

8 th grade	Physical Science (grade of C or below, planning on Pre-Algebra in ninth grade)	Physical Science (grade of B or above, planning on Algebra or higher in ninth grade)	**Accelerated Earth Science* (with a grade of B or above)
1 st year of high school	Environmental Science ↓	**LE Biology* ↓	**Honors Biology* ↓
2 nd year	**LE Biology*	**Earth Science*	**Earth Science* **Chemistry { Chemistry in the Community Honors Chemistry* **Physics { Conceptual Physics Honors Physics*
3 rd year	**Earth Science*	**Chemistry { Consumer Chemistry Chemistry in the Community Honors Chemistry **Physics { Conceptual Physics Honors Physics* Electives: Zoology Marine Biology (.5 credit) Forensics (.5 credit)	Electives: AP Chemistry AP Environmental Science AP Biology AP Physics B or AP Physics C Electives: Zoology Marine Biology (.5 credit) Forensics (.5 credit)
4 th year	**Chemistry { Consumer Chemistry Chemistry in the Community **Physics { Conceptual Physics Honors Physics* Electives: Zoology Marine Biology (.5 credit) Forensics (.5 credit)	Electives: Zoology Marine Biology (.5 credit) Forensics (.5 credit)	Electives: AP Chemistry AP Environmental Science AP Biology AP Physics B or AP Physics C Electives: Zoology Marine Biology (.5 credit) Forensics (.5 credit)

Dewitt Middle School Physical Science

Objectives: It is the aim of this course to instill in students an awareness of and respect for the intricacy, complexity, and diversity of the physical environments: students will investigate the chemical make-up and atomic structure that forms the basic building blocks and energy systems of the physical world. Students will investigate the relationships that exist between matter and energy systems related to heat, light, sound, mechanics, and forces. How forces and energy interact in space will be explored in our Astronomy unit. The course provides for the background information and skills needed for the high school science courses that they will be taking in the future.

Process/skills: This is a lab oriented course where the emphasis is on hands-on inquiry-based experiments. Some experiments are open-ended with opportunity for student design. Recording, graphing, and analysis of data are also incorporated into the lab routine. Demonstrations are an integral part of the classroom instruction.

Levels: There are two levels of 8th Grade Physical Science, an Average Level and an Enriched Level. Content and skills are similar for both courses, but level of discussion, degree of critical thinking, and assessment expectations are all raised for the Enriched class. The Enriched Level Physical Science course offers students a challenging alternative to acceleration.

Assessment: In addition to regular tests throughout the year and a comprehensive final at the end of the year, students are required, to take the New York State 8th Grade Science Assessment. It is a cumulative test covering content and skills learned in 5th through 8th grade science. The tests have both a written and lab component.

Concepts/skills taught in 8th grade Physical Science

- 1). Scientific Method
- 2). Physical and Chemical properties
- 3). Atomic Structure
- 4). Periodic Table
- 5). Elements, Compounds, Mixtures
- 6). Analysis of Compounds
- 7). Acids, Bases, Salts
- 8). Writing Formulas
- 9). Toxic wastes
- 10). Waves
- 11). Sound
- 12). Light, Color, and Electromagnetic spectrum
- 13). Astronomy
- 14). Force and Work
- 15). Machines
- 16). Heat

B.

Astronomy

- Terrestrial Coordinates (Latitude/Longitude)
 - Earth's Motions (Rotation/Revolution)
 - Seasons (Insolation)
 - Solar System
 - Deep Space

Meteorology and Weather

- Weather Variables (Temperature, Moisture, Pressure, Wind)
 - The Atmosphere (Measurements & Structure)
- Weather Systems (Air Masses, Fronts, and Cyclones)
 - Weather Forecasting
 - Weather Hazards

Climate

- Insolation
- Geographic Factors
 - The Water Cycle
- Human Influence (Global Warming, Heat Island, etc.)

Geology

- Weathering, Erosion, & Deposition
- Landscapes/Topo Maps
 - Minerals & Rocks
 - Plate Tectonics
 - Earth History

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Alternative sequences may begin with topics in Geology or Meteorology.

