

# Colorado Reader

## Educator Guide to Accompany the Colorado Reader

### Fresh Finds: Discover Colorado's Bountiful Produce!

**Purpose:** Students will learn about the importance of Colorado produce and the role of farmers markets in providing fresh, locally grown fruits and vegetables. Through engaging articles, fun facts, and interactive activities, the magazine fosters an understanding of agricultural practices, nutritional benefits, and the economic impact of local farming.

**Colorado Academic Standards:** This cross-curricular educational resource will meet the following standards through various activities, such as reading informational texts, conducting math exercises related to cooking, and engaging in writing tasks. Each activity is designed to align with the relevant grade-level expectations for reading comprehension, mathematical reasoning, and effective communication.

#### 3RD GRADE STANDARDS

##### Reading, Writing, and Communicating

###### Reading for All Purposes

- Standard 2: Reading for all purposes involves actively reading, analyzing, and drawing conclusions.
- Standard 3: Readers use information from various texts to increase their knowledge of the world.

###### Writing and Composition

- Standard 1: Writers use specific techniques to make their writing clear and precise.

##### Mathematics

###### Number & Operations—Fractions

- Standard 3.NF.A.3: Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.

###### Measurement & Data

- Standard 3.MD.A.2: Measure and estimate liquid volumes and masses of objects using standard units.

#### 4TH GRADE STANDARDS

##### Reading, Writing, and Communicating

###### Reading for All Purposes

- Standard 2: Reading for all purposes includes understanding the characteristics of informational texts.
- Standard 3: Comprehending the structure of informational texts to increase knowledge.

###### Writing and Composition

- Standard 1: Writers communicate information and ideas effectively.

##### Mathematics

###### Number & Operations—Fractions

- Standard 4.NF.A.1: Explain why a fraction  $\frac{a}{b}$  is equivalent to a fraction  $(n \times a)/(n \times b)$ .

###### Measurement & Data

- Standard 4.MD.A.1: Know relative sizes of measurement units within one system of units.

#### 5TH GRADE STANDARDS

##### Reading, Writing, and Communicating

###### Reading for All Purposes

- Standard 2: Understanding informational texts by comparing and contrasting and explaining how events or ideas are related.
- Standard 3: Using text structure to understand the text better.

###### Writing and Composition

- Standard 1: Writers write to communicate ideas effectively for different purposes and audiences.

##### Mathematics

###### Number & Operations—Fractions

- Standard 5.NF.A.2: Solve word problems involving addition and subtraction of fractions.

###### Measurement & Data

- Standard 5.MD.A.1: Convert among different-sized standard measurement units within a given measurement system.

**How to use:** Use this *Colorado Reader* during your reading, social studies, or math time. Another option is to send these items home with your students (or include in homework/enrichment packets) to complete at home on virtual learning days. Or use during substitute days. Pass out one copy of the *Colorado Reader* to each student. Ask students to read the *Colorado Reader*, completing the activities within the *Reader* as they go. Answers to the activities in the *Reader* are included, should you desire to collect and score responses. To further enhance learning, incorporate any of the additional lessons from the Curriculum Matrix that are identified on the back.

**\$100 Amazon Gift Card:** After using this Colorado Reader with your students, please complete the included Educator Evaluation. Your feedback is valuable to us and helps improve our educational materials. All educators who provide their name and email address will be entered into a drawing to receive a \$100 Amazon Gift Card. An online form of this evaluation can be completed by scanning the QR code.



**Vocabulary:** Reviewing these terms will help students better understand the material and enhance their learning experience as they explore the world of Colorado produce and farmers markets.

**agriculture:** the science or practice of farming, including cultivation of the soil for the growing of crops and the rearing of animals to provide food, wool, and other products

**antioxidant:** a substance that inhibits oxidation and can protect the body from damage caused by free radicals

**capsaicin:** the active component in chili peppers that makes them spicy and can have health benefits

**economic impact:** the effect that an event, policy, or market development has on the economy and local community

**farmers market:** an open-air market where farmers sell their fresh produce and other goods directly to consumers

**irrigation:** the supply of water to land or crops to help growth, typically by means of channels

**metabolism:** the chemical processes that occur within a living organism in order to maintain life, including converting food to energy

