



Syllabus For

DMS 8th Grade Science

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Welcome to 8th Grade Science! This syllabus shows a monthly breakdown of the standards your child will be taught, the objectives set forth to master those standards, and any major project or assignment that will assist in the mastery of those objectives.

We have completed this syllabus as a grade-level and content-area team in order to focus on consistency, and we have followed the state-approved blueprint. Specific weekly lesson plans will still be located on our school website: www.dekalbmiddleschoolsaints.com . They will be listed under your child's grade and teacher, per subject.

Thank you! Let's have a phenomenal year!

2016-2017

❖ August- Scientific Inquiry

- ✚ Design a simple experimental procedure with an identified control and appropriate variables.
- ✚ Select tools and procedures needed to conduct a moderately complex experiment.
- ✚ Interpret and translate data in a table, graph, or diagram.
- ✚ Draw a conclusion that establishes a cause and effect relationship supported by evidence.
- ✚ Identify a faulty interpretation of data that is due to bias or experimental error.
- ✚ Identify the tools and procedures needed to test the design features of a prototype.
 - Projects:
 - Paper Plane Experiment

❖ **September- Scientific Method & Engineering Design Process**

- ✚ Identify the tools and procedures needed to test the design features of a prototype.
- ✚ Evaluate a protocol to determine if the engineering design process was successfully applied.
- ✚ Distinguish between the intended benefits and the unintended consequences of a new technology.
- ✚ Differentiate between adaptive and assistive engineered products (e.g., food, biofuels, medicines, integrated pest management).
 - Projects
 - Marble Drop Project

❖ **October- Biodiversity & Change**

- ✚ Use a simple classification key to identify an unknown organism.
- ✚ Analyze structural, behavioral, and physiological adaptations to predict which populations are likely to survive in a particular environment
- ✚ Analyze data on levels of variation within a population to make predictions about survival under particular environmental conditions.
- ✚ Identify several reasons for the importance of maintaining the earth's biodiversity.
 - Animal Adaptation Project

❖ **November- Fossil Record & Chemical Reaction**

- ✚ Compare fossils found in sedimentary rock to determine their relative age.
- ✚ Identify the common outcome of all chemical changes.
- ✚ Classify common substances as elements or compounds based on their symbols or formulas

❖ **December- Chemical Reactions**

- ✚ Differentiate between a mixture and a compound.
- ✚ Interpret the results of an investigation to determine whether a physical or chemical change has occurred.
- ✚ Apply an equation to determine the density of an object based on its mass and volume.
 - Project
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❖ **January- Properties of Matter**

- ✚ Recognize that all matter consists of atoms.
- ✚ Use the periodic table to determine the properties of an element.
- ✚ Describe the chemical makeup of the atmosphere.
- ✚ Compare the particle arrangement and type of particle motion associated with different states of matter.
 - Project:
 - Atmospheric Gases Drawing

❖ **February- States of Matter & Electromagnets**

- ✚ Describe the chemical makeup of the atmosphere.
- ✚ Compare the particle arrangement and type of particle motion associated with different states of matter.
- ✚ Recognize that electricity can be produced using a magnet and wire coil.
- ✚ Describe the basic principles of an electromagnet.
- ✚ Distinguish among the Earth's magnetic field, a magnet, and the fields that surround a magnet and an electromagnet.

- Project:
 - Drawing of different magnetic fields.

❖ **March- Forces of Nature**

- ✚ Distinguish between mass and weight using appropriate measuring instruments and units.
- ✚ Determine the relationship among the mass of objects, the distance between these objects, and the amount of gravitational attraction.
- ✚ Illustrate how gravity controls the motion of objects in the solar system.

❖ **April- TCAP Preparation**

- ✚ **Review of all standards in preparation for TCAP**

❖ **May- 9th Grade Science Preparation**

- ✚ **9TH Grade Biology Preparation**