nature Of Science**

The student will experience scientific inquiry and learn about people from history.

#### **Benchmark 1: The student will know they practice science.**

Indicator 1: The student is involved in explorations that make his/her mind wonder and know that he/she is practicing science.

Indicator 2: The student uses technology to learn about people in science.

## **GRADES 3-4**

### **Standard 1: Science as Inquiry**

The student will experience science as inquiry.

**Benchmark 1:** The student will develop the skills necessary to do full inquiry. Full inquiry involves asking a simple question, completing an investigation, answering the question, and sharing the results with others.

Indicator 1: ▲ The student asks questions that he/she can answer by investing.

Indicator 2: ▲ The student plans and conducts a simple investigation.

Indicator 3: ▲ The student employs appropriate equipment, tools, and safety procedures to gather data.

Indicator 4: ▲ The student begins developing the abilities to communicate, critique, analyze his/her own investigations, and interprets the work of other students.

### **Standard 2: Physical Science**

The student will increase their understanding of the properties of objects and materials that they encounter on a daily basis. The student will compare, describe, and sort and classify these materials by observable properties.

**Benchmark 1:** The student will develop skills to describe objects.

Indicator 1: ▲ The student observes properties and measures those properties using appropriate tools.

Indicator 2: ▲ The student describes and classifies objects by more than one property.

Indicator 3: ▲ The student observes and records how one object interacts with another object.

Indicator 4: ▲ The student recognizes and describes the differences between solids, liquids and gases.

### **Standard 3: Life Science**

The student will develop an understanding of biological concepts through direct experience with living things, their life cycles, and their habitats.

**Benchmark 1** The student will develop knowledge of organisms in their environment.

Indicator 1: ▲ The student will observe organisms and compares and contrasts different structural characteristics that serve distinct functions.

Indicator 2: ▲ The student compares basic needs of different organisms in their environment.

**Standard 6: Science In Personal And Environmental Perspectives**

The student will demonstrate personal health and environmental practices.

**Benchmark 1:** The student will develop an understanding of personal health.

Indicator 1: ▲ The student discusses the safety involves freedom from danger, risk, or injury.

Indicator 2: ▲ The student assumes some responsibility for his/her own health.

Indicator 3: ▲ The student discusses that various foods contribute to health.

## **GRADES 5-7**

**Standard 1: Science As Inquiry**

The student will develop the abilities to do scientific inquiry, be able to demonstrate how scientific inquiry is applied and develop understandings about scientific inquiry.

**Benchmark 1:** The student will demonstrate abilities necessary to do the processes of scientific inquiry.

Indicator 1: ▲ The student identifies questions that can be answered through scientific investigation;

Indicator 2: ▲ The student designs and conducts scientific investigations safely using appropriate tools, mathematics, technology, and techniques to gather, analyze, and interpret data.

Indicator 3: ▲ The student identifies the relationship between evidence and logical conclusions.

Indicator 4: ▲ The student communicates scientific procedures, results and explanations.

**Standard 2: Physical Science**

The student will apply process skills to develop an understanding of physical science including: properties, changes of properties of matter, motion and forces, and transfer of energy.

**Benchmark 1:** The student will observe, compare, and classify properties of matter.

Indicator: 1: ▲ The student identifies and communicates properties of matter (including but not limited to: phases of matter, boiling point, solubility, and density), distinguishes, components of various types of ; mixtures and categorizes chemicals.

**Benchmark 2:** The student will observe, measure, infer, and classify changes in properties of matter.

Indicator 1: ▲ The student understands the relationship of atoms to elements and elements to compounds.

**Benchmark 4:** The student will understand and demonstrate the transfer of energy.

Indicator 1: ▲ The student understands that when work is done energy is transformed from one form to another, including mechanical, heat, light, sound, electrical, chemical, and nuclear energy, yet is conserved.

**Standard 3: Life Science**

The student will apply process skills to explore and understand structure and function in living systems, reproduction and heredity, regulation and behavior, populations and ecosystems, and diversity and adaptations of organisms.

**Benchmark 4:** The student will model structures of organism and relate functions to the structures.

Indicator 2: ▲ The student relates the structure of cells, organs, tissues, organsystems, and whole organisms to their functions and concludes that breakdowns in structure or function may be caused by disease, damage, heredity, or aging.

**Standard 6: Science In Personal And Environmental Perspectives**

The student will apply process skills to explore and develop an understanding of issues of personal health, population, resources and environment, and natural hazards.

**Benchmark 1:** The student will understand scientific knowledge relative to personal health.

Indicator 1: ▲ The student identifies individual nutrition, exercise, and rest needs based on science and uses a scientific approach to thinking critically about personal health, lifestyle choices, risks and benefits.

**Standard 7: History And Nature Of Science**

The student will examine and develop an understanding of science as a historical human endeavor.

**Benchmark 2:** The student will research contributions to science throughout history.

Indicator 1: ▲ The student recognizes that new knowledge leads to new questions and new discoveries, replicates historic experiments to understand principles of science, and relates contributions of men and women to the fields of science.

