COMMON CORE
Lessons & Activities

The Scientific METHOD

Reading for Information
Higher-Order Thinking
Writing Prompts
Current Events Analysis
Vocabulary
Cause & Effect
Graphic Organizers
& More!

REPRODUCIBLE

About this Book

This Common Core Lessons and Activities Book allows you to immediately meet new Common Core State Standards for English Language Arts, as well as Literacy and Writing in History/Social Studies. It is designed to supplement your Social Studies resources, adding new Common Core rigor, analysis, writing, inference, text-dependent questions, and more into your daily instruction.

How to Use this Book:

- Work through the lessons and activities as a class to teach your students higher-order thinking, analysis, and 21st century skills necessary to meet new Common Core expectations.
- Allow students to work through the lessons independently to build and practice these new skills.
- Include technology, collaboration, presentation, and discussion in the activities as you desire—you can decide how in-depth to go.
- Watch your class develop new abilities to meet the rigor of Common Core State Standards, right before your eyes!

Tips:

- Use some of the pages—or use them all—based on your grade, your students, your curriculum, and your needs.
- Use the pages at their current size, or if you prefer them to be 8-1/2" x 11", enlarge them 125% on your copy machine.
- Download graphic organizers labeled **"GO"** in the Table of Contents by going to: www.gallopade.com/client/go
- Use the correlations grid to easily see which Common Core standards are covered in each lesson.

Common Core Lessons & Activities:
Scientific Method

By Carole Marsh
Published by Gallopade International, Inc.

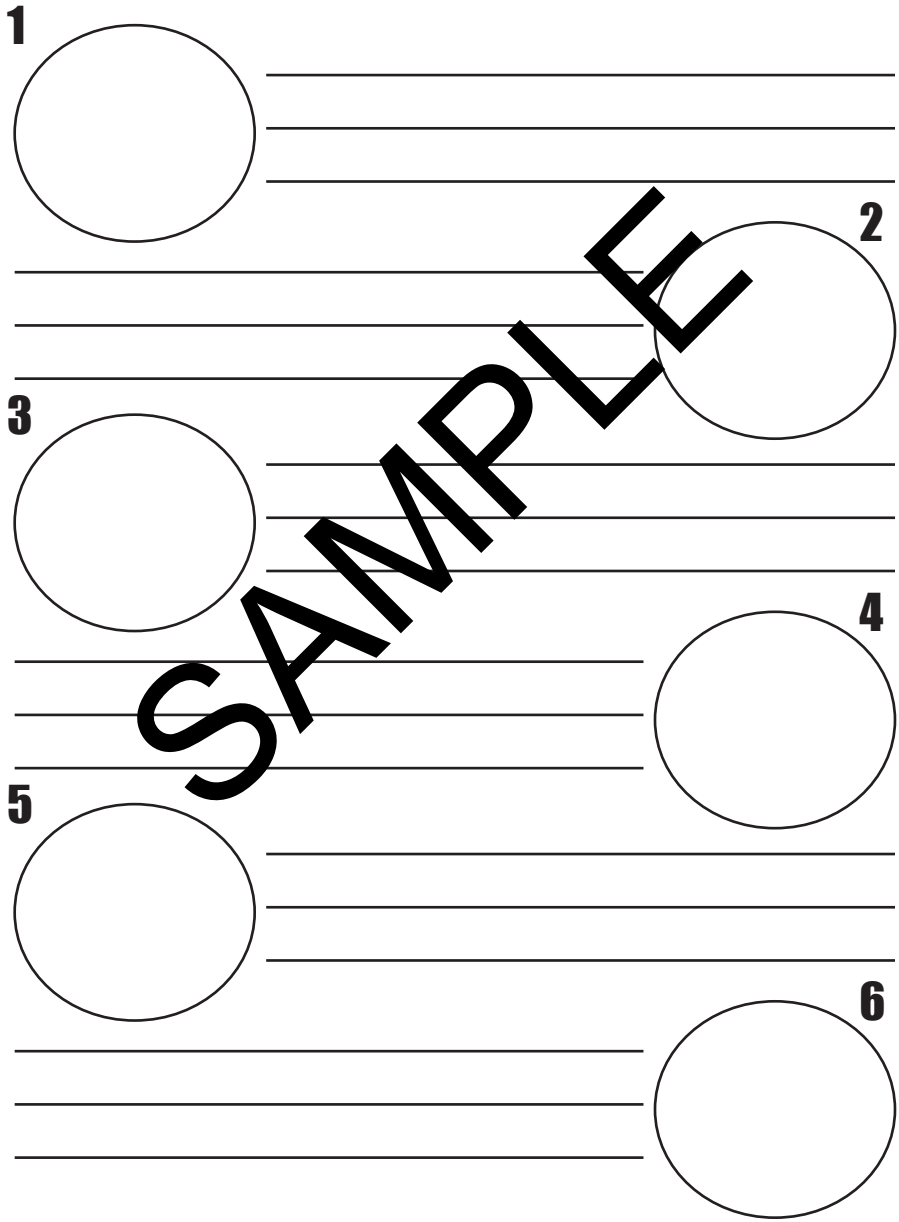
Printed in the U.S.A. (Peachtree City, Georgia)

