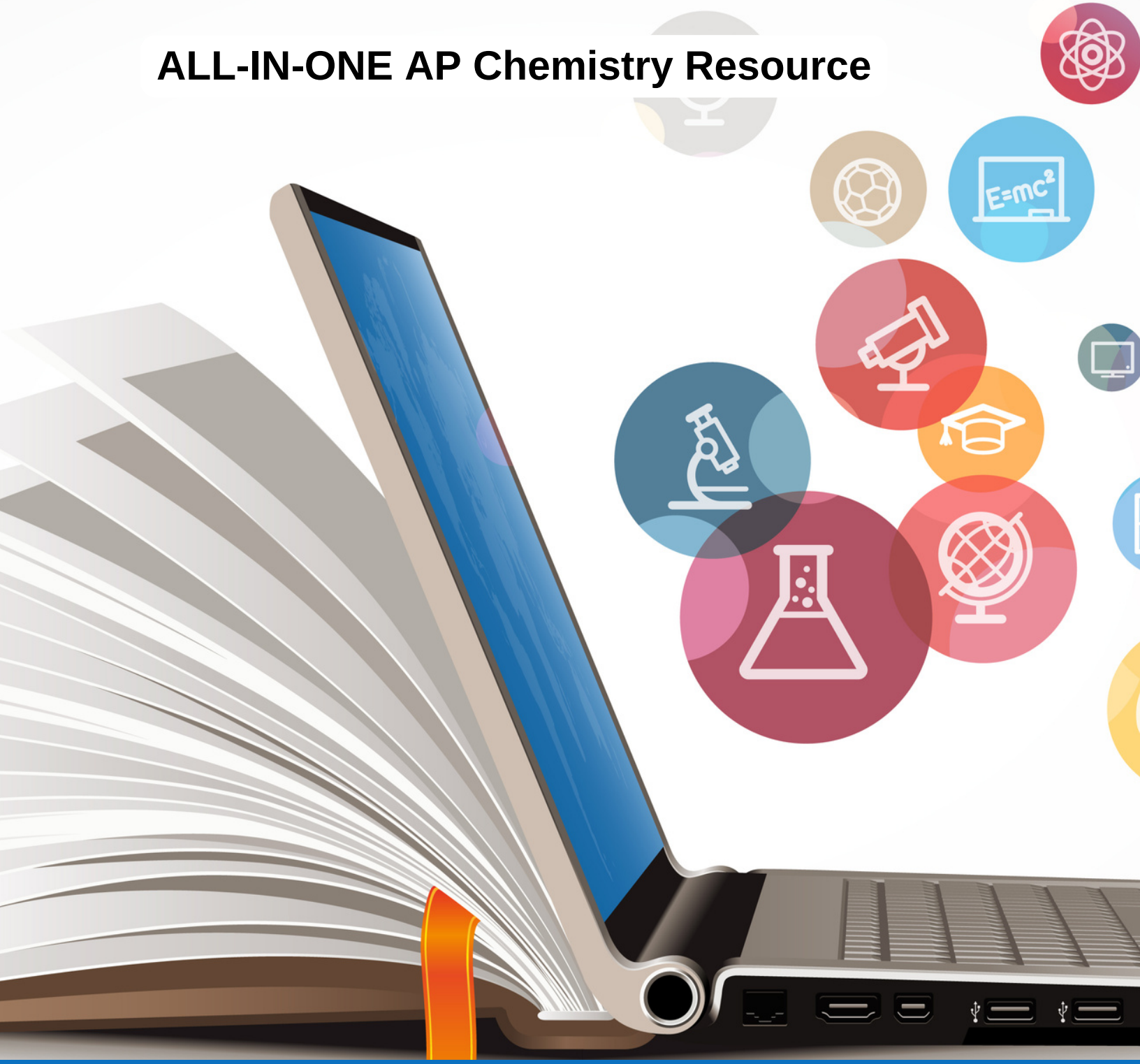
Vizisciences®

ALL-IN-ONE AP Chemistry Resource



ViZISCIENCE

Hello there! My name is Sarah and I’m a 4th year AP chemistry teacher.

I used to celebrate decent pass rates and feel confident in my teaching abilites.

Then the pandemic hit, and the year of remote learning left my students lacking in essential foundation knowledge.

My students struggled even with basics such as stoichioimetry. I’m torn between filling these gaps and covering the demanding AP Chemistry curriculum.

Despite incorporating textbooks, worksheets, videos, and materials from numerous sources, my students are falling behind. I'm not sure what else I can do.

You’re not alone! Many teachers are feeling burn out teaching this difficult class.

We have a solution that’s helped countless dedicated teachers like you, and we can't wait to share it with you.

Cool! I can’t wait to hear about it!

Welcome to Viziscience®

Today, we’re thrilled to show you how our platform can transform the classroon for you. Imagine having everything you need – interactive lessons, engaging concept videos, practical simulations, labs, and quizzes – all in one place, easy to access and use.

One of the unique aspects of our platform is how it provides a cohesive and sequential learning experience which is hard to achieve using a mix and match of materials from various sources. We understand that teachers often struggle with their lessons feeling disjointed.

The AP Chemistry curriculum is challenging, and keeping students on track can be tough. Viziscience® is meticulously designed to guide students through the curriculum step by step, ensuring they build on each concept methodically before moving to the next.

