



GRACE MONTESSORI ACADEMY

Program Presentation: The Upper Elementary (9-12) Class

We have prepared this “Program Presentation” as a guide to what is presented in the 9-12 classroom, in order to help you follow your child’s progress at Grace Montessori Academy. It outlines broad areas of study and categories of skills that are presented to the children, and it provides brief narrative intended to frame these skills in the broader philosophy and methodology of our school.

There are several major areas to explore in the 9-12 classroom. These areas, guided by a Christian foundation, will help the child realize that there is a grand plan and that he or she is a participant in this plan. The major areas of exploration include communication (oral and written expression), reading, mathematics (including geometry) and the cultural subjects.

Communication

Communication is one of our major human tendencies. It involves both oral and written expression. Communication was slowly developed by many civilizations and countless people. We often represent to people who we are by the way we speak and write. At our school, communication skills are carefully broken down, usually by grade level, for the children to explore. A key lesson is given on the skill, practice is expected, and an assessment (informal through observation and formal through tests and application) is given to determine your child’s understanding of that skill. The ultimate goal is for your child to incorporate that skill into his/her everyday usage.

Every child’s timetable to do this can vary. However, we generally expect that by the end of a certain grade level your child will have been presented certain skills, has practiced them, and has begun to use them in his/her oral or written communication.

For example, the exploration of linking verbs (ex Bob **is** a student.) happens at 4th grade at our school. It is listed below under grammar skills in the following fashion:

Linking verbs (4)

By the end of 4th grade your child should be able to identify what a linking verb is in a sentence and begin to use it in his/her writing. Ongoing review would occur in both the 5th and 6th grades.

Some communication areas are presented at all three levels. This would be represented in the following fashion: Latin root study (4,5,6). This indicates that this is an on-going study at our school for your child.

For study we artificially break up communication skills into certain areas. However, we integrate them as soon as possible in your child's cultural studies and independent research projects. These areas are mechanics, grammar, diagramming, vocabulary and spelling, composition, handwriting, the history of language and oral communication. These skills are further practiced and applied in different types of writings.

In broad terms, these skills include:

Paragraph development (4,5,6)

Letter writing – both business and friendly (4,5,6)

Summarization skills needed in report writing (4,5,6)

Research reports (4,5,6)

Writing of stories (4,5,6)

Keeping a journal/log (4,5,6)

Poetry – including the use of figures of speech (4,5,6)

We present a **general** picture of communication development for the 9-12 year old child below. We do this so that you can see that your child should have very effective communication skills when entering the 7th grade.

Mechanics

All punctuation skills should be used by your child by the end of the 6th grade. To achieve this the following general schedule is followed:

Capitalization (4)

Use of quotes (4)

End marks (4)

Commas (4)

Dialogue writing (5)

Semicolon, colon, italics, apostrophes, hyphen (5)

Dashes, brackets (6)

Grammar

By the age of 12 your child should be familiar with all parts of speech and how they can be effectively used in both oral and written communication.

Reviewing parts of speech (4)

Exploring how an adverb can be used (4)

Introducing the prepositional phrase (4)

Learning about predicate nouns and adjectives (4)

Irregular nouns (mouse, mice) (4)

Exploring verbs

Subject verb agreement (4,5,6)

All types of verbs as

Transitive and intransitive (4)

Helping verbs (4,5)

- Linking verbs (4)
- Learning about irregular verbs (buy, bought) (4,5,6)
- Verbs express time
 - Principal parts of a verb (4,5,6)
 - Present, past, future (4)
 - Compound tenses (4,5,6)
- Subject-verb agreement (4,5)
- Verbals (ex gerunds) (5,6)
- Coordinating conjunctions/demonstrative pronouns (5,6)
- Study of pronouns (4,5,6)

Diagramming

Diagramming helps your child understand what a sentence is as well as how words relate in a sentence. This skill helps your child craft beautiful sentences and it helps your child develop comprehension skills when reading what others have written.

