



ANGELICUM ACADEMY PLACEMENT TEST

Please note: completing this placement test is not necessary in order to enroll with the Angelicum. It is made available as a convenience, desired by some.

You may wish to take only one, a few, or all of these tests. You may discover your starting level with the Academy will vary in each course - that is, you may do well, for example, in 7th grade math and not above 5th grade in grammar. That is fine and very normal. We encourage homeschoolers to begin where they are, in each course selected. Which courses you decide to take, and at what levels, is up to you.

You may grade or evaluate the test results yourself, or you may send them to us for evaluation and our suggestions. We hope you find these helpful.

Please let us know if you have any questions (angelicummailbox@aol.com).

For a complete curriculum list, please visit Angelicum.net.

ART PLACEMENT TEST

Nursery - 5th Grades: We recommend beginning the placement testing with the grade level that normally matches the child's age. For example, if the child is 8, then get the art book listed in the 3rd grade. For 6-8th grades, start with the 6th grade *Art in Focus* course.

CARTOGRAPHY PLACEMENT TEST

Please have your child answer these questions orally or in writing.

1st Grade

1. If you face north, what direction is on your left?
2. Why do we use special words to tell directions?
3. Name two things found on water and two things found on land.
4. Describe an ocean.

2nd Grade

5. How can a map be helpful?

6. How many oceans does Earth have? Name them.
7. Water is one of the most important natural resources. How do people use water?
8. Why would someone use a map of a national park?

3rd Grade

9. What is the purpose of the map key?
10. Give 3 examples of Earth's different landforms.
11. In what state is San Francisco located? What ocean is just west of San Francisco?
12. People traveling west killed huge numbers of buffalo. Soon there were very few buffalo left. How did this affect how the Native Americans and the people on the trails got along?

4th Grade

13. What direction is between north and east on a compass rose?
- 14. Why was the Richter scale created?**
15. What is happening to the air when a tornado occurs?
16. Why might a farmer grow corn to feed his or her cattle, rather than selling the corn for food for people?

5th Grade

17. Describe what you can see on a globe that you could not see looking at Earth from space.
18. How is trade beneficial to people?
19. Why are map scales important?

20. How many states are there in the United States today? How many states formed the original United States in 1790?

6th Grade

21. How many minutes equal one degree?

22. In ancient times, why were rivers important to trade among civilizations?

23. Why do you think people thought it was necessary to standardize time around Earth?

24. Why is mapping the ocean floor a fairly recent phenomenon?

FOREIGN LANGUAGE PLACEMENT TEST

Foreign Languages: We recommend starting with the first level of Latin or Greek and testing from these.

HISTORY PLACEMENT TEST

Please have your child answer these questions orally or in writing.

1st Grade

1. What terrible secret was buried in Shi Huangdi's tomb?

2. Did nomads make lizard stew?

3. What happened to Anansi the Spider in the Village of the Plantains?

4. How did a six-year-old become the last emperor of Rome?

5. Who were the Nomads?

6. Why did Rome fall?

2nd Grade

1. What happened between the brothers Cain and Able?

2. What happened to the Egyptians when the Lord parted the Red Sea?

3. How do David and Jonathan renew their covenant?

4. Would you call Joash a good king? Why or why not?

3rd Grade

5. What are mummies and how are they made?

6. Describe the Great Pyramid of Giza.

7. Name and describe the two types of writings the Egyptians have?

8. Why did God send each of the Ten Plagues to the Egyptians?

4th Grade

9. What are myths and legends and how do they differ from one another?

10. How did Odysseus and his friends escape from the cave of the giant Cyclops?

11. How did Aristides contribute to the rebuilding of the city and other public works?

12. How would you describe Philip of Macedonia?

5th Grade

13. Why did the Romans declare war against each other?

14. How did the Second Punic War begin?

15. Describe the Colosseum.

16. How were Christian believers treated under Diocletian?

6th Grade

17. How is civilization distinguished from barbarism?

18. Why is Pentecost Sunday called the birthday of the Church?

19. Where did the term "Middle Ages" originate? Why is it inaccurate?

20. What was the Black Death? How did it help to bring the High Middle Ages to an end?

7th Grade

21. What motivated Columbus to sail to the “Indies” and why was he motivated to sail west in order to get there?
22. What was the Baroque? What did it symbolize?
23. Who were the founders of Communism? What are the principles of Communism?
24. What was the Inquisition?