TABLE OF CONTENTS

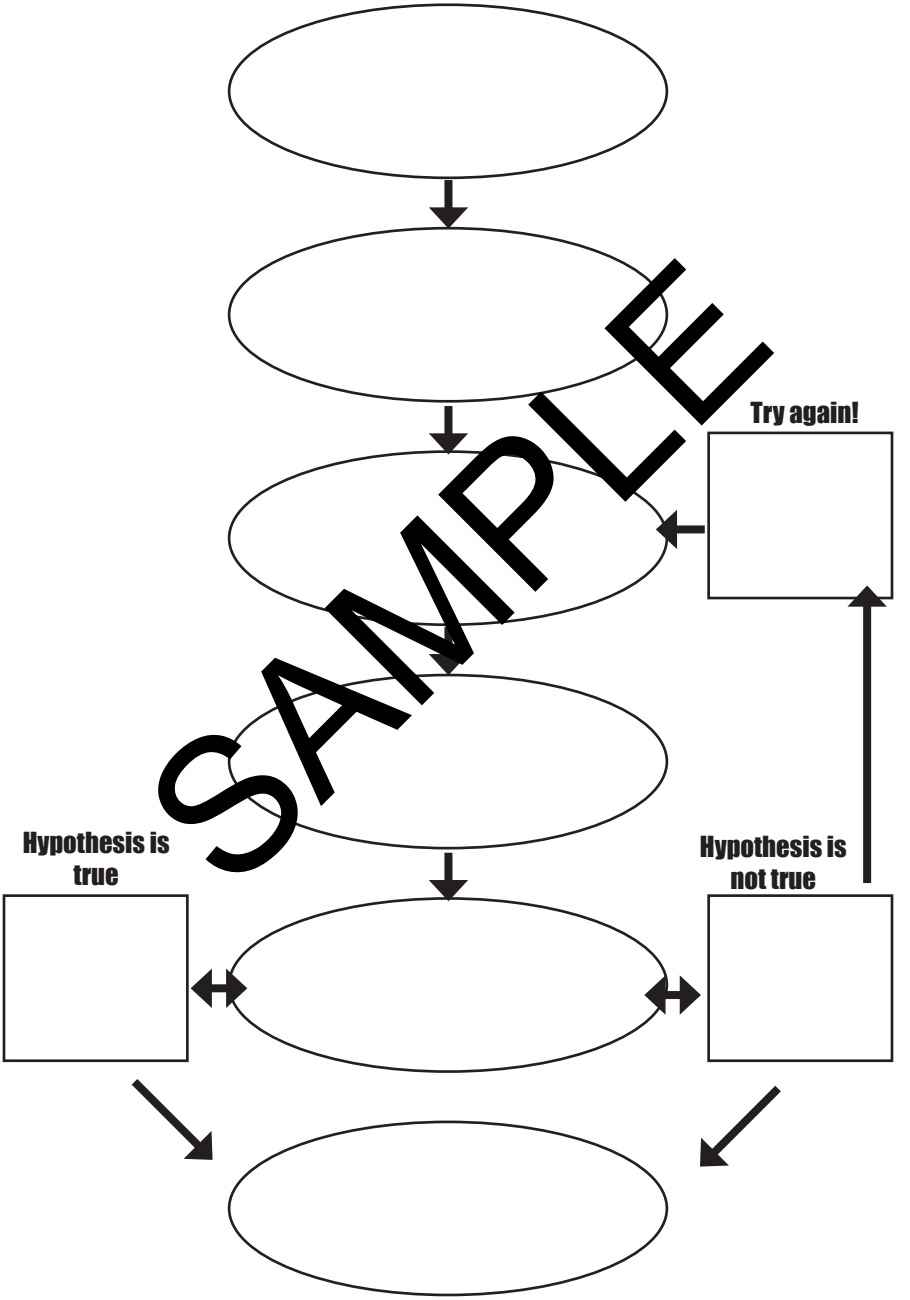
G: Includes Graphic Organizer
GO: Graphic Organizer is also available 8½" x 11" online download at www.gallopade.com/client/go
(numbers above correspond to the graphic organizer numbers online)

Scientific Method Chart

Write in the name and definition of each of the scientific method's 6 steps, in order, in the graphic organizer.