- What is a sentence fragment? (4)
- Exploring the simple sentence including
 - Subject-verb-direct object (4)
 - Sentences with understood subjects (Do the dishes.) (4)
 - Subject-verb-indirect object-direct object (4)
 - Compound subjects and compound predicates (4)
 - Subject-linking verb-predicate noun or adjective (4)
- Exploring clauses (adjective, noun, adverb (5,6)
- Compound-complex sentences (6)

Vocabulary and Spelling

The English language has a rich history. To understand where words come from helps to develop word meaning as well as how that word is spelled. A rich vocabulary, spelled correctly, can help a child effectively communicate their thoughts to others as well as help the child understand other people's thoughts and ideas as they read them. In Montessori education a large vocabulary can be gained when studying the world cultures and their many contributions to our present day lives. Grace Montessori Academy supplements the Montessori vocabulary and spelling lessons with "Spell to Write and Read Curriculum." This further enhance the students knowledge of the English language.

- Latin root study (4,5,6)
- Prefix-suffix studies (4,5,6)
- Spelling rules
- Syllabification (4)
- Suffix rules (4,5,6)
- Plurals (4,5,6)
- Use of dictionary/thesaurus (4,5,6)

Oral and Written Communication

To express one's thoughts clearly, adequately and beautifully is an important part of Montessori education. To share with others what one has learned, in both oral and written form, is an important skill which everyone in the community can benefit from. Oral presentations can be in many forms

The sharing of reports (4,5,6)

Giving a persuasive speech (4,5,6)

The reciting of poetry (4,5,6)

Discussions (4,5,6)

Conflict resolution (4,5,6)

Written communication can be expressed in these forms:

Cursive writing (4,5,6)

Calligraphy (4.5.6)

Keyboarding skills (4,5,6)

It was once said that "Language is the breath of the spirit." No study in language would be complete in a Montessori environment without the continual use of the Great Lessons of Oral and Written Communication. It is these lessons which inspire the children as they see how their language is the gift of many, from many lands and times.

Reading

Since the development of the various alphabet systems, humans have been able to learn about the accomplishments of others even though they may have lived many years ago. All fields of endeavor are expressed in writing. Holy thoughts are recorded in writings that we can think and reflect about.

In the 9-12 classroom, the skill of reading is accomplished by reading about interesting things, whether it might be Great Books, great literature pieces (as The Iliad), exploring cultures or the sciences. Thus reading is doing, finding out about life and the thoughts of others. Grace Montessori Academy uses The Junior Great Book Reading series to move students toward excellence in reading, comprehension, critical thinking and writing.

Reading is a sophisticated process and thus involves skill development. These skills are isolated and taught and then applied to the children's daily reading as he or she explores the world. The following reading skills will be explored and applied at the 9-12 level:

Exploring story elements such as plot, setting, characters, problem and solution

Cause and effect

Context clues

Drawing conclusions

Fact and opinion

Main idea both stated and unstated

Inferences

Multiple meanings

Figures of speech

Author's point of view

Word problems

Science experiments

Reading (and eventually drawing) maps, charts, tables, graphs, etc.

Comparing and contrasting

Sequencing

Using all types of reference materials, being familiar with parts of a text, and knowing the value (under strict control) of the Internet as a resource

Further skills in reading include

Oral reading (reading with expression and fluency)

Speed reading

Reading (and memorization) of poetry

As you can see, the list is quite long. Some of these skills are visited every year (as main idea and figures of speech) while others are emphasized less frequently (the role of mood in a story).

All of these skills are practiced when reading in the different subject areas (science, literature, social studies, math and the arts). Each of these areas requires of its readers that they apply their reading skills in different ways. Each area has its own vocabulary and purpose for reading which affects reading fluency.

Finally, the area of reading would be incomplete without giving it a sense of history. The development of oral and then written language, as given in Montessori's Great Lessons, gives each child a sense of heritage of their own language. These Great Lessons serve as a constant bedrock and referral point as the cultures of the world are explored.

Latin

Grace Montessori Academy uses the Prima Latina series. This program helps to integrate the English and Latin language.

