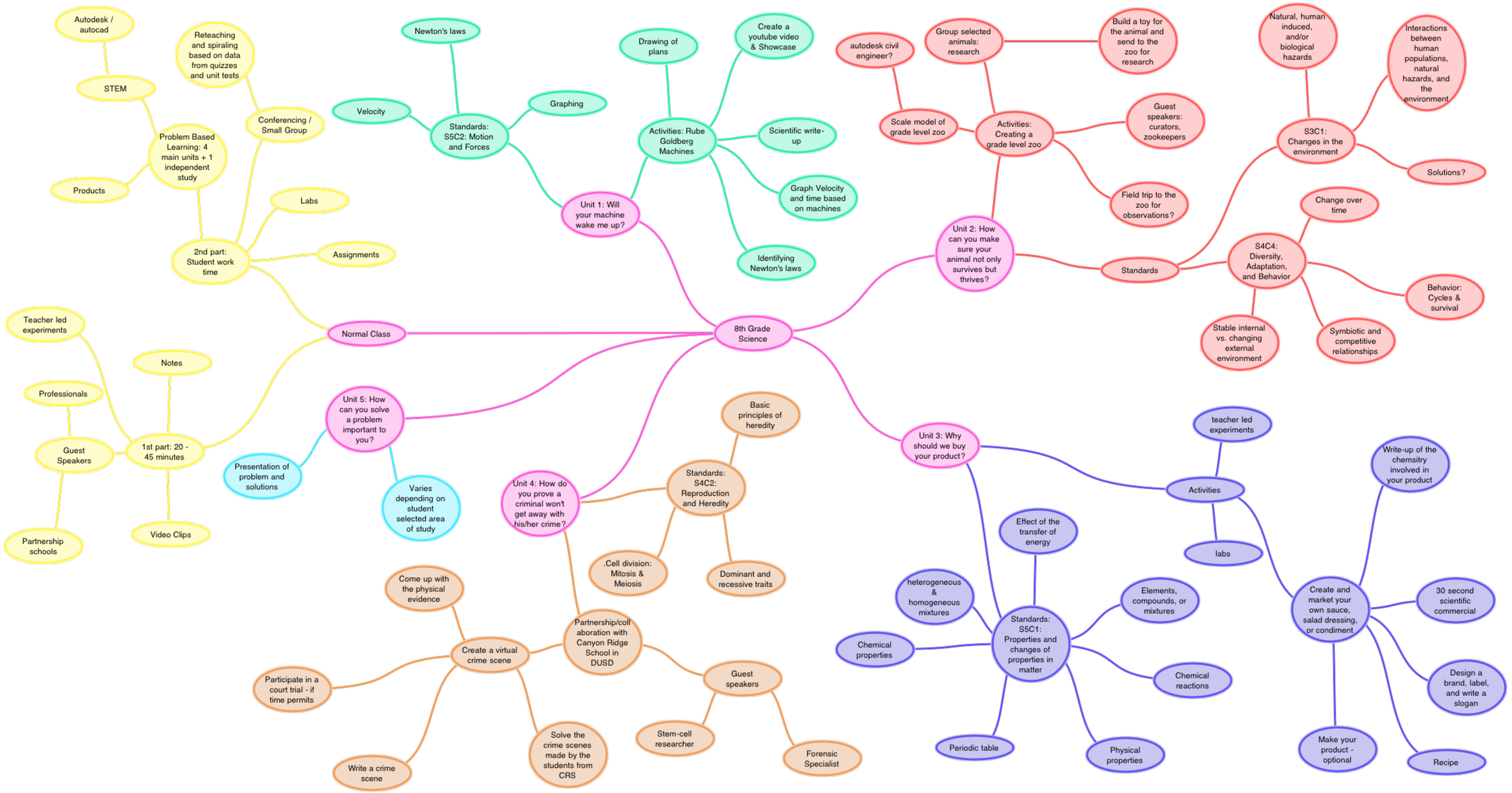
8th Grade Science
Unit 1: Will your machine wake me up?
Standards: S5C2: Motion and Forces
Newton's laws
Velocity
Graphing
Activities: Rube Goldberg Machines
Drawing of plans
Create a youtube video & Showcase
Scientific write-up
Graph Velocity and time based on machines
Identifying Newton's laws
Unit 2: How can you make sure your animal not only survives but thrives?
Activities: Creating a grade level zoo
Group selected animals: research
Build a toy for the animal and send to the zoo for research
Guest speakers: curators, zookeepers
Field trip to the zoo for observations?
Scale model of grade level zoo
autodesk civil engineer?
Standards
S3C1: Changes in the environment
Natural, human induced, and/or biological hazards
Interactions between human populations, natural hazards, and the environment
Solutions?
S4C4: Diversity, Adaptation, and Behavior
Change over time
Behavior: Cycles & survival
Symbiotic and competitive relationships
Stable internal vs. changing external environment
Normal Class
Problem Based Learning: 4 main units + 1 independent study
Autodesk / autocad
STEM
Products
Conferencing / Small Group
Reteaching and spiraling based on data from quizzes and unit tests
2nd part: Student work time
Labs
Assignments
1st part: 20 - 45 minutes
Teacher led experiments
Notes
Professionals
Guest Speakers
Partnership schools
Video Clips
Unit 3: Why should we buy your product?
Activities
teacher led experiments
labs
Create and market your own sauce, salad dressing, or condiment
Write-up of the chemsitry involved in your product
30 second scientific commercial
Design a brand, label, and write a slogan
Recipe
Make your product - optional
Standards: S5C1: Properties and changes of properties in matter
Effect of the transfer of energy
Elements, compounds, or mixtures
Chemical reactions
Physical properties
Periodic table
Chemical properties
heterogeneous & homogeneous mixtures
Unit 4: How do you prove a criminal won't get away with his/her crime?
Standards: S4C2: Reproduction and Heredity
Basic principles of heredity
Dominant and recessive traits
.Cell division: Mitosis & Meiosis
Partnership/collaboration with Canyon Ridge School in DUSD
Guest speakers
Forensic Specialist
Stem-cell researcher
Create a virtual crime scene
Come up with the physical evidence
Solve the crime scenes made by the students from CRS
Write a crime scene
Participate in a court trial - if time permits
Unit 5: How can you solve a problem important to you?
Varies depending on student selected area of study
Presentation of problem and solutions