Fill in each step of the scientific method in the correct place in the flow chart. Explain what scientific "tools" you might use in each step. Tools may be ways of thinking or specific scientific equipment.



Use Your Senses

Read the text and complete Parts A and B.

A scientist's five senses are the most important tools of observation. Scientists use their senses to see, hear, taste, smell, and touch things when asking questions. They use those same senses to observe and experience the results of their experiments.

PART A: Choose one of the 10 objects and observe it using all of your senses. Complete the table by recording your observations.
Important note: not all items should be tasted!!!!!

apple • feather • pencil • saltine cracker • rock • water
tree leaf • paper • shell • M&M

SENSE	ITEM:_____ Description
Sight	
Hearing	
Taste	
Smell	
Touch	

PART B: Some experiments involve loud noises, laser beams, sharp objects, chemicals, and other potentially harmful substances. List at least one thing that could damage each sense organ. Then infer what pieces of equipment scientists could use to protect each body part.

eyes _____

hands _____

hair _____

ears _____

nose_____

body_____

Quality vs. Quantity

Read the text and answer the questions.

Data comes in two forms, qualitative and quantitative. Qualitative data is best explained as a "description." A quality can be observed but cannot be measured. Colors, textures, smells, tastes, and more, are examples of qualitative data. Quantitative data is best explained as data that can be measured in numbers. There are many different types of quantitative data, including height, weight, length, width, area, volume, and more.

1. Use the text to complete each sentence with the correct vocabulary word.
   A. She took note of the animal's _____ data by recording how tall it was and how heavy it was.
   B. She took note of the animal's _____ data by recording how its fur looked and felt.

2. Identify each of the following observations of a bean sprout as either **qualitative data** or **quantitative data**.
   A. 2 leaves _____
   B. short, wide leaves _____
   C. slight scent _____
   D. non-poisonous _____
   E. 13.75 centimeters tall _____
   F. bitter taste _____
   G. 25% growth in 1 week _____
   H. thin, delicate stem _____

3. Determine whether each example is a change in **quality** or **quantity**.
   A. _____ After a week, the plum's smooth skin became wrinkled.
   B. _____ Out of a class of 24, two students stayed home sick.
   C. _____ The carpenter sawed 17 centimeters off a wood beam.
   D. _____ A tree's green leaf changes color in the fall.

Writing Prompt

Write two paragraphs about yourself. Title the first paragraph "My Qualitative Data," and include at least 4 examples of qualitative data about yourself. Title the second paragraph "My Quantitative Data," and describe at least 4 examples of quantitative data about yourself.

Standard Measurements

Read the text and answer the questions.

It is important that scientists share information in ways that are understandable for everyone. That is why measurements are standardized, or made the same, around the world. Standard measurements are important for doing experiments and recording data. Scientists need information to be consistent to make sure that experiments are always done with the right measurements.

Most standard scientific measurements use the metric system. The metric system starts with a basic measurement, called a base unit. Scientists add prefixes to each basic unit to change its value. Each prefix is a factor of ten. For example, "kilo" means "thousand." (1 kilometer = 1,000 meters)

1. A. Define the word standardized as it is used in the text.
   B. Why do scientists use a standardized system?

2. Complete the chart by adding the prefix to each basic unit.

Prefix	Meaning	Symbol	Length	Mass	Volume
kilo-	Thousand (1,000)	k		kilogram	
hecto-	Hundred (1[illegible])	hm	hectometer		
deka-	Ten (1[illegible])	dkm			dekaliter
Base unit	One (1)	m	meter	gram	liter
deci-	Tenths (0.1)	dm		decigram	
centi-	Hundredths (0.01)	cm			
milli-	Thousandths (0.001)	mm			milliliter

3. A. Circle the base units of length, mass, and volume
   B. How many meters is 1 hectometer?
   C. How many decigrams is 1 gram?
   D. How many liters is 1 kiloliter?