Mathematics

In her book From Childhood to Adolescence Dr. Marie Montessori wrote: "Without a mathematics education, it is impossible to understand the progress of our time or participate in it." Mathematics is an expression of the innate human tendency to order. People have a predisposition towards learning those things pertaining to order, exactness, and precision. Thus every child has a mathematical mind which needs to be developed so that he or she can advance civilization.

Math presentations in certain areas are carefully sequenced. However parallel work in all areas is necessary. Thus, exploration in geometry and whole numbers can occur simultaneously. Finally, it is important that the study of mathematics is linked to the study of history. In this way an appreciation of those people's work which preceded us is fostered.

The guidelines below provide a full picture of math presentations at the 9-12 level. The grade indicator at the end of a subject (e.g., base systems (6)) tells you that by the end of the 6th grade your child should be familiar with various base systems beside the decimal system we now use. This does not mean that children do not have the opportunity to explore the base systems at an earlier age; but by the 6th grade mastery should be accomplished.

The development of basic math skills can be seen as three layered. The first layer is achieving mastery of the four operations (adding, subtracting, multiplying, and dividing) with whole numbers. This skill is applied by doing (and creating) word problems, science

experiments, reading (and developing) charts, graphs, tables, using estimation strategies etc. Competence in this area should be achieved in the fourth grade.

The second layer is achieving mastery of fractions and decimals with their related applications. Some of the following skills include:

Add and subtract fractions and mixed numerals ($4\frac{1}{4}$) with like and unlike denominators. (4)

Reducing, finding common denominators, (4)

Reading a ruler ($4\frac{1}{8}$ inches) (4)

Multiplying and dividing fractions (4,5)

Introduction to decimals (to the millionth's place) (4)

Adding and subtracting of decimals (4)

Multiplying and dividing of decimals (4,5)

Metric measurement (centimeters, millimeters etc.) (4,5,6)

The third layer is relating fractions and decimals to the areas of ratios, proportions and percents. The mastery of these skills, with application, should be obtained by the end of 6th grade. It should be noted that all three layers require that your child spend sufficient time in practicing his/her math skills.

Studies in geometry and beginning algebra (4,5,6) occur simultaneously with the child's work with the basic math skills described above. Related skills in geometry include:

Study of lines (4)

Study of polygons (4)

Study of angles (4,5)

Study of circles (4,5)

Area studies

Quadrilaterals (4,5,6)

Triangles (4,5,6)

Circles – includes circumference (5,6,)

Surface area (5,6)

Volume studies

Shape names (4)

Volume: rectangular prisms (4,5)

Volume-all basic shapes (5,6)

Finally, two points need to be noted. The first point is that in the Montessori upper elementary class, mathematics and geometry are very rich in content. Hands-on exploration of binomial and trinomial cubes, cubing, cube root, Pythagoras' Theorem, and the like should all be explored by the end of your child's stay at the 9-12 level. All of these studies can be interspersed with your child's study of basic math and geometric processes and can enrich your child's understanding of them.

The second comment is that math and geometry are richly tied in with history. Without math, the complexities of cultures would not have occurred. As with language, math is a product of the human spirit and reflects continual development from earliest times. Consequently the Great Lesson in Mathematics (which includes geometry) is continually referred to as your child explores how humanity has developed his need to order things in his/her world.

Cultural Subjects

Cultural subjects is a general term for the study of history, geography, social studies, earth sciences, chemistry, physics, life sciences, health and the like. As the outline below indicates, these subjects are closely knit together to help your child develop a clearer picture of the unfolding Plan of God as well as his or her place in this ever unfolding Plan. Thus your child's education is basically spiritual in its orientation.

During your child's three years in the 9-12 environment, he or she will explore three cycles.

Cycle One explores the early phases of the Plan of God. This would include prehistoric cultures, including Sumer and Egypt (among others). This study is supported by the study of the science of physics. Topics in astronomy, health, and the earth sciences give further life to Cycle One exploration.

Cycle Two explores the Plan of God from Classical Greece to the Renaissance. Cycle Two exploration is supported by the study of the science of chemistry. As in Cycle One, the topics of health, earth science and astronomy are explored, from a different perspective.