SCIENCE

A. Criteria

Students eligible for acceleration in science should possess the following characteristics:

- **High interest in accelerating in science**
- **Strong skills in math, reading comprehension, as indicated by test scores of the Stanford Achievement Test or a similar standardized achievement test.**
- **Overall science report card average of B+ or A**
- **Good oral and written communication skills**
- **Ability to maintain a minimum average of 85% in an accelerated science course taught at the Honors level without extraordinary effort or supplementary teaching.**
- **Strongly recommended by the current science teacher to accelerate in science.**
- **History of regular school attendance and strong academic effort.**
- **Consistent homework completion and ease in understanding new, complex ideas.**
- **Interest in pursuing a five-year Regents sequence in science in high school.**

B. Accelerated Course Option

The eighth grade student who accelerates in science will take Regents Earth Science at the Honors Level instead of eighth grade physical science.

Acceleration for Math

Options for students in eighth grade at DeWitt

Option #1

Math 8

NYS math
8
curriculum
taught

Option #2

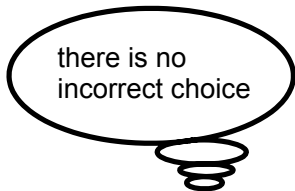
Expanded
Math 8

NYS math
8
curriculum
with extra
Algebra
topics
taught

Option #3

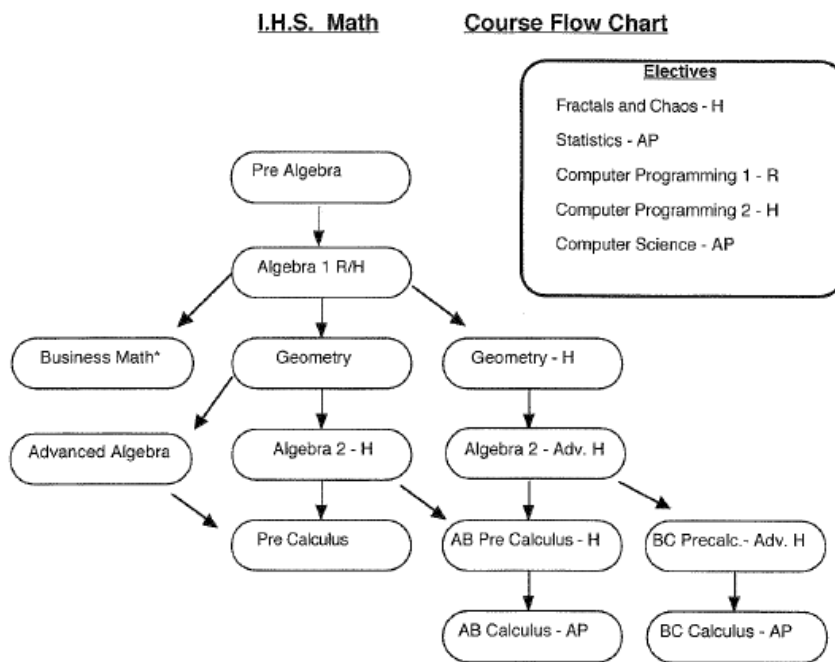
Honors
Algebra

NYS Algebra
curriculum
with extra
topics
included to
prepare
students for
Honors
Geometry
and Honors
Algebra 2



there is no
incorrect choice

Wonder which to take



* Business Math is only available to seniors who have passed TWO previous math courses, including at least one regents course AND exam

The above image was taken from page 31 of the PDF posted at <http://www.icsd.k12.ny.us/highschool/Final%202012-2013%20POS.pdf>

To learn more about math options at the high school, be sure to read the math section of that PDF document. At the meeting, we learned how to interpret the above chart, so if you don't understand it, you might want to ask someone at DeWit or ICSD. In short, students who accelerate in 8th grade will take the Algebra Regents at the end of 8th grade. Because they will have this work completed, they will have more options for AP math and for math-related electives as they get into their later high school years. That's my understanding from having been at the meeting, but you should check with the school if you have any questions, since I wasn't formally taking notes at the meeting!

— Tonya Engst, volunteer handout distributor.

Comparison of Regents and Honors Math

Regents

- Covers core state curriculum.
- 15-20 minutes of homework/night.
- Credit given for homework, effort and participation.
- Retakes available on all tests.
- Student should have a strong math background and be willing to work hard.
- Final exam is state regents exam.

Honors

- Only 50% of time spent on core curriculum; remainder is advanced topics.
- 30-45 minutes of homework/night.
- Grade based primarily on assessments.
- Only 1 retake per semester, no extra time on tests.
- Student should have excellent skills well above the norm, and be *enthusiastic* about mathematics.
- Final exam consists of regents exam and rigorous supplement

Factors to consider in your decision:

Maturity of your child

Extracurricular activities

Committment to seek extra help when needed

Attendance