## Exploring the Pyramid: Piece by Piece

### Grade 1: Lesson 1

#### Objectives

*Upon completion of Lesson 1, youth will:*

- |   |  |
|---|--|
| 1. Recognize that foods and physical activity contribute to overall health.   | <i>Kansas Science Standards Grade K-2</i><br><i>Standard 6.1.1, 2,</i> |
| 2. Suggest three reasons why we eat what we eat.                              | 1.1.4,   |
| 3. Identify MyPyramid and explain its use for making smart food choices.      | 1.1.4, 5, and 2.1.1, 2,  |
| 4. Classify foods as coming from a plant or animal source.                    | 1.1.2, 4, 5, and 2.1.1, 2,   |
| 5. Follow recommended steps in hand washing before preparing or eating foods. | 6.1.1, 3,  |

## Go for the Grains!

### Grade 1: Lesson 2

#### Objectives

*Upon completion of Lesson 2, youth will:*

- |   |                       |
|---|-----------------------|
| 1. Recognize that daily eating a variety of foods, including Grains Group foods, and being physically active contribute to good health. | <i>Standard 6.1.2</i> |
| 2. Name at least three Grains Group foods.  | 2.1.2                 |
| 3. Select foods from the Grains Group when presented in a daily menu.   | 2.1.1, 2,             |
| 4. Define carbohydrates and their use in the body.  | 3.1.4                 |
| 5. Identify ways to keep foods separate to prevent cross-contamination.   | 6.1.1, 3,             |

## Vegetables & Fruits

### Grade 1: Lesson 3

#### Objectives

*Upon completion of Lesson 3, youth will:*

- |  |                          |
|--|--------------------------|
| 1. Recognize that daily eating a variety of foods, including vegetables and fruits group foods, and being physically active contribute to good health. | <i>Standard 6.1.1, 2</i> |
| 2. Name at least three Fruits Group and three Vegetables Group foods.  | 2.1.1, 2                 |
| 3. State one reason why eating foods from the Fruits Group is important to us.   | 1.1.4 and 6.1.1, 2       |
| 4. State one reason why eating foods from the Vegetables Group is important to us.   |                          |
| 5. Identify how to clean fresh fruits and vegetables.  | 6.1.1, 3,                |

## Get Milk!

### Grade 1: lesson 4

#### Objectives

*Upon completion of Lesson 4, youth will:*

- |   |                            |
|---|----------------------------|
| 1. Recognize that eating a daily variety of foods, including Milk Group foods, and being physically active contribute to good health. | <i>Standard: 6.1.1, 2,</i> |
| 2. Name at least three Milk Group foods.  | 1.1.1 and 2.2.3            |
| 3. State two reasons why it is important to eat foods from the Milk Group.  | 6.1.2 and 2.1.1, 2,        |
| 4. Recognize the importance of calcium for building strong bones and teeth.   | 1.1.3, 4, 5, and 2.1.3     |
|   | 3.1.1, 4, and 7.1.1 5.     |
| 5. Recognize that different types of milk contain different amounts of fat.   | 6.1.2                      |
| 6. Identify foods that need to be kept cold to prevent foodborne illness.   | 6.1.3                      |

## Meat and Beans for Growth

### Grade 1: lesson 5

#### Objectives

*Upon completion of Lesson 5, youth will:*

1. Recognize that daily eating a variety of foods, including Meat & Beans Group foods, and being physically active contribute to good health. *Standard:* 6.1.1, 2
2. State two reasons why it is important to eat foods from the Meat & Beans Group. 2.1.1, 2
3. Recognize that high-fat foods should be eaten in moderation. 6.1.2
4. Identify healthy choices at a fast-food restaurant. 6.1.2
5. Follow recommended safe food handling practices to avoid foodborne illness. 6.1.3

## Exploring the Pyramid: Piece by Piece

### Grade 3: lesson 1

#### Objectives

*Upon completion of Lesson 1, youth will:*

1. Recognize that food and physical activity contribute to overall health. *Standards:* 1.1.1, 4, and 6.1.2, 3
2. Suggest three reasons why we eat what we eat. 1.1.1
3. Identify MyPyramid and explain its use for making smart food choices. 1.1.3, and 2.1.1
4. Classify foods as coming from a plant or animal source. 2.1.2
5. Follow recommended steps in handwashing before preparing and/or eating foods. 6.1.1

## Go for the Grains

### Grade 3: lesson 2

#### Objectives

*Upon completion of Lesson 2, youth will:*

1. Recognize that daily eating a variety of foods, including Grains Group foods, and being physically active contribute to good health. *Standards:* 6.1.2,3
2. Name at least three Grains Group foods. 2.1.1, 2,
3. Select foods from the Grains Group when presented in a daily menu. 2.1.2
4. Define carbohydrates and their use in the body. 3.1.1, 2,
5. Identify picnic foods that need to be kept cold to prevent food borne illness. 6.1.1