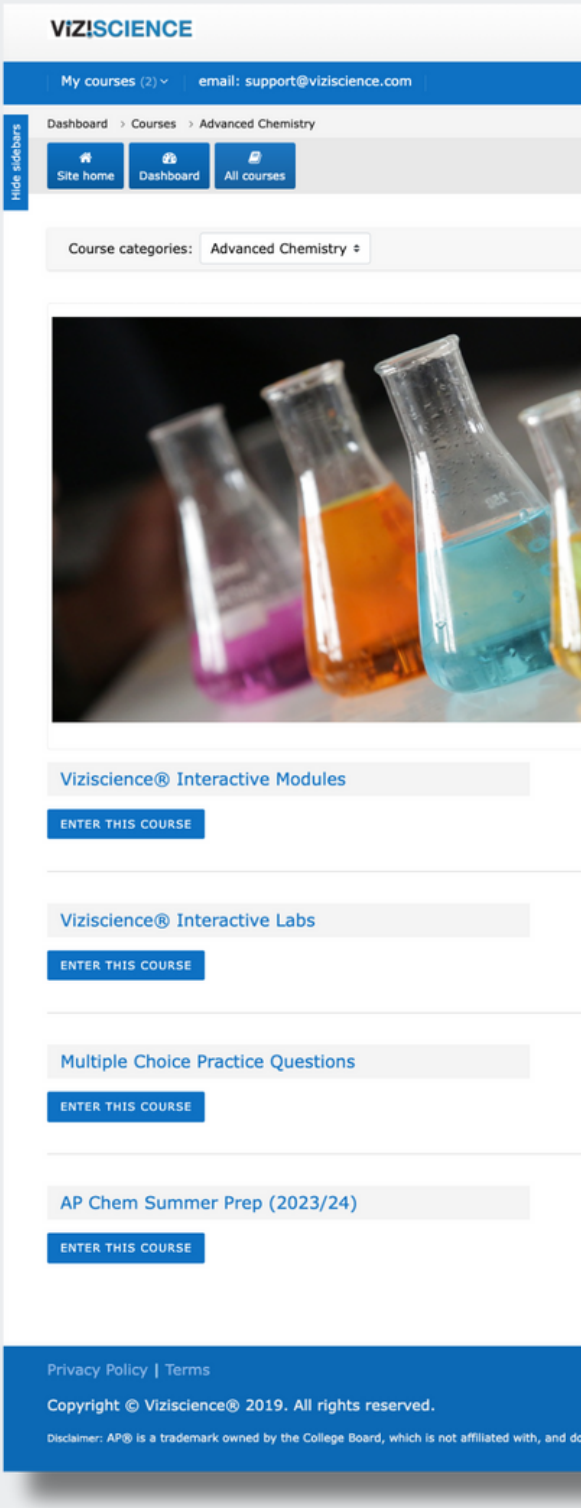
What's really exciting is the flexibility Vizisciences® offers. You, the educators, can tailor the learning path to fit the unique needs of each of your students. Whether it's revisiting a tricky concept or pushing ahead, you have the control. Students facing difficulties can independently catch up without slowing down the rest of the class

So, let's dive in and see how Vizisciences® not only supports but enhances the learning experience, ensuring your students are not just keeping up, but excelling in AP Chemistry.

Viziscience

The Viziscience AP chemistry course is made up of 4 sections to hone your students' skills:

- Interactive Modules
- Interactive Labs
- Multiple Choice Practice
- Summer Prep

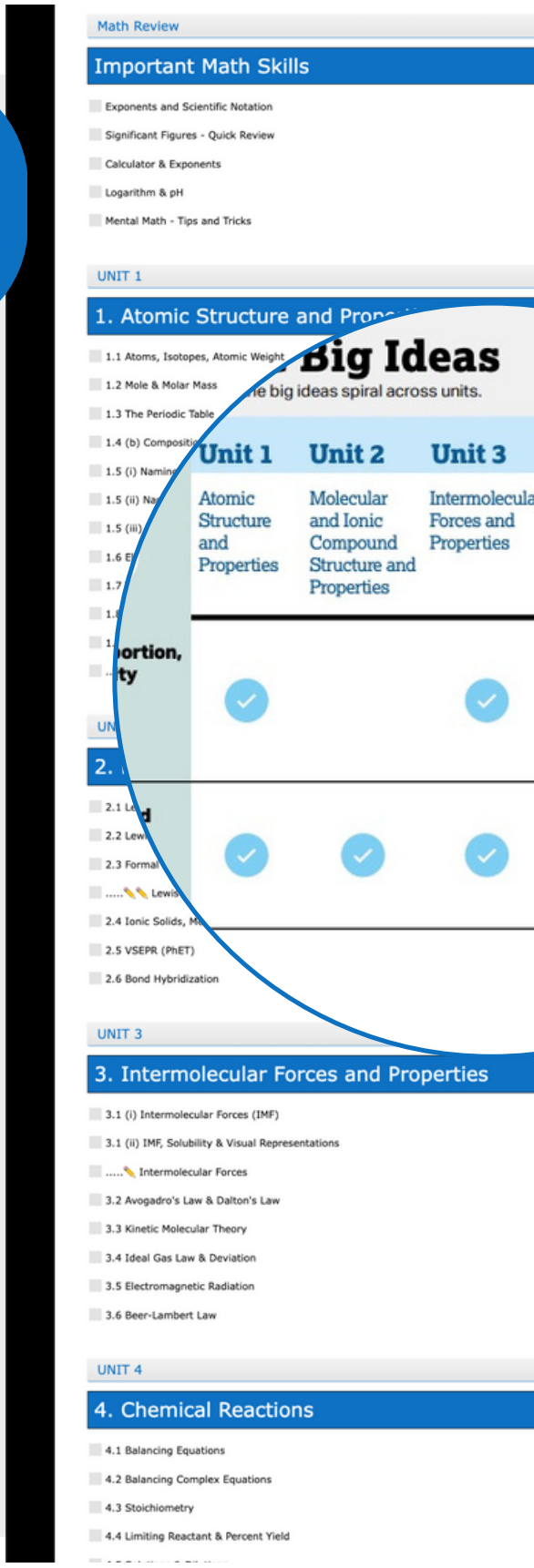


Welcome to Viziscience Interactive Modules

Let's explore how Viziscience® aligns with the AP Chemistry Exam Description (CED), ensuring that your students fully benefit from their learning experience.

The AP Chemistry CED is structured around four core ideas, commonly referred to as the 'Big Ideas'. These Big Ideas form the foundation of the course and are critical in shaping students' understanding of chemistry. To bring these ideas to life, the curriculum is further divided into nine main units, each delving into specific topics and concepts.

In Viziscience®, we've mirrored this structure to provide a seamless and intuitive learning path.



Interactive Modules

Viziscience complements CED topics with lessons and additional subtopics designed to support foundational learning.

Let's take the example of teaching Unit 1.1 Moles and Molar Mass. To prepare your students for this topic, assign Viziscience's additional subtopic VZ1.1 'Atoms and Isotopes' as prerequisites to the course.

