

6th Grade Resources needed for JCESC Curriculum

ELA

Course Overview

In Sixth Grade Language Arts, students engage in skill units that focus on writing conventions and vocabulary building. They are responsible for obtaining copies of:

- Maniac Magee by Jerry Spinelli
- Bud, Not Buddy by Christopher Paul Curtis
- From the Mixed-up Files of Mrs. Basil E. Frankweiler by E.L. Konigsburg

All three books are Newberry Award Books. Students are required to read these books and use the writing process to write several papers including a research paper. Students also develop and present a variety of speeches. Emphasis is placed on recognizing and using literary elements and techniques. You may purchase these books, or you may borrow them from your local library or school district.

Unit 03: Context Clues Maniac Magee by Jerry Spinelli

Unit 12: Synonyms & Antonyms Bud, Not Buddy by Christopher Paul Curtis

Unit 24: Words from Other Languages From the Mixed-up Files of Mrs. Basil E. Frankweiler by E.L. Konigsburg

Math

Course Overview

This course covers factors, exponents, and orders of operations; prime numbers and prime factorization; rational numbers, GCF (Greatest Common Factor), and LCM (Least Common Multiple); adding fractions and mixed numbers with like and unlike denominators using fraction bars; rounding fractions to the nearest half; subtracting mixed fractions with borrowing using fraction bars; subtracting mixed fractions from whole numbers using fraction bars; multiplying and dividing fractions and mixed fractions; analyzing patterns; numeric and geometric patterns; decimals: estimation, addition, subtraction, equivalence, division and multiplication; measuring to the nearest eighth; equivalent fractions and decimals; ratios and proportions; estimate reasons solutions with fractions and decimals; percents: fractions and decimals; measuring angles; classifying triangles and triangle properties; geometry: lines, diagonals and planes; polygons and quadrilaterals; transformations, tessellations, and similar triangles; customary units conversions and computations; metric system: units of weight, length, and capacity; perimeter and area of triangles and quadrilaterals; perimeter and area; effects of

doubling dimensions; circumference and area of circles and circle sectors; solids and 3-D cube models; volume and surface area of solids; variables, expressions and functions; properties: commutative, associative, and distributive; negative numbers and graphing in the coordinate plane; exploring algebra through diagrams and pictures; simple equations: addition, multiplication, and division; rate of change and inequalities; constructing line graphs, circle graphs and histograms; statistics; displaying data in appropriate graphs; probability: theoretical and actual.

- No additional materials needed other than scratch paper and pencils

Social Studies

Course Overview

Throughout this course, we will study the Western Hemisphere (North and South America), its geographic features, early history, cultural development and economic change. Students will learn about the early inhabitants of the Americas and the impact of European exploration and colonization. The geographic focus includes the study of contemporary regional characteristics, the movement of people, products and ideas, and cultural diversity. Students will develop their understanding of the relationship between markets and available resources.

*no additional resources needed

Science

Course Overview

Students in this course will:

- continue to conduct investigations and begin to apply mathematical skills in evaluating and analyzing variables of data.
- identify basic skills of the scientific inquiry process, such as how thinking scientifically is helpful in daily life and how technological advances affect the quality of life.
- research how men and women of other countries and cultures contribute to science.
- identify rocks, their distinct properties and formation and characteristic properties of the minerals that form them.
- recognize that a cell continually divides to create new cells, reproduction of cells occur, similar cells have special functions, and characteristics of an organism are a result of inherited traits.

- acquire knowledge of the uses, properties and chemical processes of the small particles that compose matter.
- will learn about the renewable and nonrenewable sources of energy.

[Required Materials for Science160](#)

Throughout this course there will be a number of links for printable documents pertaining to each unit. You will be given directions to click on these links. These documents will be in PDF format and ready for printing.

Required Course Material SCI160: SCIENCE 160

Throughout this course you will be instructed to log information into a notebook. You can use a spiral notebook to record your information.

Unit 01: Scientific Inquiry, Exploration and Analysis

2 plants, fertilizer, soil for plant

Unit 02: Observations vs. Inferences

Science Notebook

2 clear 1 cup containers, 2 tablespoons baking soda, 2 tablespoons vinegar

Unit 03: Safe Science Procedures

Protective wear: goggles, gloves

Unit 04: Setting Up an Experiment or Investigation

One individual bag of M&M's, science notebook

Unit 05: Observation Tools

A hole punch, tape, 4 blank note cards, salt, sugar, paper, soil

Unit 06: Measurement Tools

Thermometer, calculator, balance, beaker, water, toy car (that can go in water),

At home: cracker box, cereal box, or a shoe box, rock, sugar cubes

Unit 07: Basic Concepts of Matter

4 ice cubes, shallow bowl, candle

Unit 08: Periodic Table

Large sugar cookie, icing, Choose from: chocolate chips, M&M's, skittles, marshmallows, peanut butter chips, chocolate chips, popcorn, raisins, jelly beans eyedropper or syringe, few drops of perfume, deflated balloon, jar

Unit 09: Properties of Solids, Liquids, and Gases

4 ice cubes, shallow bowl, candle

Unit 10: Identify Change in Properties

JCESC VLA Required Course Material SCI160: Science 160 2

N/A

Unit 11: Everyday Perspectives

3 cups, 3 pennies, Vinegar, dishwashing liquid
¼ cup vinegar, 2 tbsp baking soda, 2 balloons, and 2 empty water bottles

Unit 14: Non Renewable Energy Sources: Coal, Oil and Gas

Sink or large foil pan with water, vegetable cooking oil, dishwashing liquid, sponge, paper towel, drinking straws

Unit 15: Renewable Energy Sources: Wind, Solar and Geothermal

4 graham crackers, 2 plain milk chocolate candy bars, 8-by-11-inch glass baking pan, a clear glass lid for the baking pan, 1 thermometer

Unit 19: The Rock Cycle

Clean empty coffee can with plastic lid, 2 inch samples of granite, sandstone chalk, basalt or rocks from your yard, clear 7oz plastic cup of water, watch or timer, metric ruler

Unit 21: Basic Functions of Cells

One raw egg, apple cider vinegar (any vinegar will work), yogurt container with a lid plastic sacks, twist ties, jello, gelatin, boiling water, large mixing bowls, spoons plastic "tupperware" sandwich containers, canned fruits, paper and writing implement

Unit 25: Cell Differentiation

Crayons, 2 quarters, 2 nickels, 2 dimes, 2 pennies
2 flower pots, soil, potato (with "eyes") for planting

Unit 26: Interaction among Organisms; Symbiosis

Meter sticks, metric rulers, poster board, markers, photographs of ecosystems

Unit 29: Robots and Machines

Drawing supplies, building construction sets or household junk, boxes, rods, tongue depressors, pipe cleaners, etc.

Unit 30: Impact of Technology on Society

N/A

Unit 31: Designs Using Technology and Problem Solving

Toothpicks and mini marshmallows