

**Our Lady of the Assumption School**  
**8<sup>th</sup> Grade Science**  
**Mrs. Antonio**



The eighth grade year in science focuses on **Physical Science**. Topics included in this curriculum are motion, energy and force. The curriculum at Our Lady of the Assumption has always been aligned with the Diocesan Curriculum Standards (**DCS**). And California's Common Core State Standards. The goal is to meet standards and have the students well prepared for high school science.

**DCS 1.0 Motion**: The velocity of an object is the rate of change of its position. As the basis for understanding this concept, students will learn:

**Chapter 9: Motion and Energy**

**DCS 2.0 Forces**: Unbalanced forces cause changes in velocity. As the basis for understanding this concept, students will learn:

**Chapter 10: Forces**

**DCS 3.0 Structure of Matter**: Elements have distinct properties and atomic structure in the scientific realm created by God. All matter is comprised of one or more of over 100 elements. As the basis for understanding this concept, students will learn:

**Chapter 2: The Nature of Matter**

**Chapter 3: Solids, Liquids, and Gases**

**DCS 4.0 Earth In The Solar System**: The structure and composition of the universe can be learned from the study of stars and galaxies, and their evolution. As the basis for understanding this concept, students will learn:

**Chapter 12: Earth, Moon, and Sun**

**Chapter 13: Exploring Space**

**Chapter 14: The Solar System**

**Chapter 15: Stars, Galaxies, and the Universe**

**DCS 5.0 Reactions**: Chemical reactions are processes in which atoms are rearranged into different combinations of molecules. As the basis for understanding this concept, students will learn:

**Chapter 6: Chemical Reactions**

**Chapter 7: Acids, Bases, and Solutions**

**DCS 6.0 Chemistry of Living Systems**: Principles of Chemistry underlie the functioning of biological systems as created by God. As the basis for understanding this concept, students will learn:

**Chapter 8: Carbon Chemistry**

**DCS 7.0 Periodic Table:** The organization of the periodic table is based on the properties of the elements and reflects the structure of atoms. As the basis for understanding this concept, students will learn:

**Chapter 4: Elements and the Periodic Table**

**Chapter 5: Atoms and Bonding**

**DCS 8.0 Density And Buoyancy:** All objects experience a buoyant force when immersed in a fluid. As the basis for understanding this concept, students will learn:

**Chapter 11: Forces in Fluids**

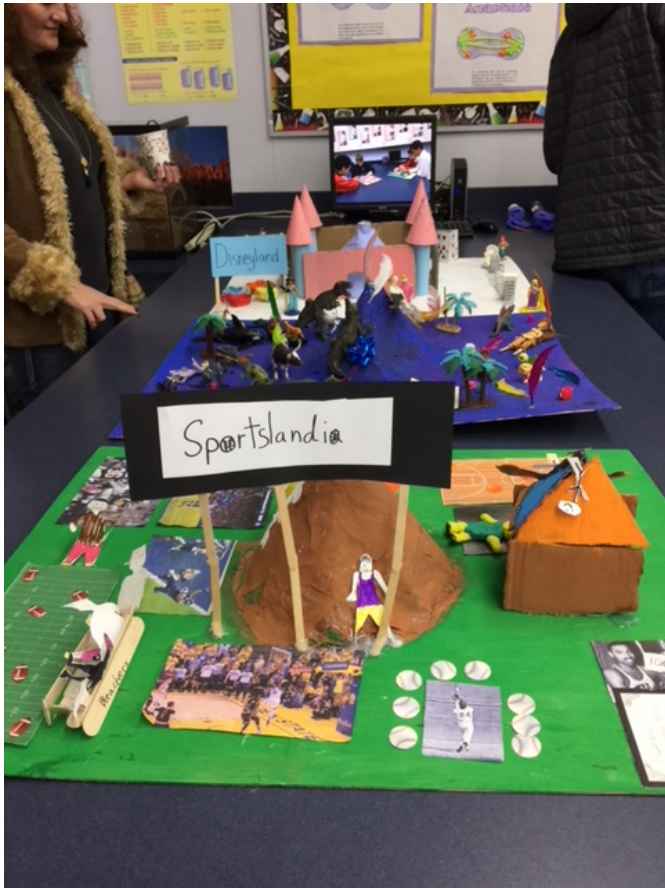
**DCS 7.0 Investigation and Experimentation:** Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept, students will be required to complete a **SCIENCE PROJECT**, and they will participate in the School Science Fair in February.

**Chapter 1: Introduction to Physical Science**

*(Please note: The Diocesan Standards will not necessarily be taught in numerical order. Please see our class website for topics currently being covered.)*

The book for this year is: Focus on California Physical Science from Prentice - Hall. There are many additional resources throughout each chapter that can be accessed online for review, reinforcement and enrichment. All Diocesan Standards are met with this text. In addition, the text can be downloaded onto a MP3 player at: [www.californiascience.com](http://www.californiascience.com)

The eighth grade Science field trip is to the Challenger Space Center where we will see a planetarium show and then participate in a simulated space mission. The trip is scheduled for January. Many disciplines are incorporated into this activity, and it gives the students a chance to see how different areas of science come together in real life. This is a fun day out for the class.





*Abigail S.*  
Hydroponics Experiment Log

Date	Measurement Root Length (cm)	Number of leaves	Other observations
01/16/18	0.2cm	none	started experiment
01/22/18	0.3cm	none	3 leaves got shorter and 3 roots got longer
1/18/18	0.6cm	none	but 4 sprouting
1/19/18	0.9 cm	none	5 roots and 4 leaves
1/22/18	3 cm	9 leaves	got longer from very long
1/23/18	3 1/2 cm	12 leaves	got longer more leaves
1/24/18	4 1/2 cm	13 leaves	longer and wider
1/25	5 cm	26 leaves	longer

*Dalton D.*  
Hydroponics Experiment Log

Date	Measurement Root Length (cm)	Number of leaves	Other observations
01-16-18	0.2 cm	0.0	
01-16-18	0.2	0.0	Water in water 11.
01-17-18	0.2	0.0	water 11.
01-21-18	0.2	0.0	water 11.
01-23-18	0.3	0.3	less wet
01-24-18	0.4	0.5	smaller
01-25-18	0.4	0.5	less