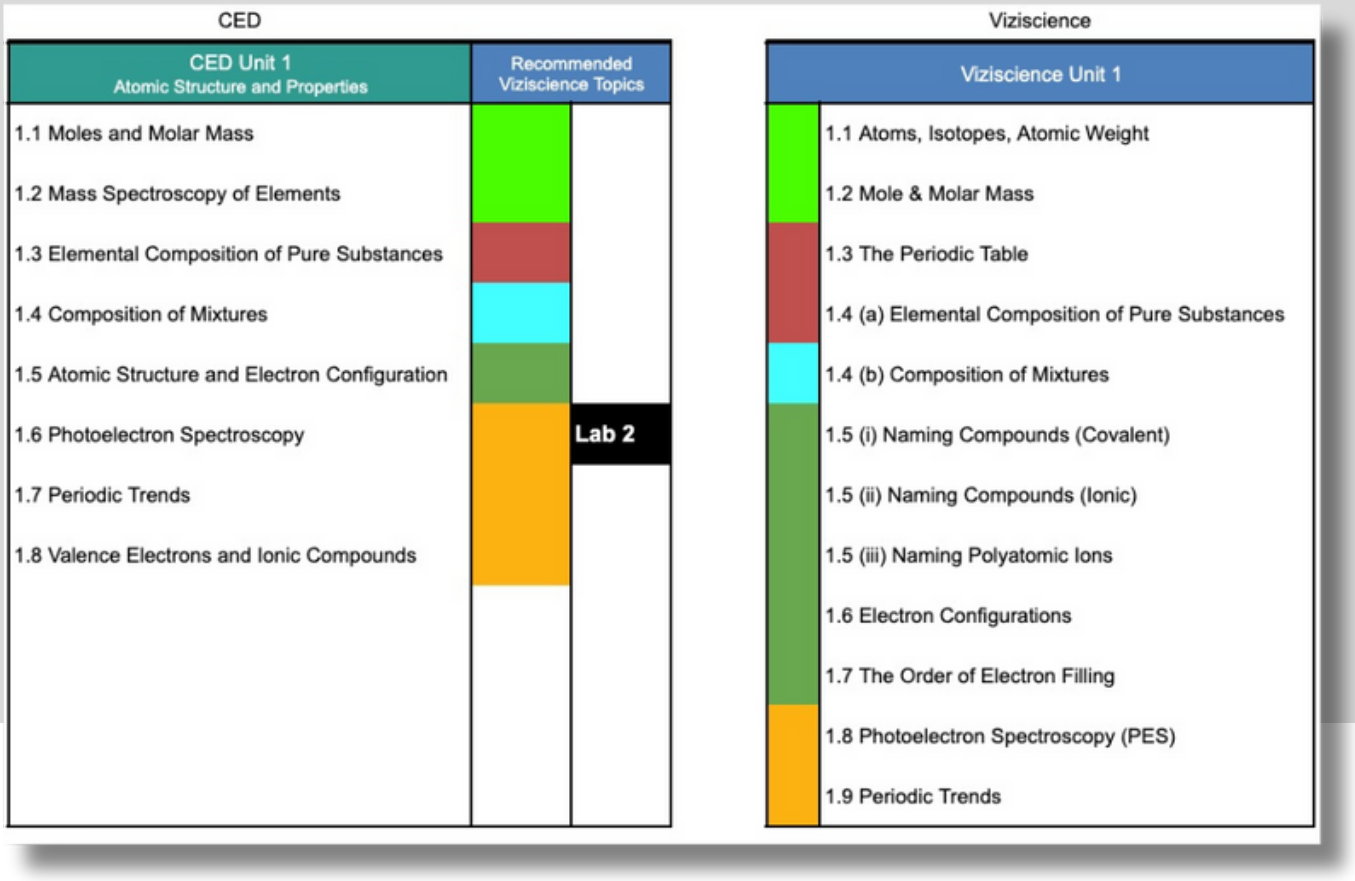
VZ1.1 equips students with essential knowledge about what contributes to an atom's mass and how atomic mass is calculated through the relative abundance of isotopes. Furthermore, it offers a comprehensive review of isotopes and delves into the practical application of Mass Spectrometry.

If your students lack prior knowledge of this topic, our materials are really helpful. Even for students who have previously covered this subject, it’s an excellent opportunity for concept review. This foundation equips your students to make the most of your class as they come well prepared.

Interactive Modules

To help teachers in navigating the CED alignment, we provide an easy to use color-coded roadmap.

This resource will guide teachers in effectively utilizing our supplementary units to bridge any gaps as needed.



On the left, you'll find the CED order of topics, while the right table provides the recommended order as suggested by Viziscience. You have the flexibility to use our recommended order, align the topics with the CED order, or adapt them to fit your own teaching approach.

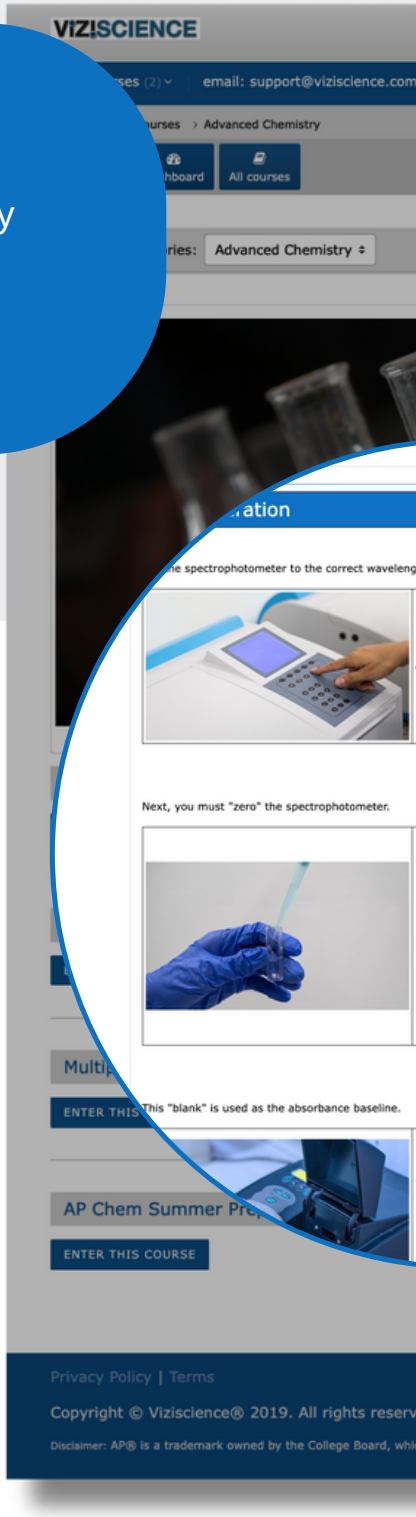
Interactive Labs

LABS

Laboratory experiences are integral to the AP Chemistry curriculum, offering students invaluable opportunities to apply theoretical knowledge to real-world **experiments.**

BRIDGING THE GAP WITH VIRTUAL LABS

When it's not possible to conduct traditional wet labs, Viziscience offers a practical and effective solution to bring laboratory experiences into your lessons. Our virtual labs are designed to closely **simulate the real laboratory** experience. Students start by grasping the theory before moving on to learn how to set up equipment, perform experiments, and carefully gather and analyze data. **We put a strong focus on developing skills essential for exams, such as the ability to spot errors and understand their impact on experimental results.**



Interactive Labs

Here is the list of Vizisciences's interactive and engaging labs to support the AP chemistry curriculum.

