

Department Chair Report
Hesperia HS Math and Science
Board Meeting Report
December 13, 2021

The Math and Science department comprises 5 members and instructs the following courses.

- ❑ Jose Capella - Math III , Precalculus Honors, Calculus Honors
- ❑ Bernard Iyawwe - Math I
- ❑ Sophia Munoz - Math I, Math I Honors, and Math II
- ❑ Vanessa Crook- Environmental Science
- ❑ Vacant Science Teacher - Chemistry I/Honors, Chemistry II Honors,
- ❑ Donald Hodges- Biology, Anatomy

This report highlights the team's best practices and accomplishments.

Math

MyPath:

How MyPath 6–12 Works

- A Built-in placement exam determines students' initial proficiency level or integration with NWEA® MAP® Growth™, Scantron® Performance Series®, and Renaissance Star 360® assessments.
- A library of standards-based lessons from the 3rd–11th grade is built explicitly for older students so teachers can provide engaging, age-appropriate instructional content that keeps learners motivated.
- Gradual release, explicit instruction with answer-specific feedback that promotes confidence and conceptual understanding.
- Progress monitoring and skills-based reporting help inform small-group instruction or one-on-one with students, whether in-class or at home.
(edgenuity.com)

Math Benchmarks & Math MyPath Course

Students take a benchmark assessment at the start of the year and based on their score, they are each assigned a math course on Edgenuity under the MyPath courses.

Three levels a student can be placed in:

- Basic Math
- Foundational Math
- Advanced Math

Each level then has multiple courses available such as “Basic Math A” or “Basic Math B” this is to ensure that the student can still be placed within the correct level. Maybe they are at a basic math level but towards the end of the basic math spectrum and so a higher letter will be assigned for the student's course.

Once the student is assigned a course, the student then works on this course throughout the semester to prepare for the second benchmark which takes place around mid academic year. The MyPath program is designed to aid the student in covering concepts they don't understand and to challenge them on existing mastered concepts. If a student is in the 10th grade with a 6th grade level math score, then the mypath course will help the student achieve grade level understanding of corresponding mathematical concepts.

Essentially, the mypath courses help bridge the learning gaps many students are experiencing due to the setbacks from Covid19 and distance learning.

Student Sample:

The following student has been placed in “Advanced Math B.” Student placement based on September benchmark scores.

Edgenuity interface showing course list for Erica Gilman. The interface includes a navigation bar with 'Erica Gilman', 'Students', 'Courses', 'Reports', and 'Communication'. Below the navigation bar, there are links for 'Add Course', 'Disable', 'Complete', 'Customize', 'Edit Options', 'Retakes', 'Grades', and 'Undo Bypass'. A table lists the following courses:

| Edit | Course Name | Bypasses | Grade | Start Date |
|-----------------------|--|----------|-------|------------|
| <input type="radio"/> | Advanced Math B | | 10 | 9/27/2021 |
| <input type="radio"/> | Advanced Reading B | | 10 | 9/27/2021 |
| <input type="radio"/> | Integrated Math II - Munoz 2021-2022 | | 10 | 9/21/2021 |

Student sample work progress: Through Edgenuity teachers can keep track of the progress of each student. Aside from scores, teachers can check the dates they have worked and the amount of time spent. This student has been successfully working on their mypath course throughout the semester.

Course Report: Advanced Math B
 ID: 9798 | Grade: 10
 Overall Grade: 62.5% | Actual Grade: 62.5% |
 Created On: 12/06/2021, 09:40 PM
 Start Date: 09/27/2021
 Student Progress: 6%

