8TH GRADE SCIENCE SYLLABUS

Purpose: Students are encouraged to develop criticalthinkingandproblem-solvingskills, which are essential to learning in any area.

Students will also:

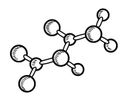
- Apply scienceand engineering practicesalong withproblem-solving strategies
- Integrate reading and writing into the science curriculum to strengthen literacy and scientific communication skills.
- Participate productively and responsibly in a constantly changing environment.

LIFE SCIENCE

- Construct an explanation of how genetic variations occur in offspring through the inheritance of traits or through mutations.
- Communicate how advancements in technology have furthered the field of genetic research and use evidence to support an argument about the positive and negative effects of genetic research on human lives.
- Develop and use a model to explain how natural selection may lead to increases and decreases of specific traits in populations over time
- Gather and communicate evidence on how the process of natural selection

EARTH SCIENCE

- Analyze and interpret data about the Earth's geological column to communicate relative ages of rock layers and fossils
- Obtain, evaluate, and communicate information about data and historical patterns to predict natural hazards and other geological events
- Construct and support an argument about how human consumption of limited resources impacts the biosphere

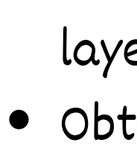


PHYSICAL SCIENCE

- Develop and use a model to demonstrate that atoms and molecules can be combined or rearranged in chemical reactions to form new compounds with the total number of each type of atom conserved
- Obtain and evaluate information regarding how scientists identify substances based on unique physical and chemical properties.
- Construct an explanation on how energy can be transferred from one energy store to another.
- Develop and use mathematical models to explain wave characteristics and interactions Develop a solution to increase efficiency when transferring energy from one source to another

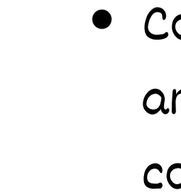
DISTRICT CURRICULUM RESOURCES

Open SciEd Units
Explore Learning Gizmos
Data Nuggets
Phet Interactives
CK-12 Middle School Flexbooks



DISTRICT REQUIRED ASSESSMENTS

September- Genetics
October - Natural Selection
December-Matter
February- Light & Energy
April- Sound Waves



ED. TECH TOOLS

Canva, Mentimeter, Spark Video, Canvas, Padlet, Infographic, etc.

GRADING CATEGORIES (DVUSD PRAG)

Assessments (80%)-Tests, Lab Reports, Quizzes, projects, presentations & research papers.

Coursework (20%)- Classworks, exit tickets & daily activities.

COMMUNICATION:

📔 Agenda

Students receive an agenda (planner) on the first day of school and must bring it to class every day. They write their daily Science activities every Monday and record assigned tasks during the first few minutes of class each day (if any).

📣Newsletter & Weekly Reminders (email)

Our 8th-grade newsletters are sent bi-weekly, with a weekly Science reminder sent every Sunday.

CLASSROOM EXPECTATIONS

- Be on Time and Prepared

Arrive on time and sitin your assigned seat when the bellrings.
Bring your ISN, pencil, Chromebook, paper, assignments, and a positive attitude daily.

- Complete and Submit Assignments on Time

Do your best on all assignments and review them before submitting.
Submit work on or before the due date.

- Monitor Your Progress

Check PowerSchool regularly to track your progress and stay informed.

- Punctuality Matters

Be present, on time, and attentive every day.
Tardiness is unacceptable as you miss valuable instruction and discussions.

- Participate Actively

Participate in activities, discussions, and lab investigations.
Ask and answer questions, even if unsure,to show engagement and help me gauge your understanding. Work cooperatively in group activities.

- Behave Respectfully

Follow all school-wide behavior expectations (TRACKS) at alltimes.
Treat all staff, visitors, and classmates with respect, including substitute teachers and classroom visitors.

- Use Available Resources

Seek help from yourteacher, Canvas modules,Gizmos, and your notes.
If you don’t understand something, ask questions, I want you to succeed.

- Use Time Wisely

Use class time productively for assignments and study.
Do not wait untilthe night before a quiz or testto study.
Prioritize regular study habits and sufficient sleep for your success.