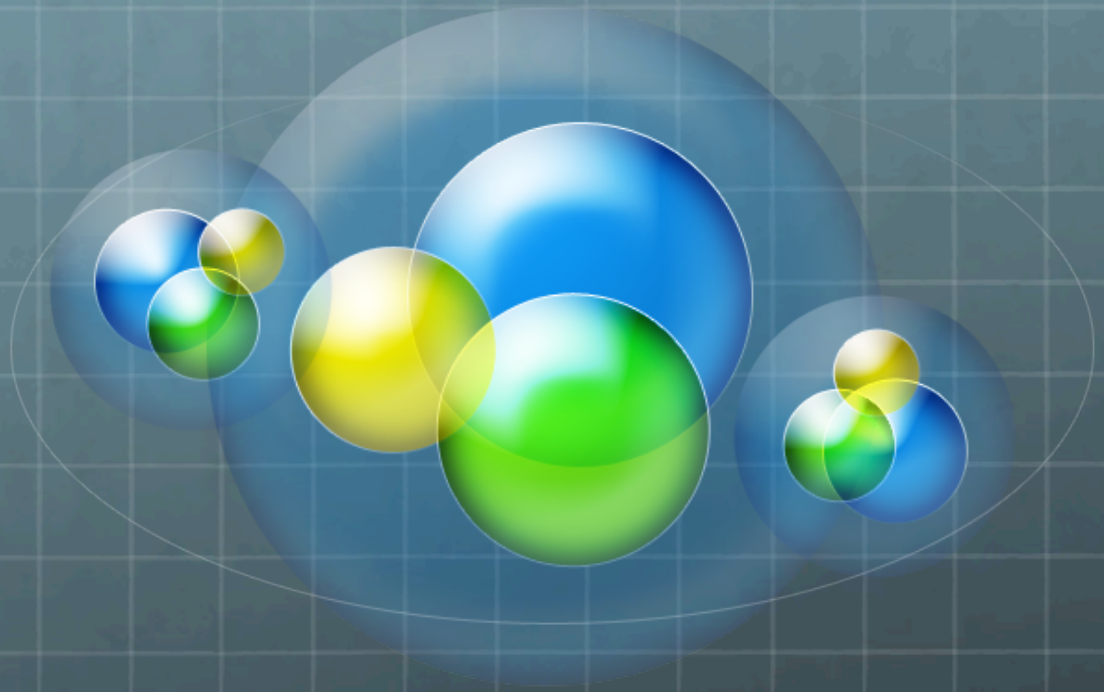


5th Grade Parent Night

6th Grade Science
Mt. Tabor Middle School

Tonight's Schedule

- JMP/SI/Neighborhood Integration
- Science Curriculum Overview
- Outdoor School
- Support Systems
- Home Education Expectations
- Questions

JMP/SI/Neighborhood Integration

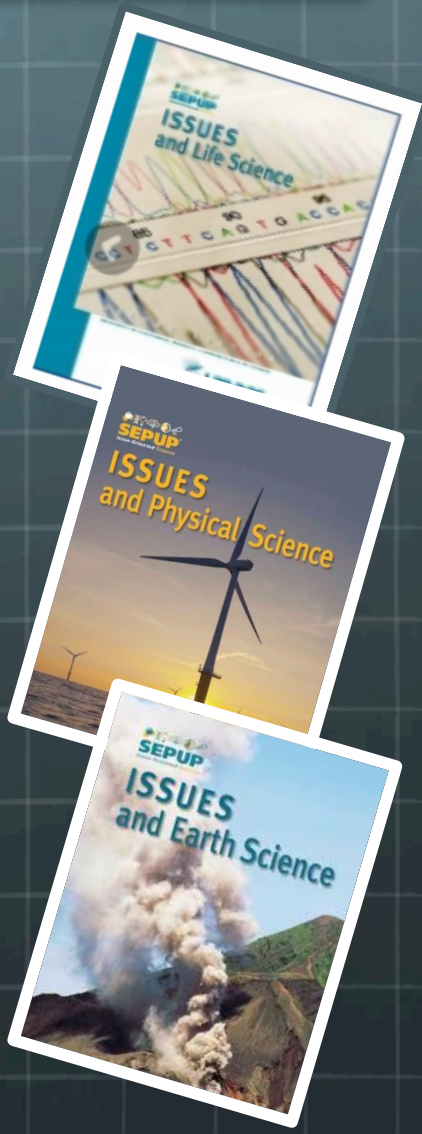
- Japanese Magnet Program (JMP)
- Spanish Immersion (SI)
- All students integrated with "Neighborhood" program for Science and Math