| Activity | Due | First Attempt | Submitted | Attempts | Est Time | Total Time | Category | Score |
|---|-----|---------------|------------|----------|----------|------------|------------|-------|
| Unit: Advanced Math B | | | | | | | | |
| Lesson: Defining Terms | | | | | | | | |
| Warm-Up | | 10/7/2021 | 10/7/2021 | 1 | 5m | 7m | | |
| Instruction | | 10/7/2021 | 10/15/2021 | 1 | 20m | 38m 40s | | |
| Summary | | 10/15/2021 | 10/15/2021 | 1 | 2m | 4m 18s | | |
| Assignment | | 10/15/2021 | 10/15/2021 | 1 | 17m | 19m 3s | Assignment | 73.3% |
| Quiz | | 10/7/2021 | 10/22/2021 | 2 | 15m | 26m 43s | Quiz | 80% |
| Lesson: Compositions | | | | | | | | |
| Warm-Up | | 10/22/2021 | 10/22/2021 | 1 | 4m | 5m 13s | | |
| Instruction | | 10/22/2021 | 11/5/2021 | 1 | 17m | 1h 10m 15s | | |
| Summary | | 11/5/2021 | 11/5/2021 | 1 | 2m | 4m 30s | | |
| Assignment | | 11/5/2021 | 11/5/2021 | 1 | 16m | 52m 21s | Assignment | 61.5% |
| Quiz | | 10/22/2021 | 10/22/2021 | 2 | 15m | 38m 49s | Quiz | 40% |
| Lesson: Symmetry | | | | | | | | |
| Warm-Up | | 11/19/2021 | 11/19/2021 | 1 | 4m | 5m 35s | | |
| Instruction | | 11/19/2021 | | | | 22m | | |
| Summary | | | | | | 2m | | |
| Assignment | | | | | | 15m | Assignment | -- |
| Quiz | | 11/19/2021 | | | | 15m | Quiz | -- |
| Lesson: Slopes of Parallel and Perpendicular Lines | | | | | | | | |

Edgenuity Courses & Curriculum

Edgenuity math courses are the online curriculum that is implemented in the class. Edgenuity offers a variety of resources as the student navigates through the lesson and the assignments.

The screenshot shows the 'Course Map' interface. On the left, there is a vertical navigation bar with four circular icons. The top icon is highlighted in blue and contains a person icon. To the right of this bar, the 'Course Map' title is displayed. Below the title, there are four main sections: 'Instruction' (with a sub-question 'What is quantitative reasoning?'), 'Summary' (with the text 'Review and connect what you learned.'), 'Assignment' (with the text 'Practice analyzing quantitative relationships.'), and 'Quiz'.

Video led instruction lesson for additional support.

The screenshot shows a video lesson interface. At the top, the title 'Quantitative Reasoning' is displayed, with 'Instruction' and 'Active' status indicators. Below the title, a 'Lesson Question' is posed: 'What is quantitative reasoning?'. The main content area features a line graph with 'Distance' on the vertical axis and 'Time' on the horizontal axis. The graph shows a line that starts at the origin, rises steeply, then levels off slightly, then rises to a peak, and finally descends. A small video inset in the bottom right corner shows a woman with glasses speaking. At the bottom of the interface, there is a navigation bar with a play button, a progress indicator (1 of 13), and other controls.

Practice assignments and quizzes provide immediate feedback for students.

Quantitative Reasoning

Quiz Active

1 2 3 4 5 6 7 8 9 10

TIME REMAINING
23:59:55

Luis created the graph below to show the temperature from 8:00 a.m. (8 hours after midnight) until 8:00 p.m.

| Hours after Midnight | Temperature (°F) |
|----------------------|------------------|
| 8 | -4 |
| 12 | 0 |
| 16 | 8 |
| 18 | 8 |
| 20 | 4 |

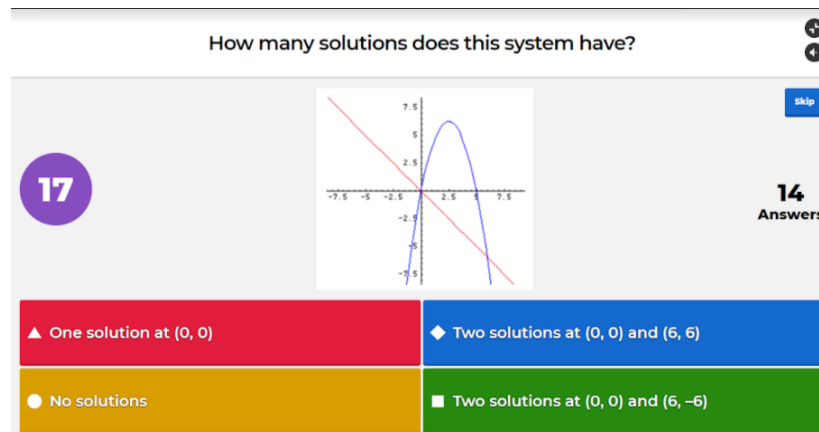
On this graph, 4:00 p.m. occurs at 16 hours after midnight, and 6:00 p.m. occurs at 18 hours after midnight. Which statements are true about the temperatures Luis recorded on the graph? Select THREE answers.

- The temperature increased until 4:00 p.m.
- The temperature was not recorded between 4:00 p.m. and 6:00 p.m.
- The temperature decreased after 6:00 p.m.
- The temperature increased and then decreased before holding constant.
- The temperature increased more quickly between 12:00 p.m. and 4:00 p.m. than before 12:00 p.m.