Cycle Three explores your child's culture from its earliest roots to now. The life sciences (botany and zoology) add life to this study as do the earth sciences, astronomy and health. In Cycle Three the "Blank Page" from the Plan of God is particularly noted. The Blank Page is an image used throughout the child's elementary catechesis experience, which expresses his or her unique, personal role in salvation history and the ongoing development of the Kingdom of God. Continual reference to this image helps the child reflect on what his or her role will be in the Divine Plan (frequently referred to in Montessori literature as Cosmic Education).

Finally, it should be realized that these cycles could not be explored without the tools of reading, language, and math. There is a reciprocal agreement here. Reading, language, and math allow for exploration and the application of these tools strengthen them through their use.

Cultural Studies: Cycle One

1. Locating ourselves in time
 - a. Rotation/revolution of the earth
 - b. Earth's tilt
 - c. Longitude/latitude
 - d. Time zones, time lines
2. Prehistoric cultures
 - a. The Stone Ages and the Ice Ages
 - b. Division of labor; the domestication of animals; the seed/farming
3. The River Cultures (also make literature correlations)
 - a. Sumer
 - b. Egypt
 - c. Chinese
 - d. Indus River Valley
4. Science: Study of Physics
(Note: Stone Age people developed the foundation of physics)
 - a. Work
 - b. Simple machines

- c. Types of energy (potential/kinetic)
 - d. Resources for energy (fossil fuels etc.)
 - e. Sound/light
- 5. Astronomy
 - a. Sun
 - b. Moon phases
 - c. Meteors, etc.
- 6. Scientific method, measurement, graphing
- 7. Health:

(Note: Study in this areas develops understanding of why humans can develop cultures/religion/communication and thinking skills etc.)

 - a. Central nervous system
 - b. Skeletal/muscular system
- 8. Earth science:

(Note: Needed to understand tool making, how geography affects a culture, etc)

 - a. Ice ages/glaciers
 - b. Earthquakes/plate tectonics
 - c. Types of rocks/the rock cycle

Cultural Studies: Cycle Two

- 1. The study of the following periods: (also make literature correlations)
 - a. Classical Greece/Hebrew Culture
 - b. Classical Rome
 - c. The Arab Culture
 - d. European Middle Ages
 - e. Renaissance
- 2. Science: Chemistry

(Note: Early civilizations developed a foundation in chemistry)

 - a. Matter and phases
 - b. Atoms
 - c. Compounds and mixtures
 - d. Electricity
 - e. Magnetism
 - f. Acids and bases
- 3. Health

(Note: Chemistry of the body and analogies to exploration/circulation can be made)

 - a. Digestion
 - b. Circulation
- 4. Scientific method/measurement/graphing
- 5. Earth Science

(Note: Develops understanding of water trade routes)

 - a. Study of air
 - Earth's atmosphere
 - Heat
 - Movement of air
 - b. Weather/climate

c. Earth's oceans

Ocean currents

Marine habitat

d. Carbon/water/nitrogen cycles

6. Astronomy

- a. Constellations
- b. Planets and their moon

Cultural Studies: Cycle Three

1. The study of the following areas: (also make literature correlations)
 - a. American History (prehistoric to present)
 - b. Ohio History
 - c. The Blank Page/personal appreciation and responsibility
 2. Science: Life science
(Note: Classification systems developed during this time. These studies also support an understanding of Native American belief systems)
 - a. The Five Kingdoms
 - b. Ecosystems
 - c. Animal/plant classification
 - d. Biomes/ecosystems
 - e. Use of microscope
 3. Health
(Note: Also supports the study of classification systems)
 - a. Respiration
 - b. Reproduction
 - c. Nutrition
 4. Earth science
(Note: Supports the understanding of modern agriculture, habitats, ecology issues)
 - a. Weathering
 - b. Soil
 - c. Wind
 - d. Erosion
 - e. Groundwater
 - f. Renewable resources
 5. Scientific method/measurement/graphing
 6. Astronomy
 - a. Galaxies
 - b. The life cycle of stars
- c. Space exploration, communication systems via satellites etc.