8th Grade

25. What is a Catholic definition of history?
26. Why did Protestant countries welcome the principles of “The Enlightenment?”
27. What was the result of the young Catholics being forced to go to public school?
28. Why was Roosevelt anxious for war?

For 9th-12th Grades (history is included in the Great Books course): To profit most from the readings and discussions a student needs to begin with the first year, the Greek year, of the program. It could be argued, in fact, that the Greek year is the most important one since it is the foundation upon which the other years build. If you haven't read and discussed the Greeks it is difficult to appreciate and understand the Romans and all else that follows. The four years are a cohesive whole.

Language Arts (Grammar, Phonics, Reading, Spelling, Vocabulary, Writing) Placement Test

PHONICS: Nursery: The child will learn to recognize the ABCs. Preschool: The child learns to recognize the ABCs and their sounds. Simple letter forming begins. Kindergarten: The child continues to learn the ABC sounds. The child learns how to write the ABCs and simple words. The child learns to read simple short vowel words. 1st Grade: The child learns to read short and long vowel words and to write as well. Grammar is introduced in the 1st grade with sentences and simple paragraphs.

Shurley Grammar Placement Test (includes grammar and writing)

1st Grade

1. Write a sentence using the adjective *brown*.
2. Write a sentence using the adverb *quietly*.

3. Use a noun in a sentence and underline the noun.
4. Use a verb in a sentence and underline the verb.

2nd Grade

5. Write a declarative sentence.
6. Write an interrogative sentence.
7. What are the adjective questions?
8. What are the adverb questions?

3rd Grade

9. How do you make a plural noun that ends in s possessive?
10. How do you make a singular noun possessive?
11. Write the contractions for the following words: can not, are not, will not, and we will.
12. Write the contractions for the following words: have not, did not, would not, and they will.

4th Grade.

13. Write an exclamatory sentence.
14. Write an imperative sentence.
15. Steve said may I borrow your pencil. (Write the sentence correctly.)
16. Write the following words in plural form: mouse, foot, fly, peach, church, and toy.

5th Grade

17. The kitchen curtains blew softly in the spring wind yesterday. (Tell how each word is used by writing the part of speech above the word.)
18. The dolphins in the marine show are very intelligent animals. (Tell how each word is used by writing the part of speech above the word.)
19. will the plane from Columbus ohio be here soon susan asked the ticket agent (Put capital letters and punctuation marks as needed.)

20. my dad said i am taking you to lake henderson on friday for a fishing trip (Put capital letters and punctuation marks as needed.)

6th Grade

21. Yesterday we did not search for their lost cat in the field behind our house. (Tell how each word is used by writing the part of speech above the word.)

22. After school the energetic coach gave the team a very vigorous workout. (Tell how each word is used by writing the part of speech above the word.)

23. Yes mr j c smith our neighbor took billy brent and shawn fishing on lake charles (Put capital letters and punctuation marks as needed.)

24. is the plane from dallas texas due in one hour jerry asked the man at the gate (Put capital letters and punctuation marks as needed.)

7th Grade

25. Several plump robins searched diligently for juicy worms in my back yard. (Identify the part of speech and write the abbreviation above the word.)

26. After an exciting election John Conner named Sarah Warren chairman of the committee. (Identify the part of speech and write the abbreviation above the word.)

27. Four very excited fans were irate after the referee's call! (Identify the part of speech and write the abbreviation above the word.)

28. Identify each pronoun as indefinite or personal (I, P) and as singular or plural (S, P): *we, everybody, she, both, each, they, either, and it.*

8th Grade

29. Many outstanding runners jogged fast in the marathon up the mountain. (Identify the part of speech and write the abbreviation above the word.)

30. Eleven extremely tired offensive players were happy with their game. (Identify the part of speech and write the abbreviation above the word.)

31. At the meeting Mr. Donald named Kelly Brace editor of the school paper. (Identify the part of speech and write the abbreviation above the word.)

32. Identify each pronoun as indefinite or personal (I,P) and as singular or plural (S,P): *you, someone, him, many, some, us, and no one.*

9th Grade: Describe each of the following in three sentences:

prewriting

revising

proofreading

audience

drafting

editing

mapping

narrative paragraph

descriptive paragraph

expository paragraph

persuasive essay

10th Grade: Describe each of the following in three sentences:

style

writer's notebook

outlining

publishing

brainstorming

clustering

peer editing

purpose

Write a narrative essay.