Vizisciences
Labs
1. Ionic & Covalent Compound Lab
2. Flame Test Lab
3. Paper Chromatography
4. Molar Mass of a Gas
5. Thin Layer Chromatography
6. Single Displacement
7. Gravimetric Analysis
8. Strong Acid-Strong Base Titration
9. Kinetics Theory
10. Calorimetry Lab
12. Redox Titration
Equilibrium Labs
13. Le Chatelier's Principle & The Haber Process
14. KEQ LabPage
a) KEQ: Experiment & data
b) KEQ: Calculations & Post Lab
15. Solubility & KSP

Multiple Choice Practice

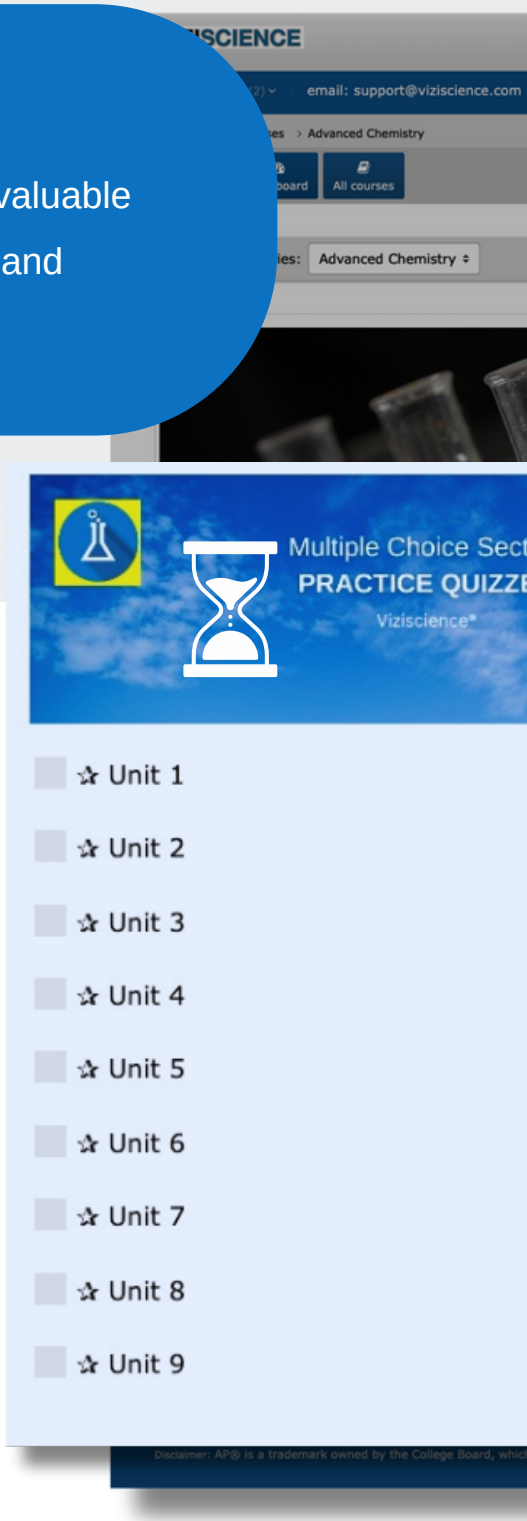
Multiple Choice Quizzes

Utilize this low-stakes multiple-choice quiz as a valuable tool to help students hone their test-taking skills and enhance their confidence.

PRACTICE IS KING

The quizzes are grouped by units (Units 1 through 9), each containing 15 multiple-choice questions. These 45-minute quizzes work for both in class and at home. Teachers coordinate the start with a password release for simultaneous access.

Teachers have access to the answer key and can address concerns the following day, offering valuable insights and strengthening students' knowledge.



Summer Prep

GET AHEAD OF THE CURVE

The Summer Prep course includes fundamental topics like atomic structure, chemical formulas, equations, and stoichiometry.

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For educators, this course is a valuable tool to gather information about incoming students, allowing them to **identify students' strengths and weaknesses**. This knowledge enables teachers to plan ahead for the class effectively.

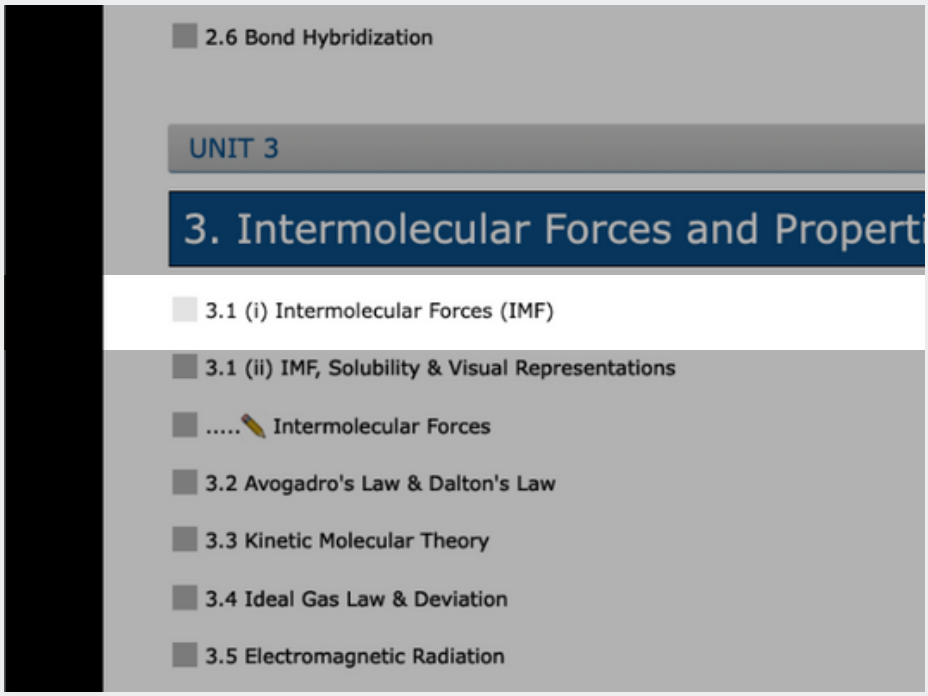
Sudents benefit by gaining a head start, potentially saving up to two weeks of instructional time during the academic year to direct on critical areas.

