

Christ the King Catholic School

Eighth Grade Curriculum

Religion

Students will . . .

- exhibit a deeper understanding of the Commandments, Beatitudes, and Catholic moral principles.
- Apply knowledge of Catholic teachings to moral decision-making.
- Realize what morality is and appreciate how the moral life leads to happiness.
- Express their commitment to full membership in the Church, especially through the reception of the sacrament of Confirmation.
- Open themselves to the Holy Spirit and working of the demonstrate knowledge and understanding of the working of the Gifts and the Fruits of the Holy Spirit in their lives.
- Respond to the Gospel call by sharing time and talents in service to the community.
- Recognize the beliefs and knowledge of their faith and the importance of living their faith daily.
- Identify and apply positive values regarding God's gift of human sexuality.
- Utilize a variety of prayer forms and demonstrate a commitment to prayer.
- Understand the importance of the order of the Mass and actively participate in, and prepare for, liturgical celebrations.

- Show respect and love for all people in God’s Global Village, and lovingly participate in mission and outreach experiences toward God’s people.
- Develop ideas of the Catholic moral life with Jesus as the perfect role model.
- Explain conscience, sin, forgiveness, and consequences as parts of the moral decision-making process.
- Investigate the use of influence, education, advice, prayer, choice, and evaluation in making decisions.

Reading

Students will . . .

- Apply a variety of reading strategies for comprehension appropriate to the genre.
- Use context clues, prior knowledge, and inferences to build vocabulary.
- Identify and analyze the elements of non-fiction, fiction, short stories, novels and drama.
- Identify and describe the different types of poems and use of figurative language in poetry.
- Identify the purposes and characteristics of the major literary genres.
- Identify common themes in literature.
- Apply critical thinking to the interpretation of literature.
- Identify and analyze the elements of a short story, novel, and drama.

English

Content Skills:

- Eight parts of speech
- Punctuation and capitalization
- Develop and refine writing skills
- Types of paragraphs
- Research process (MLA thesis style)
- Oral presentations
- Vocabulary
- Word structure
- Current events

Math (Algebra)

Students will . . .

- Show familiarity with the set of real numbers
- Show data relationships with various types of graphs
- Show functions in three ways
- Model and solve two-step equations
- Solve percent and percent of change problems
- Solve equations and inequalities using all operations
- Demonstrate knowledge of graphing and writing linear equations
- Solve systems of equations and systems of linear equalities
- Graph and solve quadratic equations
- Add, subtract and multiply polynomials; factor polynomials
- Do basic work with exponents

- Show all steps in algebra problem solutions
- Solve word problems, including percent of change and time-distance problems

Content Skills:

- Production and identification of various types of graphs
- Order of operations
- Function rules, table of values for a function, graphing of functions
- Combining like terms to solve equations
- Percent equations: percent of change problems
- Absolute value equations
- Solving inequalities using all operations
- Slope
- Rate of change
- Direct variation
- Slope-Intersect form
- $Ax+By=C$ form
- Solving systems of equations by graphing, substitution, and elimination
- Writing systems
- Linear equalities
- Identifying and graphing quadratic function
- Solving quadric equations using square roots and the quadratic formula
- Zero and negative exponents
- Multiplication and division properties of exponents

- Adding, subtracting and multiplying polynomials; factoring trinomials
- Solving equations by factoring; solving motion problems

Science

Matter and Energy

Students will . . .

- Recognize elements (unique atoms) and compounds (molecules or crystals) are pure substances that have characteristic properties.
- Describe evidence that supports the theory that matter is composed of moving particles too small to be seen (atoms, molecules).
- Recognize more than 100 known elements exist that may be combined in nature or by man to produce compounds that make up the living and nonliving substances in the environment (not memorization of the periodic table).
- Provide evidence that mass is conserved during a chemical change in a closed system.
- Explain that the amount of matter remains constant while being recycled through food chains and food webs.
- Recognize chemical energy is stored in chemical compounds.
- Recognize the types of materials that transfer energy by conduction, convection, and/or radiation.
- Describe how heat is transferred by conduction, convection, and radiation, and classify examples of each.