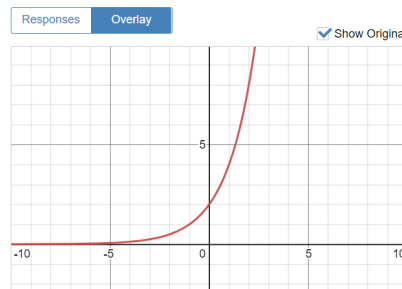
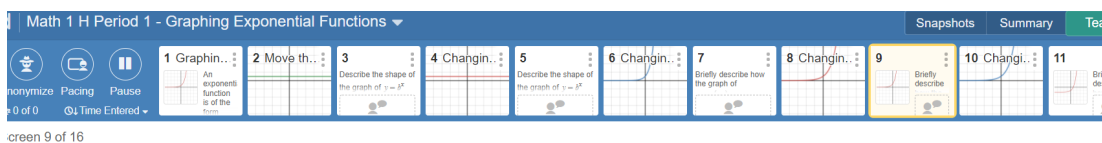
[Mark this and return](#) [Save and Exit](#) [Next](#) [Submit](#)

Additional Learning Resources

- ★ Kahoot is effective as a review and as an assessment of current knowledge. Many students enjoy the competitive nature of the Kahoots and the immediate feedback it provides.



- ★ Desmos Activity Builder - can be added to instruction time as a review or as a guided step by step lesson. Desmos activity builder allows the students to demonstrate their understanding of the topic. Interactive and creates an outlet for higher level critical thinking.



Briefly describe how the graph of $y = 2^{x+c}$ changes when the c changes.

What point does $y = 2^{x+c}$ pass through for some unknown c value?

No responses yet...

Science

CK-12

CK-12 offers science interactive assignments that teachers can link through their google classroom. Assignments are posted and students are able to further enhance their understanding on any given science topic by completing the interactive assignment where videos and follow up questions are assigned.

The screenshot shows a CK-12 FlexBook page titled "14.8 Ideal Gas Law". The page header includes "Free STEM teaching resources" and navigation options like "Subjects", "Explore", and "Donate". A green "Assign" button is visible. The main content area features a video thumbnail of a yellow gas cylinder with a blue cap, labeled "[Figure 1]". Below the video, a question asks: "What chemical reactions require ammonia?".

Additional resources such as videos are included within the lesson for students to reinforce concepts taught.

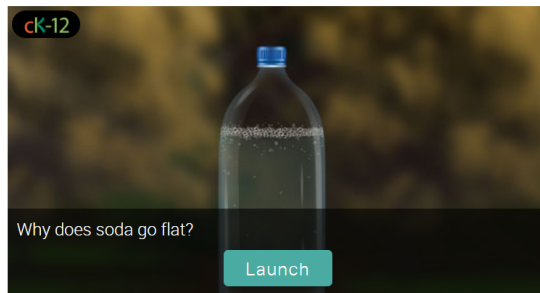
Notice that the unit for R when the pressure is in kPa has been changed to $J/K \cdot mol$. A kilopascal multiplied by a liter is equal to the SI unit for energy, a joule (J).



Sample Problem: Ideal Gas Law

Through the Ck-12 platform students can further explore the topic through videos that are meant to explain the details of the lesson. For example “why does soda go flat?” is a question that can be answered in a simple sentence or two but through ck-12 students can see in action what is happening throughout the entire process.

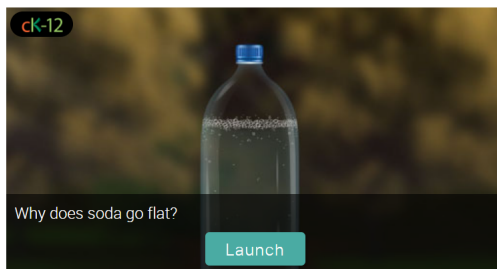
Ever wonder why soda goes flat? Explore the ideal gas law in action inside a soda bottle in this simulation:



Summary

- The ideal gas constant is calculated.
- An example of calculations using the ideal gas law is shown.

Ever wonder why soda goes flat? Explore the ideal gas law in action inside a soda bottle in this simulation:



Summary

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- An example of calculations using the ideal gas law is shown.



21
ESTIMATED TIME TO COMPLETE

Get in the game

Students will need to get 10 correct answers to complete their practice goal.