Interactive Modules

Now that you've learned about the structure of our course, let's delve into a mini lesson and see how it works

Unit 3.1(i) - Intermolecular Forces.

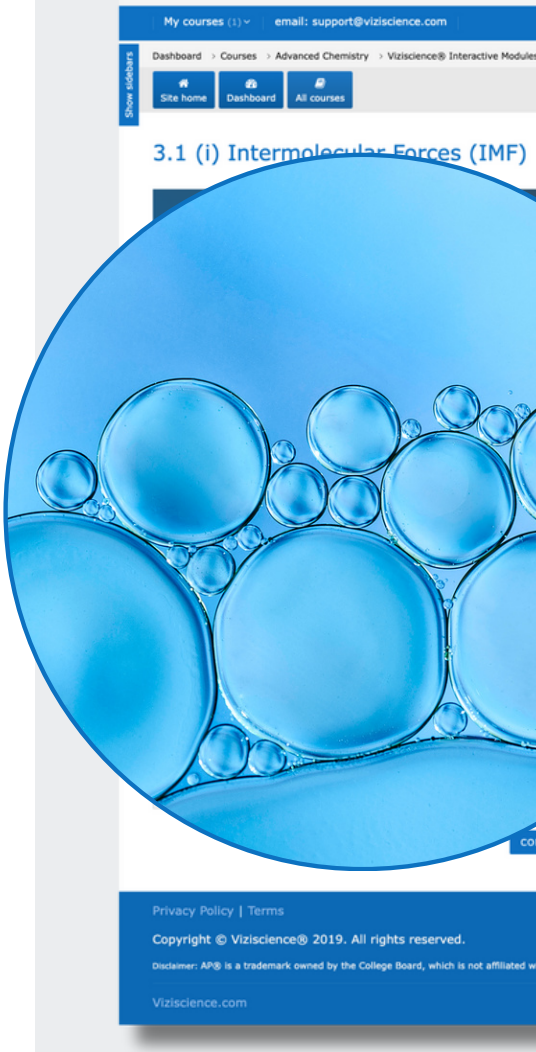
This is the largest Unit in AP chemistry, it carries up to 22% exam weighting, so we want to make sure students are well prepared for this lesson.



Unit 3 is a big leap for students!

While Unit 3 doesn't require extensive mathematical calculations, students often struggle with a multitude of new concepts, unfamiliar terminology, and the need to swiftly apply their knowledge. This can lead to a loss of confidence as they transition into tackling complex questions.

One effective approach having students use our units for preparation, they can gradually build a strong foundation. This approach helps them feel well-prepared and confident when they enter your class, so they won't feel like 'fish out of water'.

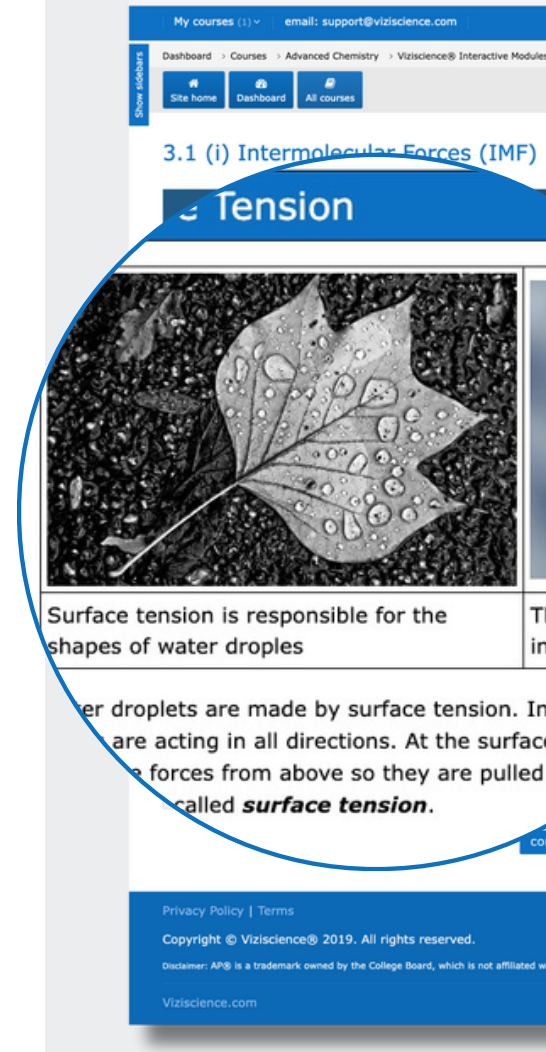


USE VIZISCIENCE TO BOOST STUDENTS' CONFIDENCE

Common struggles

Students often find the following topics challenging in Unit 3:

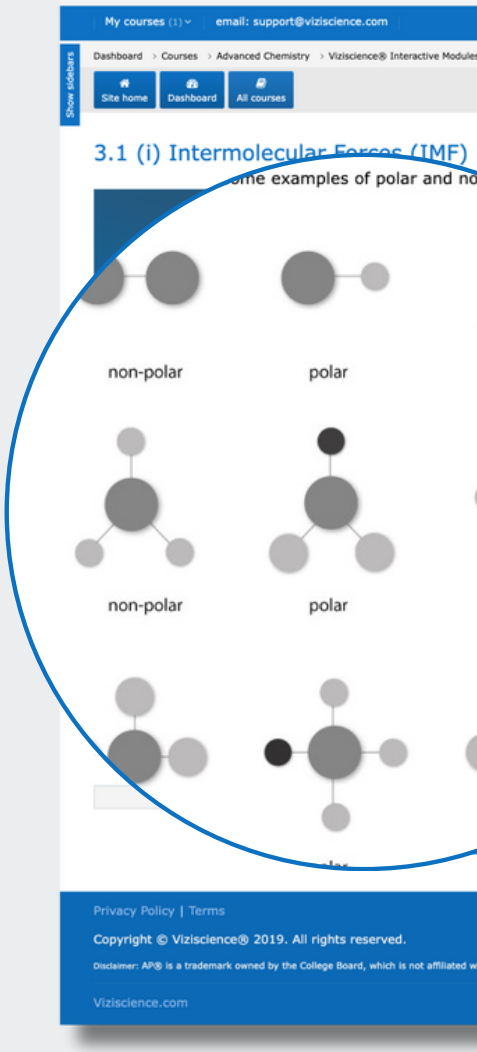
1. **Molecular Polarity:** Recognizing molecular polarity and its impact on intermolecular forces can be confusing for students.
2. **Predicting Physical Properties**: Students may have difficulty predicting and explaining how intermolecular forces affect physical properties like boiling point, melting point, and solubility.
3. **Common Misconceptions:** Some students may mistakenly believe that intermolecular forces are the same as chemical bonds or that all molecules have hydrogen bonding.