Science Curriculum Overview

- 6th Grade: Integrated Science
  - 3rd year of transition
- 7th Grade: Integrated Science
  - 2nd year
- 8th Grade: Earth/Space Science
  - 1st year to move to Integrated

6th Grade Integrated Science

- SEPUP (Science Education for Public Understanding Program)
- Next year 6th Year of 'new' Science Adoption
- Inquiry-based problem-solving approach



Next Generation Science Standards

MS.Interdependent Relationships in Ecosystems

MS.Interdependent Relationships in Ecosystems

Students who demonstrate understanding can:

MS-LS2-2. **Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.** [Clarification Statement: Emphasis is on predicting consistent patterns of interactions in different ecosystems in terms of the relationships among and between organisms and abiotic components of ecosystems. Examples of types of interactions could include competitive, predatory, and mutually beneficial.]

MS-LS2-5. **Evaluate competing design solutions for maintaining biodiversity and ecosystem services.*** [Clarification Statement: Examples of ecosystem services could include water purification, nutrient recycling, and prevention of soil erosion. Examples of design solution constraints could include scientific, economic, and social considerations.]

The performance expectations above were developed using the following elements from the NRC document *A Framework for K-12 Science Education*:

Science and Engineering Practices

Constructing Explanations and Designing Solutions

Constructing explanations and designing solutions in 6–8 builds on K–5 experiences and progresses to include constructing explanations and designing solutions supported by multiple sources of evidence consistent with scientific ideas, principles, and theories.

- Construct an explanation that includes qualitative or quantitative relationships between variables that predict phenomena. (MS-LS2-2)

Engaging in Argument from Evidence

Engaging in argument from evidence in 6–8 builds on K–5 experiences and progresses to constructing a convincing argument that supports or refutes claims for either explanations or solutions about the natural and designed world(s).

- Evaluate competing design solutions based on jointly developed and agreed-upon design criteria. (MS-LS2-5)

Disciplinary Core Ideas

LS2.A: Interdependent Relationships in Ecosystems

- Similarly, predatory interactions may reduce the number of organisms or eliminate whole populations of organisms. Mutually beneficial interactions, in contrast, may become so interdependent that each organism requires the other for survival. Although the species involved in these competitive, predatory, and mutually beneficial interactions vary across ecosystems, the patterns of interactions of organisms with their environments, both living and nonliving, are shared. (MS-LS2-2)

LS2.C: Ecosystem Dynamics, Functioning, and Resilience

- Biodiversity describes the variety of species found in Earth's terrestrial and oceanic ecosystems. The completeness or integrity of an ecosystem's biodiversity is often used as a measure of its health. (MS-LS2-5)

LS4.D: Biodiversity and Humans

- Changes in biodiversity can influence humans' resources, such as food, energy, and medicines, as well as ecosystem services that humans rely on—for example, water purification and recycling. *(secondary to MS-LS2-5)*

ETS1.B: Developing Possible Solutions

- There are systematic processes for evaluating solutions with respect to how well they meet the criteria and constraints of a problem. *(secondary to MS-LS2-5)*

Crosscutting Concepts

Patterns

- Patterns can be used to identify cause and effect relationships. (MS-LS2-2)

Stability and Change

- Small changes in one part of a system might cause large changes in another part. (MS-LS2-5)

Connections to Engineering, Technology, and Applications of Science

Influence of Science, Engineering, and Technology on Society and the Natural World

- The use of technologies and any limitations on their use are driven by individual or societal needs, desires, and values; by the findings of scientific research; and by differences in such factors as climate, natural resources, and economic conditions. Thus technology use varies from region to region and over time. (MS-LS2-5)