Preview
▼

Additional questions are set at the end of the interactive assignment to make sure that students

have learned the intended concepts for that lesson.

ck-12 Ideal Gas Law Stop for next

0/10 SKILL LEVEL:
To be determined

In the ideal gas equation, 'n' represents the:

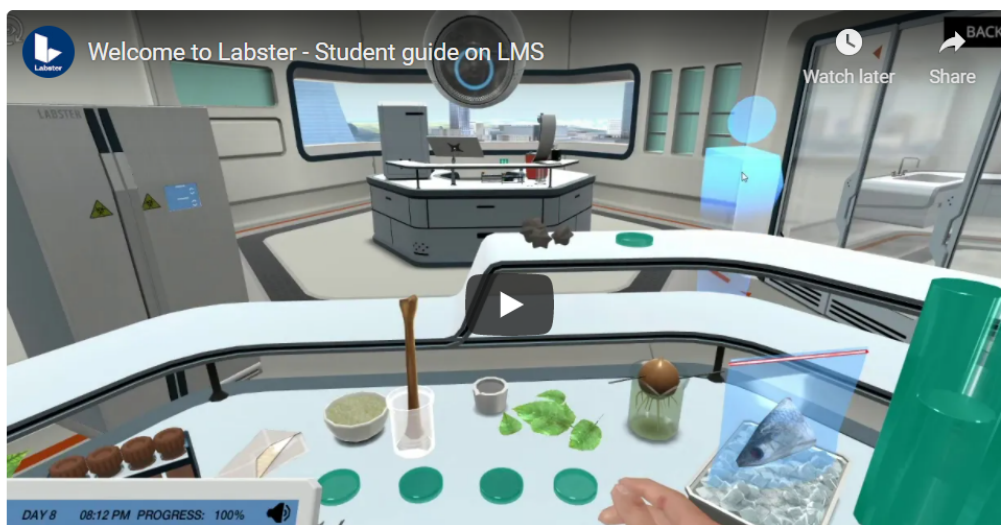
- a Number of moles of the gas
- b Concentration of the gas
- c Avogadro's number
- d None of the above

[Check it](#)

[SCRATCHPAD](#) [Improve this question](#)

Labster

Check our Student guide video below:



Labster

Virtual Labs



Virtual lab simulations allow students to complete laboratory experiments online and explore abstract concepts and complex theories without stepping into a physical science lab. Labster simulations visualize science at a molecular level, offering open access to students. They can then apply their scientific knowledge and use advanced lab equipment to solve real-world challenges, such as DNA and gene sequencing, chemical reactions and cancer treatment responses. The gamified 3D learning virtual environment may be a laboratory, a forest or the desert plains of our imaginary exoplanet — Astakos IV, and is combined with engaging storytelling and a scoring system. (labster.com)

Labster provides STEM curriculum-aligned virtual laboratory simulations within biology, biochemistry, genetics, biotechnology, chemistry, physics and more.

-Use of team based and game format activities such as Escape Rooms enables students to reinforce learned concepts and collaborate with other students.

-Utilize lab simulations to supplement concepts discussed. In the simulation Build an Atom, students were able to use the [phet](#) simulation that enables to visualize the different subatomic particles and explain the role of these particles in atoms.

Protons: ●●●●●●●
 Neutrons: ●●●●●●●
 Electrons: ●●●●●●●

Neutral Atom

Nitrogen

Stable

Model:
 ● Orbits
 ○ Cloud

Protons Neutrons Electrons

Element

| | | | | | | | | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| H | He | | | | | | | | | | | | | | | | | He |
| Li | Be | | | | | | | | | | | N | O | F | Ne | | | |
| Na | Mg | | | | | | | | | | | Al | Si | P | S | Cl | Ar | |
| K | Ca | Sc | Ti | V | Cr | Mn | Fe | Co | Ni | Cu | Zn | Ga | Ge | As | Se | Br | Kr | |
| Rb | Sr | Y | Zr | Nb | Mo | Tc | Ru | Rh | Pd | Ag | Cd | In | Sn | Sb | Te | I | Xe | |
| Cs | Ba | La | Hf | Ta | W | Re | Os | Ir | Pt | Au | Hg | Tl | Pb | Bi | Po | At | Rn | |
| Fr | Ra | Ac | Rf | Db | Sg | Bh | Hs | Mt | Ds | Rg | Cn | Nh | Fl | Mc | Lv | Ts | Og | |

Symbol

14 0

N

7

Show

Element
 Neutral/Ion
 Stable/Unstable