What essential topics need to be reviewed?

In this unit on intermolecular forces (IMF), we've included a structured review to help students revisit fundamental concepts, including electronegativity, distinguishing between ionic and covalent compounds, and understanding molecular polarity.

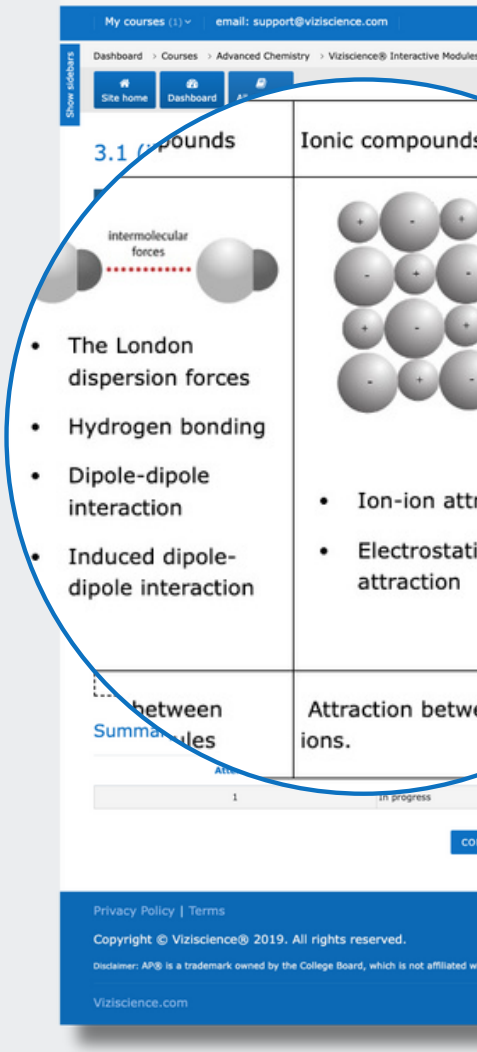
We will conduct comprehensive exercises to help students in identifying polar and non-polar molecules, as this is a specific area of challenge. This foundational review is crucial for mastering Unit 3.



What essential topics need to be reviewed?

Students often find it challenging to differentiate between different types of intermolecular forces, including London dispersion forces, dipole-dipole interactions, and hydrogen bonding.

By providing students with numerous examples, illustrations, simulations, and videos, our goal is to ensure that, by the end of the lesson, they will have a comprehensive understanding of various intermolecular forces, their mechanisms, prevalence in different substances, and the ability to rank molecules based on the relative strengths of these forces and factors affecting them.



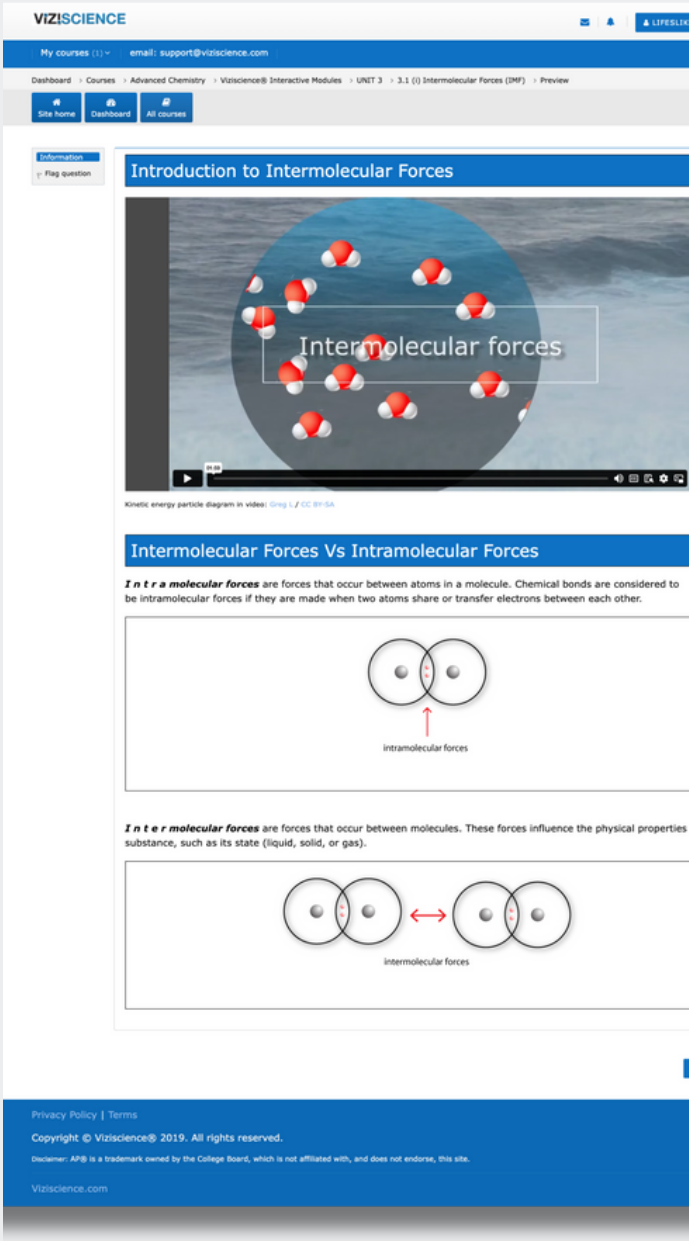
Let's now explore the powerful features of each page in this lesson activity and discover how they support your students' learning.

CONCEPT VIDEOS

Chemistry videos – we're well aware that they can be long and boring, losing students' interest. That's precisely why we've crafted our signature concept videos.

These videos provide in-depth exploration of each topic while maintaining a focused and clear trajectory.

Unlike YouTube videos, ours are exceptionally concise and notably free from advertisements which can disrupt valuable study time.