11th Grade: Complete the following research paper without looking up these seven basic writing/research steps.

Imagine that you are a writer on assignment for *Travel Smart*, a travel news television program. Write a "Best Bets" report for a three-minute segment about one major tourist attraction in your state. The attraction may be a park, a museum, an event, or something special you feel tourists should see. Try to find a news "hook" for the report; an annual festival; an exciting restoration of a historic site; a seasonal event such as a Harvest Fair; or the opening of a new attraction, such as a museum or the world's biggest water slide. Since this is a "Best Bets" report, the segment should include the kinds of facts that will encourage vacationing families to visit. Know and use the following steps to complete your work. STEP 1: Initial Search; STEP 2: Focus Your Search; STEP 3: Define Your Audience; STEP 4: Brainstorm Ideas; STEP 5: Organize Your Ideas and Write Your Rough Draft; STEP 7: Publish Your Work

12th Grade: Complete the following biographical sketch paper without looking up these seven basic writing/research steps.

Write a two-page biographical sketch about one scientist you admire. Begin by looking into the lives of several different twentieth-century scientists. Take notes on what they have worked on, where they worked, honors and awards they received, and other material. STEP 1: Initial Search; STEP 2: Focus Your Search; STEP 3: Define Your Audience; STEP 4: Brainstorm Ideas; STEP 5: Organize Your Ideas and Write Your Rough Draft; STEP 7: Publish Your Work

Vocabulit and Spelling Placement Test

Give the definition and part of speech for each word below. Write a sentence using each of the following words.

4th Grade:

curious

interfere

compliment

nape

restore

single

afford

misery

5th Grade:

admirable

envious

opponent

venomous

acquired

fatigue

dense

intensify

6th Grade

conceal

prolong

caution

disperse

theory

transmit

fruitful

testimony

7th Grade:

admonish

innocent

execute

mediocre

destination

preservation

boast

devious

8th Grade:

pulverize

compel

precise

transitional

contradictory

fatigue

anxious

solidify

9th Grade:

epigram

derisive

facsimile

expunge

archetype

necropolis

amorphous

hematothermal

10th Grade:

antagonist

dank

induce

interminable

tenant

valiant

burnish

gingerly

11th Grade:

sanctum

genial

sullen

incontinent

incline

impetuous

stagnating

cringe

12th Grade:

axiom

juxtapose

temerity

coruscate

ontological

scintillate

eon

quintessential

Literature (The Good Books and Great Books Programs)

Good Books - Nursery-8th Grades: Excellent literature – the classics – is the backbone of our elementary education. It integrates all the other subjects, is the most enjoyable and develops learners for more than any other subject, being an aggregate of them all. If you do nothing else but give your children access to the Good Books, you will have much to congratulate yourself for in the later years. We have the Good Books divided into grades Nursery-8th grade to give the parents a rough idea of the age level of the books. However, the books are really "ageless" in that they can be read and enjoyed at almost any age. The suggested reading levels are guidelines only and are not meant to be chiseled in stone. Individual children vary in their reading ability regardless of their grade level; some will need easier books and some more challenging. If you are new to our program, you may wish for your child to read from the list 2-3 grades lower than he/she is entering. The books are really wonderful and worth the time in reading. One of the things that makes a good book "good" is its timeless quality, and its ability to cross age barriers from preschool children to great-grandparents. Please do not think that simply because a wonderful book like *Winnie the Pooh* by A. A. Milne, for example, is categorized in preschool, that it could not be enjoyed by younger and older children. That is the beauty of the truly good and wonderful books. The following is taken from John Senior's book, *Death of Christian Culture*.

"The Great Books movement of the last generation has not failed as much as fizzled, not because of any defect in the books - 'the best that has been thought and said,' in Matthew Arnold's phrase - but like good champagne in plastic bottles, they went flat.

To change the figure, the seeds are good but the cultural soil has been depleted; the seminal ideas of Plato, Aristotle, St. Augustine and St. Thomas thrive only in an imaginative ground saturated with fables, fairy tales, stories, rhymes, and adventures: the thousand books of Grimm, Anderson, Stevenson, Dickens, Scott, Dumas and the rest.

