

**Mathematics**

The Senior Elementary math curriculum is the culmination of children's sensorial learning in math. Children will have fine tuned their conceptual understandings while increasing their competence in basic operations. They are expected to know how to solve problems abstractly using fractions and decimals. An introduction to the basic ideas of algebra helps them solve more complex problems. By the completion of Senior Elementary, students will know and do:

- various kinds of measurement including scale models and metrics
- cubing and cube roots
- geometric constructions and formulae
- negative numbers and work on bases
- beginning probability and statistics
- spatial visualization with calculation of areas and volumes
- coordinate graphing and estimation
- functions and orders of operations
- a variety of problem-solving techniques including the basics of inductive and deductive reasoning

**Science**

The emphasis is on students' ability to know and use scientific processes of investigation. Experiments and exercises help students to develop their skills of observation and analysis. Senior Elementary has a greater emphasis on the physical sciences including geology, basic mechanics, oceanography, electricity, and astronomy. The life science curriculum emphasizes the human body and health. Some specific content areas are:

- understanding and practicing scientific processes including hypothesizing, experimenting, reflecting, analyzing, and reporting scientific data using more sophisticated data gathering techniques
- basic mechanics and physical laws
- astronomy with a continued emphasis on the history of the universe
- geology with an emphasis on plate tectonics and rock formation
- basic human body systems and their functions

**Literacy**

(The use of language: reading, writing, speaking and listening)

The Senior Elementary level is characterized by students learning more sophisticated strategies and honing these strategies through the production of complex reports and more creative writing. Our objective is to teach children a love of reading and writing while providing them with the necessary strategies to be successful. By the completion of Senior Elementary, students will be expected to:

- use a variety of reading comprehension strategies

- perform basic literary analysis (plot, style, theme, point of view, etc.)
- use a variety of resources such as encyclopedias, the Internet and other print media to conduct research
- understand and use the mechanics of writing, such as punctuation, grammar, spelling and paragraph structure
- understand the writing process (drafting, editing, reviewing, and revising)
- use a variety of genres in their writing and reading, such as personal essays, journals, poetry, short stories and news articles
- speak and listen in ways that relate real/imaginary events with organization and closure
- engage in relevant discussions with active listening
- follow oral and written directions
- use appropriate tone, accurate diction and pronunciation

### **Cultural Studies**

(includes Anthropology, History, Sociology, and Geography)

The cultural studies curriculum is the core content of the Elementary program. The curriculum is both independent and closely integrated into the reading and writing of the Senior Elementary program. The literature and books are designed to raise important concepts and ideas about worlds both familiar and unfamiliar to children. Children are asked to play an active role in thinking about how they can make positive contributions to society at large. Some of the expectations by completion of this program include:

- ability to use compass, maps, and coordinates
- understanding concepts of democracy and citizenship
- knowledge of U.S. geography
- introduction to world civilization and cultures
- knowledge of practical economics and earth resources
- understanding physical and cultural geography