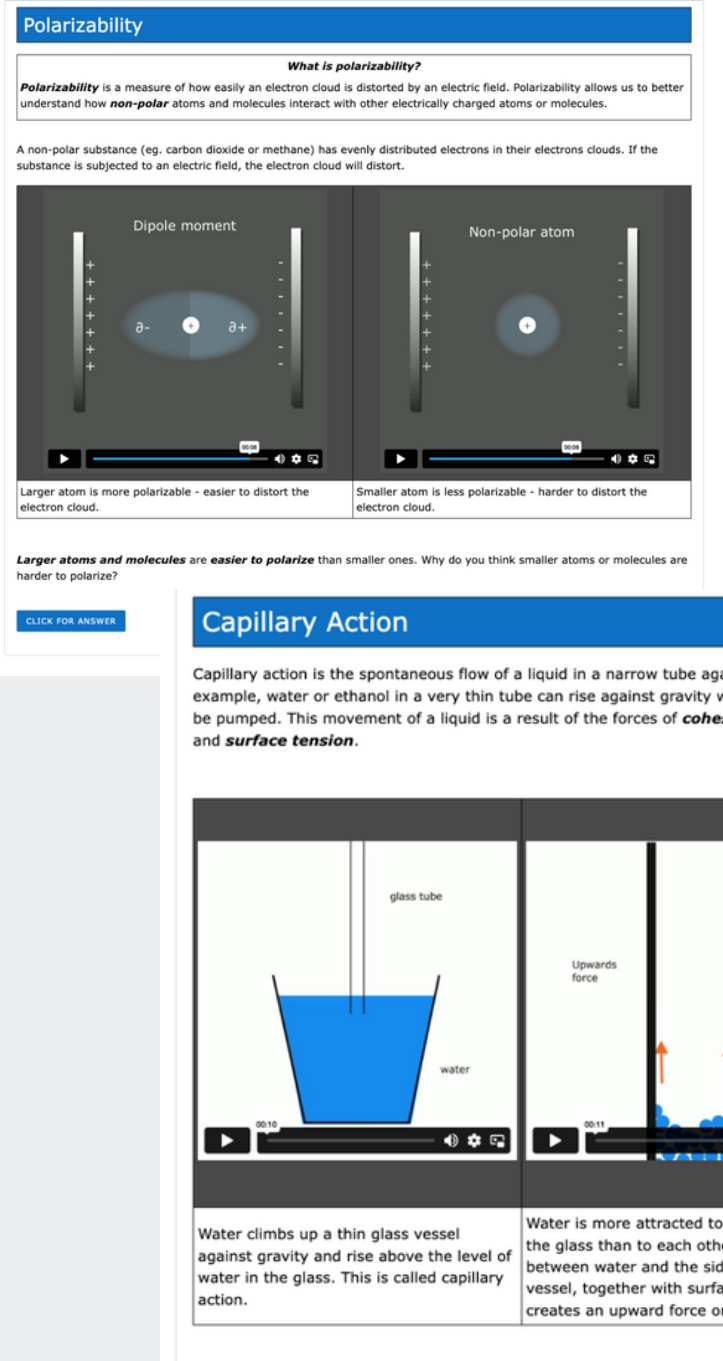


Teachers love our Viziscience concept videos, and they've told us how much these videos help students quickly understand tricky concepts and clear up any misconceptions.

SIMULATIONS

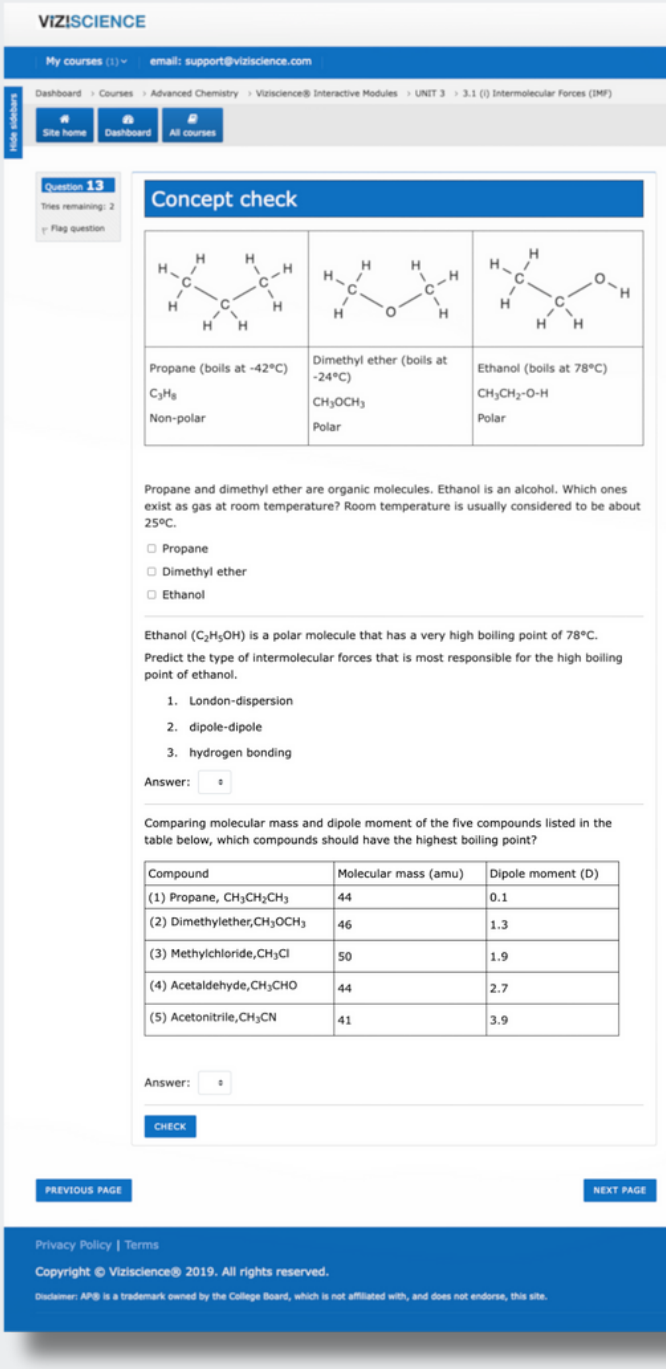
While simulations are invaluable tools to offer students a dynamic and engaging experience in chemistry, overly complex simulations will hinder learning.

What sets Viziscience simulations apart is their **user-friendliness**—students can dive right in without the need to spend valuable time learning how to operate the software.