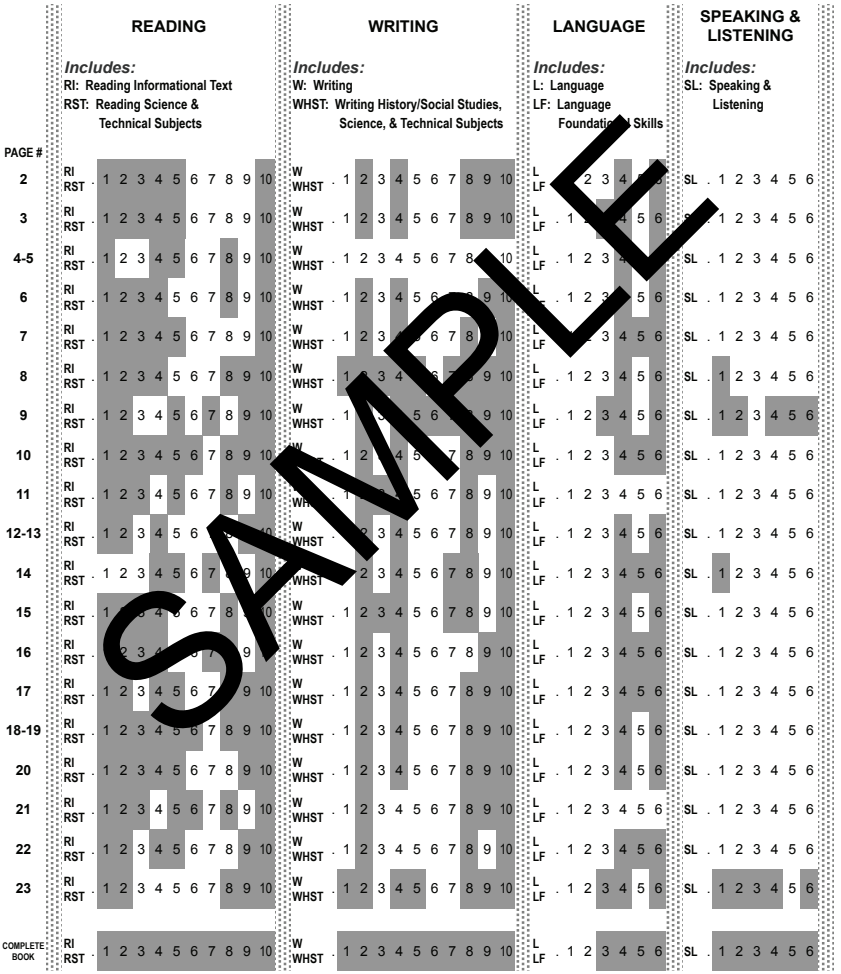
4. Choose the best measurement of distance between two cities. Explain why this measurement is most useful.
   a) kilogram b) kilometer c) centimeter d) milliliter

Correlations to Common Core State Standards

For your convenience, correlations are listed page-by-page, and for the entire book!

This book is correlated to the Common Core State Standards for English Language Arts grades 3-8, and to Common Core State Standards for Literacy in History, Science, & Technological Subjects grades 6-8.

Correlations are highlighted in gray.



For the complete Common Core standard identifier, combine your grade + "." + letter code above + "." + number code above.

In addition to the correlations indicated here, the activities may be adapted or expanded to align to additional standards and to meet the diverse needs of your unique students!

Common Core Lessons & Activities Books

Social Studies Titles:

- Declaration of Independence
- U.S. Constitution
- Bill of Rights
- Road to the Civil War
- The Civil War: Key Battles & Events
- Jamestown
- Key Events of World War II
- Civil Rights Movement
- Branches of Government
- Basic Economic Concepts
- Women's Suffrage and the 19th Amendment
- The American Revolution
- Explorers
- The Olympics
- Underground Railroad
- Forms of Government: Democracy, Monarchy, & Oligarchy & More
- Ancient Greece
- Ancient Egypt
- Native Americans
- Indian Removal & the Trail of Tears
- Inventors & Inventions
- Map Skills
- Westward Expansion
- Communities

Science Titles:

- Habitats
- States of Matter
- Cell Structure
- Weather
- Water Cycle
- Energy
- Solar System
- Sound
- Mammals
- Light
- Rocks and Minerals
- Oceans
- Heredity & Genetics
- Magnetism
- Natural Resources
- Ecosystems
- Force & Motion
- History of the Earth
- Life Cycles
- Wave Properties
- Landforms
- Classification of Organisms
- Electricity
- The Scientific Method

COMMON CORE Lessons & Activities

Are you expected to change how you teach because of new CCSS for English Language Arts & new CCSS for Literacy and Writing in History/ Social Studies and Science?

Are you expected to continue to meet existing science and social studies standards, AND integrate new, more rigorous expectations for reading, writing, analysis, inference, and more into your daily instruction?

This series of 48+ little books is a HUGE help!

Common Core at an Uncommon Value!

Supplement the resources you already have by choosing the books in this series that match the science and social studies topics you teach. Each book will provide you with ready-to-use reproducible pages that are the exact kinds of Common Core lessons and activities you need to meet the new added requirements of Common Core!

"You'll want these for every topic you teach!"
–Amy Johnson, Common Core Specialist

You don't have to start from scratch. This brand new series meets Common Core State Standards for ELA + Common Core State Standards for Literacy and Writing in History/Social Studies and Science!

GALLOPADE
www.gallopade.com