

St. Ambrose School
Junior High Science Program
Dr. Ndifon

Our goal: Enabling our students to succeed in high school and beyond by providing them with a solid comprehensive foundation in Earth Science, Life Science and Physical Science.

Our instructional strategy: lectures, hands-on outdoor/indoor activities, field trips, video and or PowerPoint presentations, virtual labs, and the Internet. Students are continually monitored and assessed for comprehension of key concepts. Active participation is encouraged.

Grade 6 - Earth Science

Text: Prentice Hall Science Explorer- Earth Science (with accompanying work book) by Pearson Publishers.

Syllabus

Earth Science is taught in the 6th Grade. Each year we cover the following topics:

- The language of science – review of prefixes/suffixes used in scientific terminology.
- The scientific method - an exploration of scientific inquiry through simple experiments such as pH, density, penny lab, and soil porosity.
- The SI system – an exploration of scientific units of measurement and their conversions
- Laboratory safety – students learn safety symbols and safe laboratory practices.
- Planet Earth
 - Rocks
 - Minerals
 - Plate tectonics
 - Earthquakes
 - Volcanoes
- Earth's waters:
 - Freshwater
 - Freshwater resources
 - Ocean motions
 - Ocean zones
- Astronomy
 - The Earth, the Moon and the Sun
 - The solar system
 - Stars, galaxies and the universe
- Weather and Climate
 - The atmosphere
 - Weather patterns
 - Weather factors
 - Climate and climate change

Expectations

All students will:

- Be respectful of everyone
- Follow directions and rules

- Come prepared for class
- Actively participate in all activities

Policies

Forms of Assessment: Tests, quizzes, homework, class work, projects and reports.

- **Homework:**
 1. **Purpose:**
 - Enrich and reinforce skills and concepts learned in the class
 - Improve self-reliance, responsibility and independence
 - Foster effective study habits
 - Finish work started in class
 - Encourage interest in learning
 2. **Format:**
 - In work book or loose leaf
 - In blue/black ink only
 - Properly headed and dated
 3. **Due date:**
 - Next day
 - An assignment not turned in on the due date is considered late and will initially be recorded as M (missing) on Engrade.
 - An assignment that is more than 2 days past due will receive a grade of zero(0)
 - No grade (a blank) on Engrade means the assignment is yet to be checked or recorded.
 - Late homework will be penalized at the depreciation rate of 25% for every late day.
 - Each homework assignment is worth 10 points.
 - It is the responsibility of a student that is absent to make up missed work within 2 days of resuming school.
 4. **Posting:** Home work is posted online on *Engrade*.
- **Class work:**
 - Includes: note taking, hands-on activities, warm ups, etc
 - Should be done in the science note book
 - Should be properly headed and dated
 - Each assignment is worth 10 points
- **Tests/Quizzes:**
 - Test but not quiz dates are announced at least 3 days in advance.
 - Study guides will be provided for every test (not quizzes).
 - Graded tests must be signed by a parent/guardian and returned the next day.
 - Tests may be paper-based or computer-based.

Textbooks: All text books and work books must be covered at all times. Failure to do so could result in a demerit. Students are expected to take good care of books assigned to them and be responsible for them at all times. Students will be charged the cost of replacing damaged or lost books. Organizational demerits will be issued for misplaced textbooks.

Grade 7 - Life Science (Biology)

Text: Prentice Hall Science Explorer- Life Science (with accompanying work book) by Pearson Publishers.

Course Syllabus

Seventh Grade students take Life Science (Biology). The following topics are always covered in detail during this course.

- The language of science - review of the prefixes/suffixes
- A quick review of the scientific method of inquiry
- Microscopy
 - Parts of the microscope
 - Types of microscopes
 - Use and care of the microscope
 - Calculations in microscopy
 - Specimen preparation and observation
 - Drawing, sketching, etc.
- Cells and heredity
 - Discovering cells
 - The Cell Theory
 - Cell structure
 - Cell chemistry
 - Cell processes – respiration, photosynthesis, mitosis, meiosis, osmosis, diffusion
 - DNA, RNA - structure and function
 - Mendelian genetics
 - monohybrid/dihybrid crosses
 - Punnett squares
 - Probability
 - Modern genetics
 - Human inheritance
 - Genetic disorders
 - Cloning
 - Biological engineering
- Human biology and health
 - The skeletal system
 - The muscular system
 - The skin
 - The digestive system and digestion
 - The circulatory system
 - Blood and lymph
 - Cardiovascular disease
 - The respiratory system
 - Smoking and health
 - The excretory system
 - Infectious/noninfectious diseases
 - Body defenses
 - The nervous system
 - Structure and function the nervous system
 - Sense organs – structure and function
 - The endocrine system
 - The reproductive system
- Ecology
 - Populations and communities – living things and the environment; interactions among living things.
 - Ecosystems and biomes – energy flow in ecosystems, ecological succession, biomes, cycles of matter, biogeography, Earth's biomes

- Living resources – forests and fisheries
- Biodiversity
- Environmental issues.