Taking all that was best of the Greco-Roman world into itself, Western tradition has given us the thousand good books as a preparation for the great ones - and for all studies in the arts and sciences. Without them all studies are inhumane. The brutal athlete and the foppish aesthete suffer vices opposed to the virtue of Newman's gentleman. Anyone working at college, whether in the pure arts and sciences or the practical ones, will discover he has made a quantum leap when he gets even a small amount of cultural ground under him: he will grow up like an undernourished plant suddenly fertilized and watered.

Of course, the distinction between great and good is not absolute. Great implies a certain magnitude; one might say War and Peace and Les Miserables are great because of their length, or The Critique of Pure Reason because of its difficulty. Great books call for philosophical reflection; good books are popular, appealing especially to the imagination. But obviously some authors are both great and good, and their works may be read more than once from the different points of view - this is true of Shakespeare and Cervantes, for example.

It is commonly agreed also that both great and good can be judged only from a distance. Contemporary works can be appreciated and enjoyed but not very properly judged; and just as a principle must stand outside what follows from it (as a point to the line), so a cultural standard must be established from some time at least as distant as our grandparents'. For us today the cutoff point is World War I, before which cars and the electric light had not yet come to dominate our lives and the experience of nature had not been distorted by speed and the destruction of shadows. There is a serious question - with arguments on both sides, surely - as to whether there can be any culture at all in a mechanized society. Whichever side one takes in that dispute, it is certainly true that we cannot understand the point at issue without an imaginative grasp of the world we have lost.

What follows is not a complete list, but it is a sufficient worksheet. Everyone will find more than enough that he hasn't read; and everything on this list is by common consent part of the ordinary cultural matter essential for an English-speaking person to grow in. Remember that the point of view throughout a course of studies such as this is that of the amateur - the ordinary person who loves and enjoys what he loves not of the expert in critical, historical or textual technology.

The books have been divided (sometimes dubiously because some bridge two categories) into stages of life corresponding to the classical ages of man, and in general agreement with the divisions of modern child psychology. because sight is the first of the senses and especially powerful in the early years, it is very important to secure books illustrated by artists working in the cultural tradition we are studying, both as an introduction to art and as part of the imaginative experience of the book. This is not to disparage contemporary artists, any more than the tradition itself disparages contemporary experiment - quite the contrary, one of the fruits of such a course should be the encouragement of good writing and drawing. The good work of the past is a standard, not a straight-jacket. Book illustration reached its perfection in the nineteenth century in the work of Randolph Caldecott, Kate Greenaway, Walter Crane, Gustav Dore, George Cruikshank, "Phiz," Gordon Browne, Beatrix Potter, Sir John Tenniel, Arthur Rackham, Howard Pyle, N. C. Wyeth, and many others. The rule of thumb is to find a nineteenth-century edition or one of the facsimiles which (though not as sharp in printing) are currently available at moderate prices. The incomplete work sheet that follows may serve as a rough guide.

Literary experience begins for very young children with someone reading aloud while they look at the pictures. But they can begin to read the simplest stories which they already love at any early age."

Great Books - 9-12th Grades

To profit most from the Great Books Program readings and discussions a student needs to begin with the first year, the Greek year, of the program. In fact, the Greek year is the most important one since it is the foundation upon which the other years build. If one hasn't read and discussed the Greek literature it is difficult to appreciate and understand the Romans and all else that follows. The four years are a cohesive whole, arranged chronologically beginning with the works of Homer.

Music Placement Test

1st Grade

1. Name the eight tones in an octave.
2. What is a xylophone and how do you play it?
3. Some composers use the flute to sound like what animal?
4. Which instrument is by far the most popular musical instrument of them all?

2nd Grade

1. How can you make a string vibrate?
2. How can a melody make you feel?
3. Which instrument produces the highest notes in the orchestra?
4. How does a trombone player know how far to move the slide to get a particular note?

3rd Grade

1. The regular or irregular rhythms of music create its what? This controls the flow of music, whether it's fast or slow, lively or stately.
2. The highness or lowness of a sound is called what?
3. Do you enjoy listening to the music of Mozart? Why?
4. Mozart and Beethoven had different styles. How were they different?

4th Grade

1. Sounds can be described as loud or quiet. This is called a sound's what?
2. To make a tune, a composer uses sounds of different pitches and puts them together in a pattern to make a _____?
3. How was Beethoven able to compose music even after he became completely deaf?

