

6th Grade Science:

Instruction will be guided from the 6th *Grade Science: Level Red* book. The First part of the quarter is based around the scientific method and measurement. These are skills that students will use throughout their scientific schooling. From this, we will start discussing the properties of matter and then finish off with planetary science. The flow of class is usually has the students take notes on day 1 and then a lab/activity to reinforce the material on day 2, for each section. There are 3-4 sections per chapter. At the end of a chapter, students will have 1 review day before that chapter's test. Chapters should be done in less than 2-3 weeks.

- Chapter 1: The Nature of Science

Students will:

- Know the difference between a law and a theory.
- Define the different steps of the scientific method.
- Create their own Scientific investigation using the scientific method.
- Construct and utilize models in science.
- Develop Critical thinking skills to evaluate scientific claims.

- Chapter 2: Measurement

Students will:

- Understand the importance of measurements in a scientific investigation.
- Know when Estimation, Accuracy, and Precision is appropriate to use.
- Pick the appropriate unit of measure for the object being measured.
- Understand and use the SI units of measure.
- Be able to convert measurements.
- Construct appropriate tables and graphs to display their data.
- Construct a scale model of the classroom using measurements and conversions.

- Chapter 3: Matter and its changes

Students will:

- Be able to distinguish between a physical and chemical change in matter.
- Give different properties (physical and chemical of matter).
- Be able to draw a model of how atoms are spaced in different states of matter.
- Know the boiling point and melting point of water in all 3 temperatures.
- Know the law of conservation of mass and how its applied to our labs.

- Chapter 4: Atoms, Elements, and the Periodic Table

Students will:

- Describe the characteristics of matter.
- Identify the parts of an atom.
- Identify what makes up matter.
- Compare the models that are used for atoms.
- Identify the relationship between elements and the periodic table.
- Explain the meaning of atomic mass and atomic number.
- Identify what makes and isotope.
- Contrast the different parts of the periodic table.
- Identify the characteristics of a compound.
- Compare and Contrast different types of mixtures.
- Balance Chemical Equations.

7th Grade Science:

Instruction will be guided from the 7th *Grade Science: Level green* book. The First part of the quarter is based around the scientific method. These are skills that students will use throughout their scientific schooling. The flow of class is usually has the students take notes on day 1 and then a lab/activity to reinforce the material on day 2, for each section. There are 3-4 sections per chapter. At the end of a chapter, students will have 1 review day before that chapter's test. Chapters should be done in less than 2-3 weeks.

Life's Structure and Classification

Students will:

- Distinguish between living and nonliving things.
- Identify what living things need to survive.
- Describe how early scientists classified living things.
- Explain the system of binomial nomenclature.
- Demonstrate how to use a dichotomous key.
- Describe the development of the cell theory.
- Identify names and functions of each part of a cell.
- Explain how important a nucleus is in a cell.
- Compare tissues, organs, and organ systems.
- Explain how a virus makes copies of itself.
- Identify the benefits of vaccines.
- Investigate some uses of viruses.

Cell Processes & Cellular Reproduction

Students will:

- List the differences among atoms, elements, molecules, and compounds.
- Explain the relationship between chemistry and life science.
- Discuss how organic compounds are different from inorganic compounds.
- Describe the function of selectively permeable membrane.
- Explain how the processes of diffusion and osmosis move molecules in living cells.
- Explain how passive transport and active transport differ.
- List the differences between producers and consumers.
- Explain how the processes of photosynthesis and cellular respiration store and release energy.
- Describe how cells get energy from glucose through fermentation.
- Explain why mitosis is important.
- Examine the steps of mitosis.
- Compare mitosis in plant and animal cells.
- List two examples of asexual reproduction.
- Explain the steps of meiosis.

Heredity

Students will:

- Explain how traits are inherited.
- Identify Mendel's role in the history of genetics.
- Use a punnett square to predict the results of crosses.
- Compare and contrast the difference between an individual's genotype and phenotype.
- Explain how traits are inherited by incomplete dominance.

- Compare multiple alleles and polygenic inheritance and give examples of each.
- Describe two human genetic disorders and how they are inherited.
- Evaluate the importance of advances in genetics.
- Sequence the steps in making genetically engineered organisms.