Expectations

All students will:

- Be respectful of everyone
- Follow directions and rules
- Come prepared for class
- Actively participate in all activities

Policies

Forms of Assessment: Tests, quizzes, homework, class work, projects and reports.

- **Homework:**

- 5. **Purpose:**

- Enrich and reinforce skills and concepts learned in the class
 - Improve self-reliance, responsibility and independence
 - Foster effective study habits
 - Finish work started in class
 - Encourage interest in learning

- 6. **Format:**

- In work book or loose leaf
 - In blue/black ink only
 - Properly headed and dated

- 7. **Due date:**

- Next day
 - An assignment not turned in on the due date is considered late and will initially be recorded as M (missing) on Engrade.
 - An assignment that is more than 2 days past due will receive a grade of zero(0)
 - No grade (a blank) on Engrade means the assignment is yet to be checked or recorded.
 - Late homework will be penalized at the depreciation rate of 25% for every late day.
 - Each homework assignment is worth 10 points.
 - It is the responsibility of a student that is absent to make up missed work within 2 days of resuming school.

- 8. **Posting:** Home work is posted online on *Engrade*.

- **Class work:**

- Includes: note taking, hands-on activities, warm ups, etc
 - Should be done in the science note book
 - Should be properly headed and dated
 - Each assignment is worth 10 points

- **Tests/Quizzes:**

- Test but not quiz dates are announced at least 3 days in advance.
 - Study guides will be provided for every test (not quizzes).
 - Graded tests must be signed by a parent/guardian and returned the next day.
 - Tests may be paper-based or computer-based.

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Grade 8 - Physical Science (Physics and Chemistry)

Text: Prentice Hall Science Explorer- Physical Science (with accompanying work book) by Pearson Publishers.

Course Syllabus

By the end of the year, 8th grade will have explored all of the following topics in detail:

- The scientific method - an exploration of scientific inquiry through simple experiments.
- The SI system – scientific units of measurement and their conversions.
- Dimensional analysis
- Motion, Forces and Energy
 - Motion and Newton’s laws
 - Forces
 - Forces in fluids
 - Work and machines
 - Energy and power
 - Thermal energy and Heat
- Chemical building blocks
 - Introduction to matter
 - Solids, liquids and gases
 - Atoms
 - The periodic table
 - Chemical bonds – ionic and covalent bonding
- Chemistry in action
 - Chemical reactions
 - Acids, bases and solutions
 - Carbon chemistry
 - Exploring materials
- Electricity and Magnetism
 - Magnetism and electromagnetism
 - Electric charges and current
 - Electricity and magnetism at work
 - Electronics
- Sound and light
 - Characteristics of waves
 - Sound
 - The Electromagnetic spectrum
 - Light

Expectations

All students will:

- Be respectful of everyone
- Follow directions and rules
- Come prepared for class
- Actively participate in all activities

Policies

- **Forms of Assessment:** Tests, quizzes, homework, class work, projects and reports. Additionally, 8th Grade students take a comprehensive final exam.
- **Homework:**
 - 9. **Purpose:**
 - Enrich and reinforce skills and concepts learned in the class

- Improve self-reliance, responsibility and independence
- Foster effective study habits
- Finish work started in class
- Encourage interest in learning

10. Format:

- In work book or loose leaf
- In blue/black ink only
- Properly headed and dated

11. Due date:

- Next day
- An assignment not turned in on the due date is considered late and will initially be recorded as M (missing) on Engrade.
- An assignment that is more than 2 days past due will receive a grade of zero(0)
- No grade (a blank) on Engrade means the assignment is yet to be checked or recorded.
- Late homework will be penalized at the depreciation rate of 25% for every late day.
- Each homework assignment is worth 10 points.
- It is the responsibility of a student that is absent to make up missed work within 2 days of resuming school.

12. Posting: Home work is posted online on *Engrade*.

• **Class work:**

- Includes: note taking, hands-on activities, warm ups, etc
- Should be done in the science note book
- Should be properly headed and dated
- Each assignment is worth 10 points

• **Tests/Quizzes:**

- Test but not quiz dates are announced at least 3 days in advance.
- Study guides will be provided for every test (not quizzes).
- Graded tests must be signed by a parent/guardian and returned the next day.
- Tests may be paper-based or computer-based.

Textbooks: All text books and work books must be covered at all times. Failure to do so could result in a demerit. Students are expected to take good care of books assigned to them and be responsible for them at all times. Students will be charged the cost of replacing damaged or lost books. Organizational demerits will be issued for misplaced textbooks.

Grading Scale 6th-8th grades

Grading Scheme: 93 – 100% (A), 85-92% (B), 77 – 84% (C), 70 – 76% (D) and 0 – 69% (F).

Grade computation: Is based on points earned. Points earned by a student are expressed as a percentage of total points possible. Students can view grades online on Engrade.