4. Describe Wolfgang Amadeus Mozart as a child.

5th Grade

1. Which instrument did Bach refer to as “the queen of instruments?”
2. What is your favorite piece of Chopin’s?
3. Why do you think the Mozart children became known as the “Wonder Children?”
3. What is your favorite musical composition of Tchaikovsky’s? How does this piece make you feel when you listen to it?

6th Grade

1. After listening to some of Beethoven’s music, write the name of your favorite composition and tell why you like it most.
2. Hadyn is often called the “Father of Symphony.” Why was he called this?
3. How did feelings and emotions affect the music of the romantic composers?
4. Vivaldi was the master of the concerto. How would you describe a concerto?

7th Grade

1. What term refers to the length, or duration, of individual notes
2. Name three ways in which music was influenced by the Eastern world.
3. How would you describe a fugue and what is it based on?
4. Why do you think Beethoven’s Symphony No. 9 has been popular the world over?

8th Grade

1. What were the ideals of the early Romantic movement?
2. What do you believe accounts for the greatness of *Stravinsky’s* music?
3. Why are the Beatles so important to the history of rock?
4. What roles does music play in our society?

Philosophy for Children & Critical Thinking Placement Test

Level 1

1. Why is it important to have a name?

1. Are there times when you pretend to be serious, but you really aren’t? When?
2. How is a play different from real life?
3. Why do some people talk more than others?

Level 2

1. Is it okay to be afraid? Why?
2. Describe a time when you were puzzled.
3. Can a person be both happy and unhappy at the same time? Explain.
4. Do you think better at different times of the day? Why?

Level 3

1. If a sign says, "All children welcome," does it mean that *only* children are welcome? Why or why not?
2. Why are some people easier to talk to than others?
3. Should we always share what we know? Why?
4. Would you rather be second best at doing something important or first at doing something not very important? Explain.

Level 4

1. What is the difference between *knowing* and *thinking*?
2. How can you read a person's face and tell if that person is happy or not?
3. Which do you prefer, things that change or things that stay the same? Why? What differences are there between dreaming at night and daydreaming?
4. What differences are there between dreaming at night and daydreaming?

Level 5

1. What's the difference between thoughts and feelings?
2. Is it ever right to tell on someone? Why?
3. Can you respect someone even though you disagree with him? Explain.
4. How can a painting show feelings?

Level 6

1. What does the word invention mean?
2. Do you think you can live without rules? Why?
3. Can we use our imaginations to change reality? Explain.
4. Are there times when you puzzle yourself? Explain.

Level 7

1. What is the difference between a disagreement and an argument?
2. How do the words probable and possible differ?
3. Should we try to avoid propaganda? Explain.
4. Why does a society have rules?

Level 8

1. How does a tautology differ from an equivalent statement?
2. What is the difference in a “red-herring” and an “ad hominem”?
3. Draw a pair of Euler circles which will picture each statement.

- i. *Some flowers are roses*
- ii. *All baseball players are good athletes.*
- iii. *A quarterback is a football player.*

1. What is brainstorming?

Religion Placement Test

1st Grade

1. Why is a little light burning beside the altar?
2. Why do we praise God?
3. Why did Our Lord choose His Apostles?
4. Why did Our Lord die on the cross?

2nd Grade

1. Why do we make the Sign of the Cross?
2. Will God take away our sins if we do not forgive others?
3. Why did Our Lord wash the feet of the Apostles?
4. Why did Our Lord rise from the dead?

3rd Grade

1. Why did God make us?
2. Why did Jesus offer Himself as a sacrifice to God?
3. How do we worship God?
4. Tell about Our Lord's first miracle.

4th Grade

1. What happened to Adam and Eve on account of their sin?
2. Why did the Church choose Friday as a day of abstinence?
3. Were the sacrifices of Cain and Abel well equally received? Why?
4. Why was Moses a figure of Our Lord Jesus Christ?

5th Grade

1. What do we mean by the Blessed Trinity?
2. Why should all Catholics be confirmed?
3. How do we usually begin and end our prayers?
4. Why did the prayer of Zachary and Elizabeth seem to remain unanswered?

6th Grade

1. What do we mean when we say that *God is eternal*?
2. Describe the resurrection of Christ.
3. How does a Catholic sin against faith?
4. How did Judas betray Our Lord?