- Classify common materials as conductors or insulators of thermal energy.
- Predict the differences in temperature over time on different colored objects placed under the same heat source.
- Describe the interactions of like and unlike charges.
- Identify the evidence of different energy transformations that may occur as chemical energy is released during a chemical reaction.
- Identify the different energy transformation that occur between different systems (e.g. chemical energy in battery converted to electricity in circuit converted to light and heat from a bulb).
- Recognize that, during an energy transformation heat is often transferred from one object (system) to another because of a difference in temperature.
- Recognize energy is not lost but conserved as it is transferred and transformed.

Living Organisms

Students will . . .

- Recognize that most plants and animals require food and oxygen (needed to release energy from food).
- Identify and contrast the structures of plants and animals that serve similar functions (e.g. taking in water and oxygen, support, response to stimuli, obtaining energy, circulation, digestion, excretion, reproduction).

- Recognize photosynthesis is a chemical change with reactants (water and carbon dioxide) and products (sugar and oxygen) that takes place in the presence of light and chlorophyll.
- Recognize oxygen is needed by all cells of most organisms for the release of energy from nutrient (sugar) molecules.
- Describe the importance of the transport and exchange of oxygen and carbon dioxide to the survival of the organism.
- Illustrate and explain the path water and nutrients take as they move through the transport system of a plant.
- Compare and contrast the processes of asexual and sexual reproduction, including the type and number of cells involved (one body cell in asexual, two sex cells in sexual) and the number of gene sets passed from parent(s) to offspring.
- Identify examples of asexual reproduction.
- Compare and contrast the reproductive mechanisms of classes of vertebrates.
- Explain how flowering plants reproduce sexually.
- Identify chromosomes as cellular structures that occur in pairs that carry hereditary information in units called genes.
- Recognize that when asexual reproduction occurs, the same genetic information found in the parent cell is copied and passed on to each new daughter cell.
- Recognize that when sexual reproduction occurs, genetic material from both parents is passed on and combined to form the genetic code for the new organism.

- Recognize that when asexual reproduction occurs, the daughter cell is identical to the parent cell.
- Recognize that when sexual reproduction occurs, the offspring is not identical to either parent due to the combining of the different genetic codes contained in each sex cell.

Ecology

Students will . . .

- Illustrate the oxygen/carbon dioxide cycles
- Describe the processes involved in the recycling of matter in the oxygen/carbon dioxide cycles.

Scientific Inquiry

Students will . . .

- Formulate testable questions and hypotheses
- Recognize the importance of the independent variable, dependent variables, control of constants, and multiple trials to the design of a valid experiment.
- Design and conduct a valid experiment.
- Evaluate the design of an experiment and make suggestions for reasonable improvements or extensions of an experiment.
- Recognize that different kinds of questions suggest different kinds of scientific investigations.
- Make qualitative observations using the five senses.
- Determine the appropriate tools and techniques to collect data.
- Use a variety of tools and equipment to gather data.

- Measure length to the nearest millimeter, mass to the nearest tenth of a gram and volume to the nearest milliliter and time to the nearest second.
- Judge whether measurements and computation of quantities are reasonable.
- Calculate range, average/mean, median and mode of a set of data. Judge the suitability of these calculations for the intended analysis.
- Use quantitative and qualitative data as support for reasonable explanations (conclusions).
- Use data as support for observed patterns and relationships and to make predictions to be tested.
- Recognize the possible effects of errors in observations, measurements, and calculations on the formulation of explanations (conclusions).
- Evaluate the reasonableness of an explanation (conclusion).
- Analyze whether evidence (data) and scientific principles support proposed explanations (hypotheses, laws, theories).
- Communicate the procedures and results of investigations and explanations through:
 - oral presentations
 - drawings and maps
 - data tables
 - graphs
 - writings

Science and Technology

Students will . . .

- Describe how technological solutions to problems can have both benefits and drawbacks.
- Describe how the contributions of scientists and inventors have contributed to science, technology and human activity.
- Recognize the difficulty science innovators experience as they attempt to break through accepted ideas of their time to reach conclusions that may lead to changes in those ideas and serve to advance scientific understanding.
- Identify and evaluate the physical, social, economic and/or environmental problems that may be overcome using science and technology.
- Describe ways in which science and society influence one another.
- Identify and evaluate the physical, social, economic, and/or environmental problems that may be overcome using science and technology.

Social Studies

Content Area: American History

1700's Slavery in the United States

1800's Civil War in the US
 The Reconstruction Period (the Southern States)
 The New West

1900's

Industrial Growth

Immigration

A World Power

World War I

The Depression

World War II

The Cold War Era

The Civil Rights Movement

American Leadership Today