Adaptations over Time

Students will:

- Describe Lamarck's hypothesis of acquired characteristics and Darwin's theory of natural selection.
- Identify why variations in organisms are important.
- Compare and contrast gradualism and punctuated equilibrium.
- Identify the importance of fossils as evidence of evolution.
- Explain how relative and radiometric dating are used to estimate the age of fossils.
- List examples of five types of evidence for evolution.
- Describe the differences among living primates.
- Identify the adaptations of primates.
- Discuss the evolutionary history of modern primates.
- Understand the Church's teaching on evolution.

8th Grade Science:

Instruction will be guided from the 8th *Grade Science: Level Blue* book. The First part of the quarter is based around the scientific method. These are skills that students will use throughout their scientific schooling. The flow of class is usually has the students take notes on day 1 and then a lab/activity to reinforce the material on day 2, for each section. There are 3-4 sections per chapter. At the end of a chapter, students will have 1 review day before that chapter's test. Chapters should be done in less than 2-3 weeks.

Plate Tectonics

Students will:

- Describe the hypothesis of continental drift.
- Identify evidence supporting continental drift.
- Explain seafloor spreading.
- Recognize how age and magnetic clues support seafloor spreading.
- Compare and Contrast the different types of plate boundaries.
- Explain how heat inside Earth Cause plate tectonics.
- Recognize features caused by plate tectonics.

Earthquakes and Volcanoes

Students will:

- Explain how earthquakes are caused by buildup of strain in Earth's crust.
- Compare and Contrast primary, secondary, and surface waves.
- Recognize earthquake hazards and how to prepare for them.
- Explain how volcanoes can affect people.
- Describe how types of materials are produced by volcanoes.
- Compare how three different volcano forms develop.

- Explain how the locations and earthquake epicenters are related to tectonic plate boundaries.
- Explain how heat within Earth causes Earth's plates to move.

Clues to Earth's Past

Students will:

- List the conditions necessary for fossils to form.
- Describe several processes of fossil formation.
- Explain how fossil correlation is used to determine rock ages.
- Determine how fossils can be used to explain changes in Earth's surface, life forms, and environments.
- Describe methods used to assign relative ages to rock layers.
- Interpret gaps in the rock record.
- Give an example of how rock layers can be correlated with other rock layers.
- Identify how absolute age differs from relative age.
- Describe how the half-lives of isotopes are used to determine a rock's age.

Geologic Time

Students will:

- Explain how geologic time can be divided into units.
- Relate changes of Earth's organisms to divisions on the geologic time scale.
- Describe how plate tectonics affects species.
- Identify characteristic Precambrian and Paleozoic life-forms.
- Draw conclusions about how species adapted to changing environments in Precambrian time and the Paleozoic Era.
- Describe changes in Earth and its life-forms at the end of the Paleozoic Era.
- Compare and Contrast characteristic life-forms in the Mesozoic and Cenozoic Eras.
- Explain how changes caused by plate tectonics affected organisms during the Mesozoic Era.
- Identify when humans first appeared on Earth.
- Explanation of our Catholic Beliefs in terms of the Geologic Time Scale.

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6th Grade Social Studies:

Instruction will be guided from the *World Cultures and Geography: Western Hemisphere and Europe* book. The First part of the quarter is based around what geography is and how we will try to understand it. Students will have graphic organizers to fill out as we read through the book and will be assigned homework once the chapter has been read. Students will work on different projects throughout each chapter to gain a deeper understanding of the concepts presented. Once all sections of a chapter are completed, students will take a unit test.

Unit 1: Introduction to Geography:

- Chapter 1: Understanding the Earth and its people's:
Students will learn:
 - Geographers have specialized ways to view and interpret information about the world.
 - Geographers use technological tools to help them understand both Earth's physical processes and the activities of people on Earth.
 - Geographers do many different kinds of jobs as they gather data and analyze and interpret it.
- Chapter 2: Earth's Interlocking Systems- How do Earth's physical systems make life on Earth

possible?

Students will learn:

- The Earth is composed of many layers, and its surface continually changes because of the drifting plates.
 - Interactions between landforms and bodies of water makes life on earth possible.
 - The Earth's rotation and revolution influences weather, climate, and living conditions on Earth.
 - Human interference with physical systems can cause problems with the environment.
- Chapter 3: Human Geography- How do natural resources affect a country's population distribution and economy?

