**Lesson 1: The World of Edible Plants**

**Pacing Guide:** Total Time Required: 165 minutes / 3 sessions

- **Session 1:** Getting Started 45 min (Science)
- **Session 2:** Activity I “Deliciously Edible Plant Parts” 60 min (Science)
- **Session 3:** Activity II “Fruits and Vegetables on MyPlate” 40 min (Science/Health); Reflect 20 min (English Language Arts)

**Standards Met:**

**Science:**
- (A) Science as Inquiry: Abilities necessary to do scientific inquiry; Understanding about scientific inquiry.
- (C) Life Science: Structure and function in living systems (form follows function); Regulation and behavior; Populations and ecosystems; Diversity and adaptations of organisms (classification).
- (F) Science in Personal and Social Perspectives: Personal health; Risks and benefits.

**English Language Arts:**
- (Writing 2) Text Types and Purposes: Write informative texts to examine a topic, and convey ideas, concepts, and information clearly through selection, organization, and analysis of relevant content.
- (Language 6) Vocabulary Acquisition and Use: Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.

**Health:**
- (1) Comprehend concepts related to health promotion and disease prevention to enhance health.

**Learning Objectives:**

Students will be able to...

- Identify fruits and vegetables that come from different parts of plants (root, stem, leaf, flower, fruit, and seed).
- Describe the function of each plant part.
- Explain how foods from plants fit into the five food groups.

*Sources: Science standards – National Academy of Sciences; English Language Arts and Math standards – Common Core; Health standards – American Cancer Society*
**LESSON 2** Farm to Plate

**PACING GUIDE:** TOTAL TIME REQUIRED: 190 minutes / 3 sessions

**Session 1:** Getting Started 30 min;
  Activity I “The Farm to Plate Game” 40 min (Science/Social Studies)

**Session 2:** Activity II “Map the Distance” 60 min (Math)

**Session 3:** Activity III “Harvest, Prepare, and Taste Dark-Green Leafy Greens!”
  30 min (Health); Reflect 30 min (English Language Arts)

**Standards Met:**
**Science:** (A) Science as Inquiry: Abilities necessary to do scientific inquiry; Understanding about scientific inquiry. (C) Life Science: Structure and function in living systems; Regulation and behavior; Populations and ecosystems; Diversity and adaptations of organisms (classification). (E) Science & Technology: Abilities of technological design. (F) Science in Personal and Social Perspectives: Personal health; Risks and benefits.

**Math:** Number and Operations: Perform operations with multidigit whole numbers. Measurement & Data: Represent and interpret data.

**Health:** (1) Comprehend concepts related to health promotion and disease prevention to enhance health. (3) Demonstrate the ability to access valid information and products and services to enhance health.

**Social Studies:** (Science, Technology, and Society 8) Science and technology have had both positive and negative impacts upon individuals, societies, and the environments in the past and present.

**English Language Arts:** (Writing 1) Text Types and Purposes: Write opinion pieces on topics or texts, supporting a point of view with clear reasons and relevant information/evidence.

*Sources: Science standards – National Academy of Sciences; English Language Arts and Math standards – Common Core; Health standards – American Cancer Society; Social Studies standards – National Council for the Social Studies*

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**LESSON 3** Healthy From the Ground Up

**PACING GUIDE:** TOTAL TIME REQUIRED: 165 minutes / 3 sessions

**Session 1:** Getting Started 20 min (Health); Activity I “Seed Race!” 40 min (Science)

**Session 2:** Activity II “Veggies: Nature’s Rock Stars” 40 min (Health/Science/Math); Activity III “Taste the Power of the Bean!” 20 min (Science/Health)

**Session 3:** Reflect 45 min (English Language Arts/Health)

**Standards Met:**
**Science:** (A) Science as Inquiry: Abilities necessary to do scientific inquiry; Understanding about scientific inquiry. (C) Life Science: Structure and function in living systems; Regulation and behavior; Populations and ecosystems; Diversity and adaptations of organisms. (D) Earth Science: Structure of the Earth (soil, water, sun). (F) Science in Personal and Social Perspectives: Personal health; Risks and benefits.

**Health:** (1) Comprehend concepts related to health promotion and disease prevention to enhance health. (3) Demonstrate the ability to access valid information and products and services to enhance health.

**English Language Arts:** (Writing 1) Text Types and Purposes: Write opinion pieces on topics or texts, supporting a point of view with clear reasons and relevant information/evidence.

**Math:** Number and Operations: Perform operations with multidigit whole numbers. Measurement & Data: Represent and interpret data.

*Sources: Science standards – National Academy of Sciences; English Language Arts and Math standards – Common Core; Health standards – American Cancer Society*
LEARNING OBJECTIVES

Students will be able to...
• Demonstrate an understanding of the scientific method by making hypotheses and drawing conclusions based on their own discoveries.
• Identify sources of fruits and vegetables in their school and home environment.
• Describe ways they can add more fruits and vegetables to their meals each day.

