



Science Matters: Spring is in The Air

April, 2017



Dear Parent(s)/Guardian(s):

We, at I.S. 237 – Rachel Carson Magnet School For The Arts, value our relationship with our students’ parent(s) and guardian(s). Spring is in the air: Midwinter break is over, we have 6 straight weeks of school until spring break; we’re in the home stretch of the school year; state testing in ELA, Math and Science are all fast approaching!

This newsletter is created by the science staff at I.S. 237 to keep you informed, connected and involved with your child’s science education!

Upcoming Important Dates

<p>May 24 - 7th Grade SP & 8th Grade (non-SP) classes start to take the Performance Exam. Testing runs till June 2nd.</p>	<p>June 14 - Class 805 & 807 – Living Environment Regents</p>
<p>June 5 - 7th Grade SP & 8th Grade (non-SP) classes take the Science Written Exam.</p>	<p>June 15 - Class 812 & 813 – Earth Science Regents</p>

Check out our school website - <http://rcis237.org/>

6th Grade Students:

Science Teachers: Alvarez, Chavez, Fiermonte, Foy, Lardner, Matyas, Vavasi, Rahman

Current Unit of Study: Weather and Atmosphere

The unit studies physical properties of matter, energy transformations, as well as how energy is released or absorbed as light and as heat. This will provide a context for how weather conditions are produced in the atmosphere, and how weather events affect life in specific regions.

Essential Questions:

- What causes weather conditions?
- How do matter and energy interact to produce weather patterns?
- Why do different locations have different weather conditions?
- What short-term/long-term solutions can we propose that will help reduce pollution? N

Upcoming Unit of Study: Diversity of Life

Diversity of life is seen through the study of cells. Complex cells are observed to describe their structure and to explain how these cells make different organisms. Students will understand how cells are the primary source for biodiversity, and will learn to classify organisms. Students will also study how different organisms have different energy needs to live. They will understand that energy flows through ecosystems in one direction, usually from the Sun, through producers to consumers and then decomposers.

Essential Question:

- How does the transfer of matter and energy through biological communities support the diversity of living things?

Important dates this month:

- ★ Test: Week of April 24
- ★ Earth Day: April 22, 2017

Ways you can be involved in what your child is learning in science:

- Create a weather station model with your child for their date of birth and location of birth.
- Make a weather vane, anemometer, or sling psychrometer and explain its use for extra credit.
- Visit the American Museum of Natural History, Hall of Biodiversity to discover how species interact within ecosystems.

7th Grade Students:

Science Teachers: Chavez, Lardner, Singh, Travers

Current unit of study: Dynamic Equilibrium: The Human Animal

Through this unit, students will understand the cell, the function of organs, and how these work together as a system. Students must be able to explain and conclude that, despite changes, the connection of organ systems, and the maintenance of a proper metabolism, will provide a dynamic equilibrium for life.

Test: The exams in April will be Biology related. Specifically on the human body systems. Test schedules will vary amongst the teachers but will always be announced a week in advance.

Ways you can be involved in what your child is learning in science:

7th Grade Honors Students (701, 707, 713, & 714)

Science Teachers: Benedetti, Ercoli, Travers

Currently your children have just finished working on units of study related to the topics of evolution and Ecology. Our next focus will be in the area of Geology, including rocks & minerals and mapping.

Please remember that all students in these classes will be taking the grade 8 science exam on June 5th. In addition, at some point during the two weeks prior to the written exam your child will be taking the "hands-on" lab practical component of this assessment.

Tests: The exams for April will all be Geology based. Test schedules vary amongst the teachers but will always be announced a week in advance.

Ways you can be involved in what your child is learning in science: stay in contact with their teachers, please ask us questions anytime. All of the NYS Exams for grade 8 science are available on the state website with answer keys. Practice makes perfect.