7th Grade

1. Why was the Bible written?
2. Why were the Israelites compelled to remain so many years in the desert?
3. How did God reward Job for his patience in suffering?
4. How and when did the Church begin her divine mission?

8th Grade

1. Can we know by our natural reason that there is a God? Explain.
2. Why can Baptism, Confirmation, and Holy Orders be received only once?
3. Why must we confess our sins?
4. How do the sacramentals obtain favors from God?

9th Grade

1. What is the secret of true human happiness? How does Heaven fulfill man's desire for it?
2. What is the secret of true human happiness? How does Heaven fulfill man's desire for it?
3. How were angels created and what do the angels do for us?
4. How were angels created and what do the angels do for us?
5. Summarize the effects of Baptism.

10th Grade

1. Explain why the Second Person of the Trinity is called The Word.
2. How did the transfiguration serve as a preparation of the Apostles for Christ's Passion?
3. Why do men offer sacrifice? Explain each of the four great purposes of sacrifice.
4. Why is unworthy Communion so horrible a sacrilege?

11th Grade

1. Why is it necessary to have a strong intellectual grasp of and appreciation for our Faith?
2. What are the marks by which men may clearly know and recognize the One, True Church founded by Christ?
3. What is meant by saying that our confession must be entire?
4. Why is temporal punishment so called?

12th Grade

1. What is the basic virtue of religion? How is it exercised?
2. What can and should we do for dying Catholics? For non-Catholics?
3. What are parents' special duties to their children on the spiritual and physical side?
4. What are parents' special duties to their children on the spiritual and physical side?

Science Grades 1-8 Placement Test

1st Grade

- 1. What are the five senses? What part of your body do you use for each sense?**
 1. What are some ways soil is used?
 2. Name the four seasons. Which one is your favorite?
 3. Why do people use magnets?

2nd Grade

1. Why do plants grow toward the light?
2. Why do animals need a habitat?
3. How does the wind make a sailboat move?
4. Today dinosaurs are extinct. What does this mean?

3rd Grade

1. In what ways can seeds be different from each other?
- 10. How can an animal be both predator and prey?**
 1. Why should people recycle?
 2. Why would you need to know what the temperature is outside?

4th Grade

1. How are tropical rain forests and coral reefs similar?

2. Why don't all volcanic mountains look the same?
3. How do water waves change a shoreline?
4. Why is there no sound in outer space?

5th Grade

1. How are muscles attached to bones?
2. Where do animals and plants get the materials they need?
3. How does wind erosion change landforms?
4. How are mass and weight alike? How are they different?

6th Grade

1. What are the three main parts of the cell theory? In cold climates some mammals and reptiles hibernate during the winter. What can birds do instead of hibernating?
2. What can birds do instead of hibernating? How does a volcano form?
3. How does a volcano form?
4. How does freezing prevent food from spoiling?

7th Grade – Life Science

1. Why is homeostasis important to the existence of organisms?
2. How do aerobic and anaerobic organisms differ?
3. How are a bird's feathers, air sacs, and skeleton adaptations for flight?
4. Explain the pathway of blood through the heart.

8th Grade – Earth Science

1. How does the air you breathe fit the definition of matter?
2. How are volcanoes related to Earth's moving plates?
3. List three ways humans contribute to extinctions.
4. Why does a lunar eclipse occur only during a full moon?

Science Grades 9-12 Placement Test

Physical Science

1. Explain the terms *Speed*, *Velocity*, and *Acceleration* and their relationship to each other. Use examples.
2. Why do we study bionics? Explain two helpful inventions that have resulted from bionics research.

3. What are three types of solutions? Give an example of each type.
4. How are lightning and thunder produced?

Biology

4. What are the 3 main ideas of *The Cell Theory*?
5. Explain the difference between dominant and codominant alleles.
6. How does fertilization in plants take place?
7. How do sweat glands help regulate body temperature?

Chemistry

8. What is the number at the bottom of each box on the periodical table? What is the significance of this number?
9. Which are the five general types of reactions?
10. What mass of sodium chloride, NaCl is needed to prepare 1.00L of 0.255M solution?
11. List three ways that radioisotopes are used in medicine.

Physics

12. Define physics.
13. Give the scientific notation for the number displayed as *1.574 E8* by a calculator.
14. Explain the difference between *Significant Digits* and *Uncertain Digits*.
15. How does an artificial satellite remain in orbit at a constant distance from Earth's surface?