STANDARDS MET:
Science: (A) Science as Inquiry: Abilities necessary to do scientific inquiry; Understanding about scientific inquiry; (C) Life Science: Structure and function in living systems; Regulation and behavior; Populations and ecosystems; Diversity and adaptations of organisms (classification); (D) Earth Science: Structure of the Earth (soil, water, sun); (F) Science in Personal and Social Perspectives: Personal health; Risks and benefits.

Health: (1) Comprehend concepts related to health promotion and disease prevention to enhance health. (6) Demonstrate the ability to use goal-setting skills to enhance health. (7) Demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

*Sources: Science standards – National Academy of Sciences; English Language Arts and Math standards – Common Core; Health standards – American Cancer Society
LESSON 6  The Global Garden

PACING GUIDE: TOTAL TIME REQUIRED: 140 minutes / 3 sessions

Session 1: Getting Started 10 min;
   Activity I “Fruits and Vegetables Around the World” 40 min
   (Social Studies/Health)

Session 2: Activity II “Global Recipes” 20 min (English Language Arts/Health);
   Activity III “Tasty Chickpeas” 40 min (Health)

Session 3: Activity IV “Garden Pen Pals” 20 min (English Language Arts);
   Reflect 10 min

Standards Met:*

English Language Arts: (Writing 1) Text Types and Purposes: Write opinion pieces on topics or texts, supporting a point of view with clear reasons and relevant information/evidence. (Writing 2) Text Types and Purposes: Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information clearly through the selection, organization, and analysis of relevant content. (Speaking and Listening 1, 2) Comprehension and Collaboration: Engage effectively in a range of collaborative discussions. Summarize and interpret information presented in diverse media and formats.

Health: (1) Comprehend concepts related to health promotion and disease prevention to enhance health. (2) Analyze the influence of family, peers, culture, media, technology, and other factors on health behaviors.

Social Studies: (Global Connections 9) Global factors such as cultural, economic, and political connections are changing the places in which people live (e.g., through trade, migration, increased travel, and communication); Global connections may make cultures more alike or increase their sense of distinctiveness.

*Sources: Science standards – National Academy of Sciences; English Language Arts and Math standards – Common Core; Health standards – American Cancer Society, Social Studies standards – National Council for the Social Studies

AT A GLANCE

LESSON 7  Chef Challenge

PACING GUIDE: TOTAL TIME REQUIRED: 185 minutes / 3 sessions

Session 1: Getting Started 30 min (Math);
   Activity I “Kitchen Measurements” 40 min (Math)

Session 2: Activity II “Taste Your Colors” 40 min (English Language Arts)

Session 3: Activity III “Chef Challenge” 60 min (Health); Reflect 15 min

Standards Met:*

Math: Operations & Algebraic Thinking: Write and interpret numerical expressions; Analyze patterns and relationships. Measurement & Data: Convert like measurement units within a given measurement system; Represent and interpret data. Geometric measurement: Understand concepts of volume and relate volume to multiplication and to addition.

Health: (1) Comprehend concepts related to health promotion and disease prevention to enhance health. (2) Analyze the influence of family, peers, culture, media, technology, and other factors on health behaviors.

English Language Arts: (Writing 1) Text Types and Purposes: Write opinion pieces on topics or texts, supporting a point of view with clear reasons and relevant information/evidence. (Writing 2) Text Types and Purposes: Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information clearly through the selection, organization, and analysis of relevant content. (Speaking and Listening 1, 2) Comprehension and Collaboration: Engage effectively in a range of collaborative discussions. Summarize and interpret information presented in diverse media and formats.

Health: (1) Comprehend concepts related to health promotion and disease prevention to enhance health. (2) Analyze the influence of family, peers, culture, media, technology, and other factors on health behaviors.

*Sources: Science standards – National Academy of Sciences; English Language Arts and Math standards – Common Core; Health standards – American Cancer Society
**LESSON 8 Fruits and Veggies Many Ways**

