

**8th Grade Advanced Science - Year at a Glance**  
M/J Comprehensive Science 3, Course # 2002110

**A Note to Parents:** State standards require your child’s science teacher to plan lessons that build knowledge of various scientific concepts, develop the ability to apply these concepts, and engage students in critical thinking. To achieve these goals, students will take part in a range of activities including reading, discussions, writing, lab activities and projects, and more. Safety is paramount in science labs and your child’s teacher will ensure a safe learning environment.

The best way to ensure your child’s success is to work as a team that includes you, your child, and your child’s teacher.

**What is the purpose of this course?**

- The purpose of this course is to provide opportunities to study concepts of the life, earth/space, and physical sciences, and their applications to everyday life.
- This course includes additional, rigorous standards from high school science courses.

**What will Advanced Grade 8 students be learning?**

**Topics**

Quarter 1

- The Nature and Practice of Science
- Atoms/Subatomic Particles
- Atomic Mass/Number
- Periodic Table

Quarter 2

- Chemical/Physical Properties and Changes
- Calculating Density
- Elements and Compounds
- Intro to Chemical Bonding
- Mixtures and Pure Substances
- Acids and Bases

Quarter 3

- Carbon Cycle
- Photosynthesis and Cellular Respiration
- Gravity/Mass vs. Weight
- Season, Tides, Eclipses, and Phases of the Moon
- The Solar System

Quarter 4

- Star Properties (including the sun)
- Galaxies
- Objects in Our Solar System
- Technology in Space
- The Space Industry in Florida

**Possible Support Resources**

Amoeba Sisters for Biological Topics:  
<https://www.youtube.com/user/AmoebaSisters>  
Student tutorials: <https://www.floridastudents.org/#29|0|0|0>  
Simulations can be found at: <https://phet.colorado.edu/>  
Schoology: the teacher’s site will have assignment information.  
Videos: Study Jams-  
<https://studyjams.scholastic.com/studyjams/jams/science/index.htm>

*Courses are designed so that all standards will be learned by the end of the course.*

*This guide represents a recommended timeline and sequence to be used voluntarily by teachers for planning purposes. Specific questions regarding when content will actually be addressed in a specific course are best answered by the individual teacher.*