Socratic Discussion Placement Test

Frequently Asked Questions

Are these discussions designed primarily for advanced students?

No. All students profit by them. But the word "advanced" is tricky. The way modern education generally assesses a student's performance is rather narrow. It tends to measure a student's ability to recite and manipulate information. It is important to possess those

skills, but we think that the acquisition of understanding, of having an idea of what the facts mean and why, is far more important in attaining the ends of education. How does one acquire understanding? Absent direct life experience, we think the most effective way is to read good and great books and discuss them with others. We often have students who do not have well developed information skills but who thrive in the discussion environment and, consequently, develop an appetite for the acquisition of those missing skills.

If a student can read and has the will to make the necessary effort to engage in a cooperative learning experience he or she will profit much from these discussions.

Are the discussions like debates?

Not in the sense that there is competition among participants. The discussions are a cooperative learning experience – a mutual discovery. We are engaged in an effort to discover and understand what is true. Different people will understand a text in different ways. So, for example, some students may understand the behavior of a character in a story to be unjust. Others may think his behavior is perfectly just. This presents an opportunity to learn and a good moderator will mine this opportunity by asking questions that will help the students discover why they think what they do. Perhaps some students will change their minds. Perhaps not. Many may become unsure regarding the justice of the character's behavior. But all will benefit from hearing and thinking about what his fellows have had to say and, hopefully, everyone will better understand the great questions of what is justice. This is great progress. It is a kind of wisdom that comes to those who have the advantage of a pool of experience and thought, to examine and discuss.

My child is a very advanced reader. Should he be with older students?

Maybe. But often not. It is one thing to be able to read well. It is another to be able to appreciate and understand what you have read. Experience that comes with living means a great deal. A ten-year-old may be able to read *Antigone* well but, because he is only ten, in a discussion of that work with high school students he is handicapped. All else being equal, he hasn't yet experienced and felt what a 15 or 16 year old has.

When can students begin classes?

For the 3rd through 8th grade groups students may enter at any time during the year. For the high school great books program this is not the case. Because the readings in the great books program are sequential, students begin in September. It simply is not practical to attempt to jump into the middle of the academic year if one hasn't already read and discussed the previous readings with one's fellow students.

May a student begin the high school great books program at any of its levels?

No. To profit most from the readings and discussions a student needs to begin with the first year, the Greek year, of the program. In fact, the Greek year is the most important one

since it is the foundation upon which the other years build. If you haven't read and discussed the Greeks it is difficult to appreciate and understand the Romans and all else that follows. The four years are a cohesive, sequential, chronological whole.

What is the average age of students in the first year of the program?

The range of ages of our first year students is about 13 to adult. The average age will vary from class to class but most of the students in the first year are 14 - 16. We generally have some older students, 17 - 19, as well, and sometimes there is an adult student included. All is kept appropriate for the group.

How much reading do the students do?

For grades 3 through 8 the reading is generally no more than a couple of pages for each discussion, taking 5-15 minutes or so of preparation. For the high school students, the reading, in terms of number of pages, falls into a rather broad range. It is sometimes about 200-250 pages a week and sometimes 50-75 pages. The difference is due largely to the varying natures of the texts involved. When reading histories, for example, we cover more text. When reading narratives, or Aristotle or most philosophy, we don't read as much. The average reading time is roughly an hour to one and a half hours a day, 4 days a week (the 5th day is for the discussion itself).

How many students are in the groups?

It depends upon the grade level. In the 3rd and 4th grade groups there is a maximum of about ten. For 5th and 6th the maximum is about 12. For 7th and 8th the maximum is about 15. For the high school great books program the maximum is about 20.

The maximums are due partly to the different lengths of the classes so everyone has plenty of opportunity to speak and question, the less time, the fewer students. The 3rd and 4th grade classes are 30 minutes, the 5th and 6th grade classes are 45 minutes, the 7th and 8th grade classes are 60 minutes, and the high school classes are 2 hours long.

Do I need a particular kind of computer?

The software runs on a PC or a Macintosh.

Is the necessary software expensive?

It's free and easy to download.

Do we need any special hardware?

You need to have speakers and a microphone for your computer, or a headset with a microphone. A good headset can be purchased for about \$10.00 at most electronic stores.