Students will learn:

1. People are not equally distributed on the Earth's Surface.

- People move from one place to another to meet their needs.
 - Economic activities in an area depend on the presence of natural resources in that area.
 - The world is divided into many political regions and organizations.
- Chapter 4: People and Culture-

Students will learn:

- Human beings are members of social groups that have shared and unique behaviors and attitudes.
 - Cultures do not remain the same, but change over time.

6th Grade Word Skills:

Instruction will be guided from the 6th *Grade Spelling: Lesson and Activities* that come from our literature books. Every week, students will have a list of words to work with. Students will be assigned different tasks (thinking critically, proofreading, sorting, etc.) to help practice and understand the words. At the end of each week, students will take a spelling test to see how well they performed on those week's spelling words.

- Lesson 1: Short Vowels
- Lesson 2: Long Vowels
- Lesson 3: Variant Vowels
- Lesson 4: Vowels Before r
- Lesson 6: Other Vowel Spellings
- Lesson 7: Words with ie and ei
- Lesson 8: Compound Words
- Lesson 9: Homophones
- Spooky Halloween Words (for 6th Grade)

6th Grade Religion

Instruction will be guided from the 6th *Grade Blest Are We* book. In this quarter, we are going to examine different ways we can listen to God and respond to what He is calling us to do. In each section, we will use our Bibles to read scripture and pull out stories to help better illustrate what we are learning from the book. Students will also do different projects (posters, skits, good works, etc.) to help bring what we are learning to life. Each Chapter should take about 2 weeks to complete.

Unit 1: We Answer God's Call

- Chapter 1: Revelation and Response

Students will learn:

- That god invites us to respond to him with total trust.
- The examples Abraham and Sarah in how they had trust in the lord.

- Chapter 2: Sacrifice and Promise

Students will learn:

- How and why God sacrifices his own son to set us free from sin.
- What sacrifices we can make in our everyday life to become closer to God.

- Chapter 3: Covenant and Commitment

Students will learn:

- In response to God's faithfulness, we must be committed to our faith.
- Examine the scripture story of Jacob and the Covenant that he entered in with God.

- Chapter 4: Piety and Prayer

Students will learn:

- We must love God above all else and remain focused on his will.
- We will examine the story of Joseph as being the loyal son.

Unit 2: God Saves and Delivers Us

- Chapter 5: Slavery and Deliverance

Students will learn:

- How God continues to act in today's world to deliver us from the enslavement of sin.
- We will examine the exodus story.

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6 Grade Literature:

Instruction will be guided from the 6th *Grade Elements of Literature Book*. Each story will take a little over 1 week to complete. We will read the story and practice the different reading skills associated with that story. Students will have comprehension questions to answer at the end of each short story. Once we get through *Collection 1: Plot- Moments of Truth* I would like to start a classroom novel. I would like to read *Hatchet* for 2 reasons. The first reason is because, it ties into what we are reading and falls into the moments of truth collection. The second reason is because, this was the first book that I actually liked when I was a youth. This book sparked my interest in reading.

Collection 1: Plot- Moments of Truth.

- Dragon, Dragon

- Summarizing the Plot: Retelling the story.

- Just Once

- Recognizing conflicts in a story. Where do they come from and how to they elevate.
- Reading Skills: retelling.

- The Stone

- Examine the moral lesson of the story. Advice for living.
- Reading Skills: make predictions.

- All Summer in a Day

- Focus on Setting of the story and how it is an intricate part for this story to take place.
- Reading Skills: Making Inferences.

- Examining Nonfiction Texts

- Examining parts of a print and on-line article.
- Discovering what makes a good non-fiction article.

- In the Fog / The Hitchhiker

- Comparing two different pieces of literature (radio broadcast and a live action play).

- Focus primarily on Suspense and how that is building up in the story.
- Earth /Earth
- Examine two distinctly different poems.
- Examine rhyme in the poem and the motivation behind each poem.
- Paraphrase what is said in the poems.
- Constructing their own poems.
- The Path Through the Cemetery
- Short story used to conclude this selection 1 in our books.
- Students will learn all the reading skills discussed in this unit to answer the questions of this story.
- Suspense Book Report
- Examine the different parts of literature (plot, characters, etc.)