**PACING GUIDE:** TOTAL TIME REQUIRED: 120 minutes / 3 sessions

**Session 1:** Getting Started 10 min;
   Activity I “Fantastic Fiber” 20 min (Health/Science)

**Session 2:** Activity II “Fiber Investigation” 40 min
   (Health/Science/English Language Arts/Math)

**Session 3:** Activity III “Fabulous Fruit” 40 min (Health); Reflect 10 min

**Standards Met:**
- Science: (A) Science as Inquiry: Abilities necessary to do scientific inquiry; Understanding about scientific inquiry; (B) Physical Science: Properties and change of properties in matter; Transfer of energy; (C) Life Science: Structure and function in living systems; Regulation and behavior; Populations and ecosystems; Diversity and adaptations of organisms. (F) Science in Personal and Social Perspectives: Personal health; Risks and benefits.
- English Language Arts: (Reading 1) Key Ideas and Details: Quote accurately from a text and cite textual evidence to support analysis of what the text says explicitly and when drawing inferences from the text. (Reading 3) Key Ideas and Details: Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text.
- Math: Operations & Algebraic Thinking: Write and interpret numerical expressions; Analyze patterns and relationships. Measurement & Data: Convert like measurement units within a given measurement system; Represent and interpret data. Geometric measurement: Understand concepts of volume and relate volume to multiplication and addition.
- Health (1) Comprehend concepts related to health promotion and disease prevention to enhance health. (2) Analyze the influence of family, peers, culture, media, technology, and other factors on health behaviors.

*Sources: Science standards – National Academy of Sciences; English Language Arts and Math standards – Common Core; Health standards – American Cancer Society*

**LESSON 9 The Power of Choice**

**PACING GUIDE:** TOTAL TIME REQUIRED: 150 minutes / 3 sessions

**Session 1:** Getting Started 10 min;
   Activity I “The Power of Choice” 40 min (Health/Science)

**Session 2:** Activity II “Fruit Imposters” 20 min (Health/Science);
   Activity III “Melon Fruit Salsa” 40 min (Health)

**Session 3:** Reflect 40 min (English Language Arts)

**Standards Met:**
- English Language Arts: (Writing 5) Production and Distribution of Writing: With some guidance and support from adults, use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; and demonstrate sufficient command of keyboarding skills to type a minimum of two pages in a single sitting. (Reading 1) Key Ideas and Details: Quote accurately from a text and cite textual evidence to support analysis of what the text says explicitly and when drawing inferences from the text. (Reading 3) Key Ideas and Details: Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text. (Reading 7) Integration of Knowledge and Ideas: Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently. Integrate information from different media and formats, and in words in words to develop a coherent understanding of a topic or issue.
Math: Operations & Algebraic Thinking: Write and interpret numerical expressions; Analyze patterns and relationships. Measurement & Data: Convert like measurement units within a given measurement system; Represent and interpret data. Geometric measurement: Understand concepts of volume and relate volume to multiplication and to addition.

Health: (2) Analyze the influence of family, peers, culture, media, technology, and other factors on health behaviors. (4) Demonstrate the ability to use interpersonal communication skills to enhance health and avoid or reduce health risks. (8) Demonstrate the ability to advocate for personal, family, and community health.

*Sources: Science standards – National Academy of Sciences; English Language Arts and Math standards – Common Core; Health standards – American Cancer Society

LESSON 10 Harvest Celebration!

PACING GUIDE: TOTAL TIME REQUIRED: 145 minutes / 3 sessions
Session 1: Getting Started 15 min; Activity I “Reflecting on Our Journey” 30 min (English Language Arts)
Session 2: Activity II “What We Learned” 40 min (English Language Arts/Health/Science/Math*)
Session 3: Harvest Celebration 60 min**
*Standards met will depend on project. See p. 61.
**Time will vary. See suggested schedule in lesson on p. 60.

Standards Met:

English Language Arts: (Speaking and Listening 1) Comprehension and Collaboration: Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5-6 topics and texts, building on others’ ideas and expressing their own clearly. (Speaking and Listening 2) Comprehension and Collaboration: Summarize and interpret information presented in diverse media and formats, including visually, quantitatively, and orally, and explain how it contributes to a topic, text, or issue under study. (Speaking and Listening 4) Presentation of Knowledge and Ideas: Report on a topic or text or present an opinion, sequencing ideas logically, using pertinent facts and relevant, descriptive details to accentuate main ideas or themes; use appropriate eye contact, adequate volume, and clear pronunciation at an understandable pace. (Speaking and Listening 5) Presentation of Knowledge and Ideas: Include multimedia components (e.g., graphics, images, music, sound) and visual displays in presentations when appropriate to clarify information and enhance the development of main ideas or themes. (Writing 1) Text Types and Purposes: Write opinion pieces on topics or texts, supporting a point of view with clear reasons and relevant information/evidence. (Writing 5) Production and Distribution of Writing: With some guidance and support from adults, use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of two pages in a single sitting.

Math: Operations & Algebraic Thinking: Write and interpret numerical expressions; Analyze patterns and relationships. Measurement & Data: Represent and interpret data. Geometric measurement: Understand concepts of volume and relate volume to multiplication and to addition.

Health: (4) Students will demonstrate the ability to use interpersonal communication skills to enhance health and avoid or reduce health risks. (8) Students will demonstrate the ability to advocate for personal, family, and community health.

*Sources: Science standards – National Academy of Sciences; English Language Arts and Math standards – Common Core; Health standards – American Cancer Society

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