Connections to Nature of Science

Science Addresses Questions About the Natural and Material World

- Scientific knowledge can describes consequence of actions but does not make the decisions that society takes. (MS-LS2-5)

Connections to other DCIs in this grade-band: **MS.LS1.B** (MS-LS2-2); **MS.ESS3.C** (MS-LS2-5)

Articulation across grade-band: **1.LS1.B** (MS-LS2-2); **HS.LS2.A** (MS-LS2-2),(MS-LS2-5); **HS.LS2.B** (MS-LS2-2); **HS.LS2.C** (MS-LS2-5); **HS.LS2.D** (MS-LS2-2);.**LS4.D** (MS-LS2-5); **HS.ESS3.A** (MS-LS2-5); **HS.ESS3.C** (MS-LS2-5); **HS.ESS3.D** (MS-LS2-5)

Common Core State Standards Connections:

ELA/Literacy –

RST.6-8.1	Cite specific textual evidence to support analysis of science and technical texts. (MS-LS2-2)
RST.6-8.8	Distinguish among facts, reasoned judgment based on research findings, and speculation in a text. (MS-LS2-5)
RI.8.8	Trace and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient to support the claims. (MS-LS2-5)
WHST.6-8.2	Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content. (MS-LS2-2)
WHST.6-8.9	Draw evidence from literary or informational texts to support analysis, reflection, and research. (MS-LS-2)
SL.8.1	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 8 topics, texts, and issues, building on others' ideas and expressing their own clearly. *(MS-LS2-2)*
SL.8.4	Present claims and findings, emphasizing salient points in a focused, coherent manner with relevant evidence, sound valid reasoning, and well-chosen details; use appropriate eye contact, adequate volume, and clear pronunciation. *(MS-LS2-2)*

Mathematics –

MP.4	Model with mathematics. *(MS-LS2-5)*
6.RP.A.3	Use ratio and rate reasoning to solve real-world and mathematical problems. *(MS-LS2-5)*
6.SP.B.5	Summarize numerical data sets in relation to their context. *(MS-LS2-2)*

Next Generation Science Standards

Science and Engineering Practices (SEP)

1. Asking Questions and Defining Problems
2. Developing and Using Models
3. Planning and Carrying Out Investigations
4. Analyzing and Interpreting Data
5. Using Mathematics and Computational Thinking
6. Constructing Explanations and Designing Solutions
7. Engaging in Argument from Evidence
8. Obtaining, Evaluating, and Communicating Information

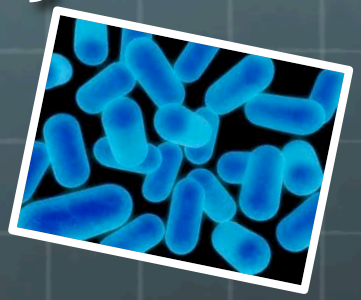
Disciplinary Core Ideas (DCI)

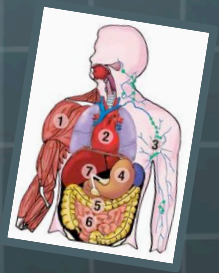
1. Patterns
2. Cause and Effect: Mechanism and Prediction
3. Scale, Proportion, and Quantity
4. Systems and System Models
5. Energy and Matter: Flows, Cycles, and Conservation
6. Structure and Function
7. Stability and Change

Crosscutting Concepts (CC)

6th Grade Integrated *Units*

- Studying People Scientifically
- Cell Biology and Disease
- Body Works
- Weather and Atmosphere
- Energy





6th Grade Science *Skills*

- Inquiry – constant questioning and discovering!
- Framing, planning, conducting, and analyzing
- Equipment knowledge and use
- Notebooking!! OR
- Google Classroom

Outdoor School

- Spring
- Back to 6-day program! Woohoo!

Support Systems

- You! Stay involved!
- Synergy Grading/ Reporting
- Planners
- Advisory class
- Teamwork and communication
- The WEB Program
- "Students First" Team Meetings
- Homework Club
- SUN School
- Website or Google Classroom

Home Education Expectations

- Homework vs. Home Education
- Ebbs and flows
- Not finished in class, finish at home
- Plan time wisely
- Notebooks . . .

Thanks for coming!!

Questions??