Website: <http://www.nysedregents.org/grade8/science/home.html>



8th Grade Students:

Science Teachers: Benedetti, Chavez, Ercoli, Gonzalez, Singh

Current unit of study: Reproduction, Heredity and Evolution

During this unit, students will compare and contrast the processes of asexual and sexual reproduction. They will also learn the structure of reproductive organs as well as the function of the organs on the reproductive, endocrine and immune systems. This knowledge leads to the study of how environmental and physical factors impact and contribute to biodiversity. At the end of the unit, students should be able to describe the genetic product of cell division and its implications in terms of diversity of life.

Ways you can be involved in what your child is learning in science: Stay in contact with their teachers, please ask us questions anytime. All of the NYS Exams for grade 8 science are available on the state website with answer keys. Practice makes perfect.

Website: <http://www.nysedregents.org/grade8/science/home.html>

Regents Earth Science:

Earth Science Teachers: Benedetti and Singh

Current unit of study: Meteorology and Climate

Meteorology is, at the simplest level, a study of how energy interacts with our atmosphere. Students will be learning about the tools and methods used to study each of the variables involved, and how those variables interact with each other to create local weather conditions. These same variables examined over an extended period of time and larger area translate into Climatology. Forecasting, severe weather, emergency preparedness are all topics also included in this unit.

Test:

- End of March first week of April
- End of April

Ways you can be involved in what your child is learning in science:

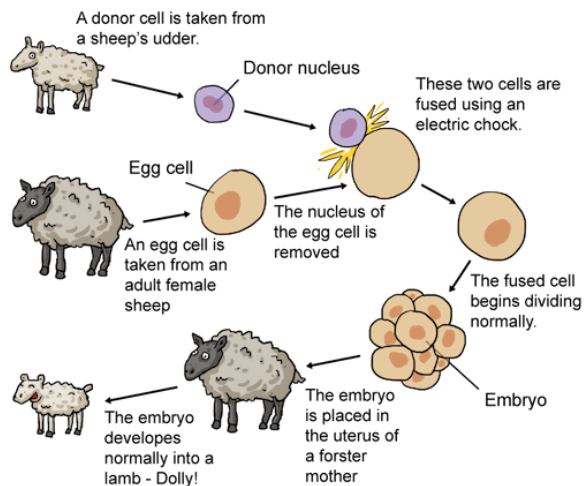
- Create a family preparedness plan - Explore the FEMA website for information on how to create a preparedness plan for severe weather events.

Did You Know?

Rachel Carson

Our school is named after Rachel Carson (we're sure you knew that)...but who was she? Why would we talk about her in our first edition of **Science Matters**? Rachel Carson was a scientist, specifically a marine biologist (earlier years) and a conservationist (latter years). She was also an avid writer who published many science articles and books. As a marine biologist, she studied fish populations and life on the ocean floor. As conservationist, Rachel Carson focused on the dangers and overuse of pesticides.

Cloning: 20 Years after Dolly



Did you know that it's been 20 years since scientists cloned our first mammal, Dolly the sheep? And, since that time, 8 more mammals have been cloned! These mammals include pigs (2001), cat (2001), deer (2003), horse (2003), dog (2005), mice (2008), and an extinct wild goat mammal named the bucardo (2009). Interesting facts along the cloning journey include the cat that was cloned, later reproduced naturally; the deer was cloned from a dead

buck; the horse was carried by the same animal that donated the genetic material, the dog that was cloned later fathered his own puppies; the endangered gray wolves that were cloned were carried by dogs; and the mice were cloned from cells that were frozen for 16 years! Once considered quite novel cloning has become more common.

Text Source: <http://www.livescience.com/57971-mammals-that-have-been-cloned.html>

Image source: <http://www.shmoop.com/biotechnology/organism-cloning.html>

Staying Connected



Pupil Path

If you have not done so already, be sure to make an account to see your child's progress at <https://pupilpath.skedula.com/>

New Science Standards

New York City recently adopted new Science Standards (Scope and Sequence) – check them out at schools.nyc.gov [In the search bar at the top, type in "6-12 Science Scope and Sequence"]

