

Course Syllabus

Course Title: Science 7

Credits:

Middle school courses do not contribute credits towards high school graduation.

Course Description:

Science 7 is an integrated science course taught in the seventh grade. Students are exposed to the scientific method of problem solving and are involved in several laboratory activities over the course of the year. Opportunities are also provided for the further development of research and computer skills.

Course Text and Readings:

Science Plus Technology and Society, Level Red. New York: Holt, Rinehart, & Winston, 1997.

SMHS Mission

Sunapee Middle-High School is committed to preparing and encouraging all students to be positive, caring and contributing members of society by maintaining high academic, social and civic expectations within a secure environment.

Academic Expectations

SMHS students will:

- Read effectively
- Write effectively
- Speak effectively
- Problem solve effectively
- Think critically
- Demonstrate knowledge and skills

Course Specific Learning Goals:

- Use the Scientific Method of problem solving.
- Take measurements using metric tools and units.
- Understand how the parts of a system work together to make the system function (ecology, astronomy, geology, forces).
- Understand how energy is transferred from one component of a system to another (ecology, astronomy, geology, forces).
- Understand how things are classified by their characteristics, and use different schemes

to classify objects (ecology, taxonomy, solutions, astronomy, geology, forces).

Grading Policy and Student Expectations:

Students are expected to be on time to and prepared for class. This includes having a textbook (which may be kept in the room), science notebook, assignment notebook/planner, and writing utensil every day. Basic courtesy is expected, including raising one's hand to speak, not having side conversations or talking over the speaker, and showing respect for adults and students. Gum, food, and drinks (except for water) are not allowed in the science classroom. Also, please do not bring backpacks into the classroom. For a complete list of school rules, please refer to the Student Handbook.

It is the student's responsibility to get homework done and turned in on time. Missing homework will result in parent notification (Blue Slip). Late homework will result in a 10% penalty, except in cases of absence or where arrangements have been made with the teacher.

Most tests and quizzes may be re-taken if a student does poorly. The maximum score that can be earned on a re-take is 80%. Students should plan to re-take the test/quiz on their own time (not during class) and within one week of the original test/quiz. Please note that the questions and/or format of the re-take may be different than that of the original test/quiz. The intent is to allow time for the student to improve his/her understanding of the material. Limits may be placed on the number of retakes allowed per quarter if this opportunity is abused.

Units of Study:

- The Scientific Method
- The Metric System
- Ecology
- Classification (Taxonomy) & Diversity
- Solutions
- Astronomy
- Forces & Motion
- Geology

Course Outline:

Week of:	Unit/Major Topics	Details
Quarter 1		
Week 1 8/29/16	Scientific Method	Introduction to Scientific Method Observation vs. Assumption ● Marker Lab
Week 2 9/5/16	Scientific Method	Application of Scientific Method ● Scientific Method Quiz

Week 3 9/12/16	Metric System	Introduction to Metric System Units of Measurement
Week 4 9/19/16	Metric System	Taking Measurements using Metric Tools Metric Conversions • Metric Measurement Lab • Metric System Quiz
Week 5 9/26/16	Ecology	Factors in Ecology Levels of Organization • Worksheet - Types of Relationships (p14-15)
Week 6 10/3/16	Ecology	Relationships in the Environment • Worksheet - Relationships in Nature (p31)
Week 7 10/10/16	Ecology	Movement of Energy: Food Chains & Food Webs Succession
Week 8 10/17/16	Classification	Population Dynamics • Worksheet - Mice & Rabbits • Simulation - Predator-Prey Biomes • Biome Postcards
Week 9 10/24/16	Classification	Classification by Characteristics Traditional Taxonomy & Modern Cladistics Kingdoms of Living Things • Word Parts Quiz
Week 10 10/31/16	Classification	Class Project: Animal Kingdom Phylenogenic Tree • Citizen Science Contributions Due
Quarter 2		
Week 11 11/7/16	Solutions	Solute vs. Solvent
Week 12 11/14/16	Solutions	Solutions in the Environment States of Matter
Week 13	Solutions	Desalination, Distillation, etc.

11/21/16		
Week 14 11/28/16	Solutions	Changes of State
Week 15 12/5/16	Solutions Astronomy	Solutions Unit Wrap-Up • Solutions Quiz Solar System Basics • Prove the Earth is Round
Week 16 12/12/16	Astronomy	Solar System Basics • Star Movement Lab • Vocabulary Worksheet
Week 17 12/19/16	Astronomy	The Solar System • Solar System Packet
Week 18 1/2/17	Astronomy	The Earth
Week 19 1/9/17	Astronomy	The Sun
Week 20 1/16/17	Astronomy	The Planets
Quarter 3		
Week 21 1/23/17	Astronomy	The Moon
Week 22 1/30/17	Astronomy	The Moon • Survival on the Moon Lab
Week 23 2/6/17	Citizen Science	Introduction to eBird • Great Backyard Bird Count
Week 24 2/13/17	Astronomy	GBBC Wrap-Up Stars

Week 25 2/20/17	Astronomy	Stellar Evolution
Week 26 3/6/17	Astronomy	Constellations & Galaxies
Week 27 3/13/17	Astronomy	Galaxies & the Universe Exoplanets & The Drake Equation
Week 28 3/20/17	Forces & Motion	Introduction to Forces Mass vs. Weight Frame of Reference
Week 29 3/27/17	Forces & Motion	Newton's Laws of Motion Balloon-Powered Car Project
Quarter 4		
Week 30 4/3/17	Forces & Motion	Friction & Unit Wrap-Up
Week 31 4/10/17	Geology	Introduction to Geology Plate Tectonics & Continental Drift
Week 32 4/17/17	Geology	Earthquakes Volcanoes
Week 33 5/1/17	Geology	Volcanoes Forces that Shape the Crust
Week 34 5/8/17	Geology <i>SBAC Testing</i>	Weathering & Erosion
Week 35 5/15/17	<i>Spring Elective</i>	
Week 36 5/22/17	Geology	Minerals ● Minerals PowerPoint

		• Mineral ID Lab
Week 37 5/29/17	Geology	Rocks (Igneous, Sedimentary, Metamorphic) • Igneous Rock ID Lab
Week 38 6/5/17	Geology NWEA Testing	Rocks (Igneous, Sedimentary, Metamorphic) • Sedimentary Rock ID Lab • Reading Sedimentary Rock Layers Lab
Week 39 6/12/17	Geology	Rocks (Metamorphic & Rock Cycle) • Metamorphic Rock ID Lab
Week 40 6/19/17	Geology	The Age of Rocks • Rock Quiz Geologic Time