## Vegetables & Fruits

### Grade 3: lesson 3

#### Objectives

*Upon completion of Lesson 3, youth will:*

1. Recognize that daily eating a variety of foods, including Vegetables and Fruits Group foods, and being physically active contribute to good health. *Standard:* 6.1.2, 3
2. Name at least three Vegetables Group and three Fruits Group foods. 2.1.1, 2,
3. State one reason why eating foods from the Vegetables Group is important to us. 6.1.2, 3, and 1.1.3
4. State one reason why eating foods from the Fruits Group is important to us.
5. Identify how to best clean and store fruits and vegetables. 6.1.1

## Get Milk

### Grade 3: lesson 4

#### Objectives

*Upon completion of Lesson 4, youth will:*

1. Recognize that daily eating a variety of foods, including Milk Group foods, and being physically active contribute to good health. *Standard:* 6.1.2, 3,
2. State two reasons why it is important to eat foods from the Milk Group. 1.1.3, 4, and 6.1.2, 3,
3. Recognize the importance of calcium for building strong bones and teeth. 3.1. 1, 2,
4. Recognize that different types of milk contain different amounts of fat. 2.1.2
5. Identify ways to keep foods separate to avoid cross-contamination. 6.1.1, 2

## Meat & Beans for Growth

### Grade 3: lesson 5

#### Objectives

*Upon completion of Lesson 5, youth will:*

1. Recognize that daily eating a variety of foods, including Meat & Beans Group foods, and being physically active contribute to good health. *Standard:* 6.1.2, 3,
2. State two reasons why it is important to eat foods from the Meat & Beans Group. 1. 1. 3, 4 and 6.1.2,
3. Recognize that high-fat foods should be eaten in moderation. 6.1.2 and 2.1.2,
4. Identify healthy choices at a fast-food restaurant.
5. Follow recommended safe food handling practices to avoid foodborne illness. 6.1.1, 2,

## Check Out the Pyramid!

### Grade 5: lesson 1

#### Objectives

*Upon completion of Lesson 1, youth will:*

1. Recognize that foods and physical activity contribute to overall health. *Standard:* 6.1.1
2. Identify MyPyramid and explain its use for making smart food choices. 6.1.1 and 7.2.1,
3. Classify food into five food groups. 2.1.1
4. Be able to place the foods they eat into the correct MyPyramid groups.
5. Identify the most effective handwashing method. 6.1.1 and 1.1.1, 2, 3, 4

## Get Going with Grains

### Grade 5: lesson 2

#### Objectives

*Upon completion of Lesson 2, youth will:*

1. Recognize that daily eating a variety of foods, including Grains Group foods, and being physically active contribute to good health. *Standard:* 6.1.1
2. Name at least five Grains Group foods, and state the recommended amount to eat daily. 1.1.2 and 6.1.1
3. Identify food containing starch. 1.1.1, 2, 3, 4, and 2.1.1
4. Identify the importance of folic acid. 2.1.1
5. Recognize the importance of breakfast and choose to eat a nutritious breakfast daily. 2.4.1 and 6.1.1 and 3.4.2
6. Identify foods that should be kept cold to prevent foodborne illness. 6.1.1

**It's Five a Day**  
**Grade 5: lesson 3**

**Objectives**

*Upon completion of Lesson 3, youth will:*

- |  |                        |
|--|------------------------|
| 1. Recognize that daily eating a variety of foods, including Vegetables and Fruits Group foods, and being physically active contribute to good health. | <i>Standard:</i> 6.1.1 |
| 2. Name at least five Vegetables Group foods, and state the recommended amount to eat daily.   | 1.1.2 and 6.1.1        |
| 3. Name at least five Fruits Group foods, and state the recommended amount to eat daily.   | 1.1.2 and 6.1.1        |
| 4. Identify healthy beverage choices based on the amount of sugar added.   | 2.1.1 and 2.4.1        |
| 5. Identify how long to safely store a variety of foods.   | 6.1.1                  |

**Bone Up on Calcium**  
**Grade 5: Lesson 4**

**Objectives**

*Upon completion of Lesson 4, youth will:*

- |   |                        |
|---|------------------------|
| 1. Recognize that daily eating a variety of foods, including Milk Group foods, and being physically active contribute to good health. | <i>Standard:</i> 6.1.1 |
| 2. Name at least five Milk Group foods..  | 2.1.1                  |
| 3. State two reasons why it is important to eat foods from the Milk Group.  | 3.4.2                  |
| 4. Recognize the importance of calcium in preventing osteoporosis.  | 2.2.1 and 3.4.2        |
| 5. Identify how to cook food safely to prevent foodborne illness.   | 6.1.1                  |

**Meat and Protein Make Us Strong**  
**Grade 5: Lesson 5**

**Objectives**

*Upon completion of Lesson 5, youth will:*

- |   |                        |
|---|------------------------|
| 1. Recognize that daily eating a variety of foods, including Meat & Beans Group foods, and being physically active contribute to good health. | <i>Standard:</i> 6.1.1 |
| 2. Name at least five Meat & Beans Group foods.   | 2.1.1                  |
| 3. State two reasons why it is important to eat foods from the Meat & Beans Group.  | 3.4.2                  |
| 4. Identify high-fat foods that should be eaten in moderation.  | 1.1.1, 2, 3, 4,        |
| 5. Identify what may cause a food to be unsafe to eat   | 6.1.1                  |

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