**mineral:** a solid, naturally occurring inorganic substance that is essential for the body to function properly

**nutrient:** a substance that provides nourishment essential for the growth and maintenance of life

**produce:** fresh fruits and vegetables that are grown on farms

**vitamin:** any of a group of organic compounds that are essential for normal growth and nutrition and are required in small quantities in the diet

**Lesson Plans to go with this Reader:** The Agricultural Literacy Curriculum Matrix is an online, searchable, and standards-based database for K-12 teachers. The Matrix contextualizes national education standards in science, social studies, and nutritional education with relevant instructional resources linked to Common Core Standards. Below are a few lesson plans that could be used in conjunction with this *Colorado Reader*. Find these lessons and more by searching the key words on the Curriculum Matrix at CoAgClassroom.org.

**A Garden Plot: The Tale of Peter Rabbit** - Students identify foods grown in a garden, observe various types of seed, and grow their own "milk jug" garden. Students listen to the Tale of Peter Rabbit, by Beatrix Potter and investigate produce that is grown in gardens or on farms. Grades K-2

**Fruit and Vegetable Bingo** - Students recognize the names of different fruits and vegetables and describe why they are important. Grades K-2

**Apple Science: Comparing Apples and Onions** - Students explore heredity concepts by comparing observable traits of apples and onions, collecting data on the traits of different apple varieties, and investigating apple production. Additional activities include hands-on methods for testing apple ripeness. Grades 3-5

**Backpack Garden** - Through project-based learning, students use school resources to construct and grow a school garden to supplement the school Backpack Program with fresh fruits and vegetables. Grades 3-5

**Peaches: What's All the Fuzz About?** - Students explore peach production in various regions of the United States, describe how peaches are produced and processed from farm to table, and explain how internal and external structures of peaches support survival and growth. Grades 3-5

**Cruisin' for a Bruisin' Food Packaging Specialist** - In this lesson students will learn that product packaging is a balance between function, food safety, and economics by designing a protective package for shipping perishable fruit. Each package will be presented to the class for evaluation, and the best design will be shipped to test the product's durability. Grades 6-8

**Robots Wanted!** - Through project-based learning, students examine fruit and vegetable farms to discover the amount of manual labor required to plant, grow, and harvest some of our food. They research the business economics of farm management, the plant life cycle, and the requirements and challenges faced in reducing manual labor through mechanization or robotics. Students present their findings to an agricultural engineer to begin developing a solution to farm labor shortages. Grades 6-8

**Aeroponic Engineering and Vertical Farming** - Students will use the Engineering Design Process to develop and construct an aeroponic garden to grow a food crop. Students will develop and apply an understanding of plant anatomy and physiology related to plant growth and ultimately discuss the possibilities and limitations of using vertical farming to produce our food. Grades 6-12

## Answers:

### Page 2: Fruit or Vegetable Activity

1. peach: fruit; 2. cucumber: fruit; 3. apple: fruit; 4. broccoli: vegetable; 5. cantaloupe: fruit; 6. asparagus: vegetable; 7. pumpkin: fruit; 8. grape: fruit; 9. carrot: vegetable; 10. potato: vegetable; 11. strawberry: fruit; 12. cauliflower: vegetable; 13. garlic: vegetable; 14. onion: vegetable; 15. tomato: fruit; 16. corn: fruit; 17. watermelon: fruit; 18. eggplant: fruit; 19. pepper: fruit; 20. butternut squash: fruit

### Page 5: Math Activity Answers

Measuring Ingredients: 1. 450 grams; 2. 100 grams; 3. 420 grams; 4. 225 grams

Scaling the Recipe: 1. 9 tomatoes; 2. 1 1/2 red onions; 3. 45 oz; 4. 4 1/2 cups; 5. 3 bell peppers; 6. 3 Pueblo chiles; 7. 1 cup cilantro

Dressing Measurements: 1. 5 1/3 tablespoons; 2. 6 teaspoons; 3. 4 tablespoons; 4. 1/8 teaspoon

### Page 8: Produce Finale

Quiz Questions: 1. D; 2. D; 3. B; 4. D; 5. C

Matching Answers: Tomatoes: E; Onions: C; Black Beans: B; Sweet Corn: A; Bell Peppers: D

Bonus Challenge: \$50