REAL-TIME SKILL PRACTICE

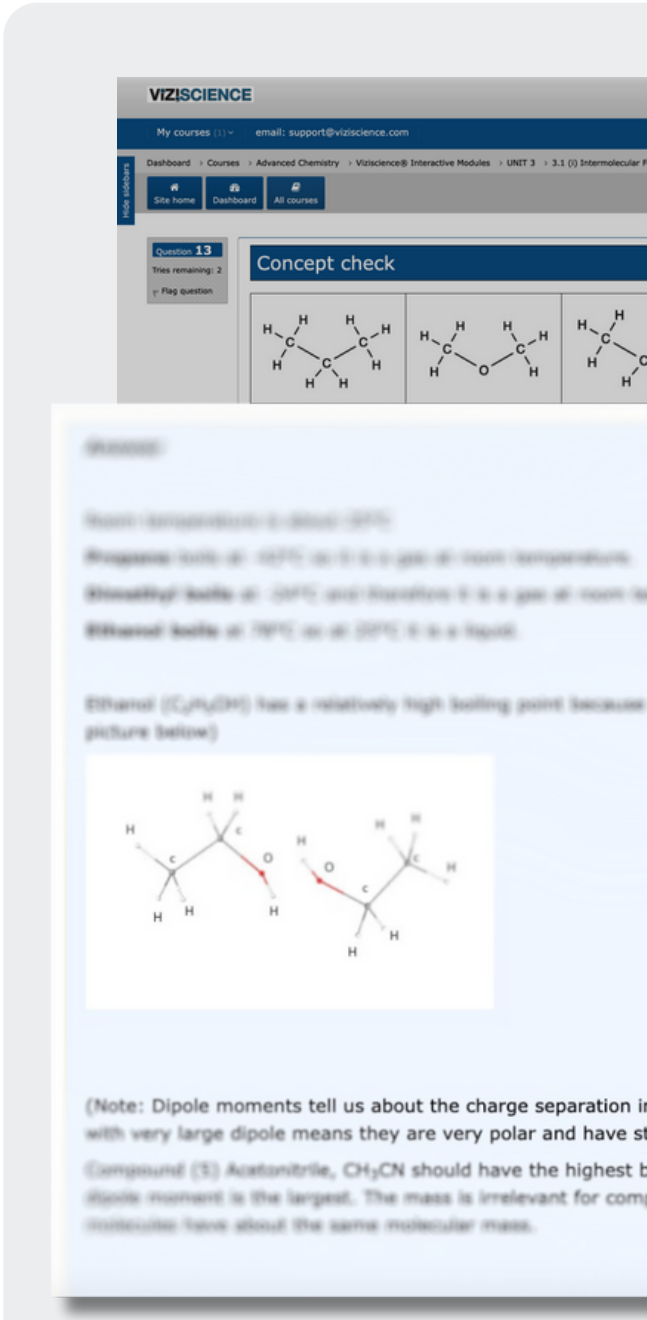
Viziscience uses small concept check quizzes throughout the lessons, allowing students to practice their skills in real-time and assess their comprehension.



STUDENT MOTIVATION

Generally when homework is not graded, students won't complete them. Consequently, teachers are compelled to use valuable class time to teach fundamental concepts.

Viziscience offers an **autograding system**, which empowers teachers to seamlessly assign homework and offer **immediate feedback** to students, fostering their confidence in completing assignments and **developing self-study skills** which is crucial for AP chemistry success.



Viziscience

VALUABLE REPORTS FOR TEACHERS

First name / Surname	Email address	State	Started on	Completed	Time taken	Grade/10.00	Q. 1 /0.67	Q. 2 /0.67	Q. 3 /0.67	Q. 4 /0.67	Q. 5 /0.67	Q. 6 /0.67	Q. 7 /0.67	Q. 8 /0.67	Q. 9 /0.67	Q. /0
Review attempt	2[redacted]t	Finished	May 5 2021 9:06 AM	May 5 2021 10:40 AM	1 hour 34 mins	9.39	✔ 0.67	✔ 0.67	✔ 0.67	✔ 0.67	✔ 0.67	✔ 0.67	✔ 0.67	✔ 0.67	✔ 0.67	✔
Review attempt	4[redacted]t	Finished	May 5 2021 10:20 AM	May 5 2021 11:15 AM	54 mins 30 secs	9.67	✔ 0.67	✔ 0.67	✔ 0.67	☑ 0.56	✔ 0.67	✔ 0.67	✔ 0.67	✔ 0.67	✔ 0.67	✔
Review attempt	4[redacted]t	Finished	May 5 2021 10:32 AM	May 5 2021 8:09 PM	9 hours 37 mins	9.06	✔ 0.67	✔ 0.67	✔ 0.67	✔ 0.67	✔ 0.67	✔ 0.67	✔ 0.67	✔ 0.67	✔ 0.67	✔
Review attempt	4[redacted]t	Finished	May 5 2021 11:42 AM	May 5 2021 2:12 PM	2 hours 30 mins	9.50	✔ 0.67	✔ 0.67	✔ 0.67	✔ 0.67	✔ 0.67	✔ 0.67	✔ 0.67	✔ 0.67	✔ 0.67	✔
Review attempt	4[redacted]t	Finished	May 5 2021 11:48 AM	May 5 2021 12:56 PM	1 hour 8 mins	9.39	✔ 0.67	✔ 0.67	✔ 0.67	✔ 0.67	✔ 0.67	✔ 0.67	✔ 0.67	✔ 0.67	✔ 0.67	✔
Review attempt	2[redacted]t	Finished	May 5 2021 11:51 AM	May 13 2021 11:50 AM	7 days 23 hours	9.39	✔ 0.67	✔ 0.67	✔ 0.67	✔ 0.67	✔ 0.67	✔ 0.67	✔ 0.67	✔ 0.67	✔ 0.67	✔
Review attempt	j[redacted]	Finished	May 25 2021 11:58 PM	June 9 2021 12:04 PM	14 days 12 hours	8.06	✔ 0.67	✔ 0.67	✔ 0.67	☑ 0.56	✔ 0.67	✔ 0.67	✔ 0.67	☑ 0.22	✔ 0.67	✔
Overall average						8.30	0.65	0.58	0.57	0.59	0.53	0.60	0.52	0.59	0.57	0.6

Too often, we've seen teachers feeling disheartened when they receive disappointing results after a quiz or exam. Our goal is to prevent such surprises and equip educators with the tools they need to stay ahead. The progress report will help teachers tremendously to plan ahead and offer support when needed.

Get started with Viziscience®

1.Teacher subscribe and create an account on the system.

2. Students create their own individual accounts and enroll into their respective classes assigned to their teacher.

3. Students use the activities under teacher's instructions.

4. Teachers can view students' activity reports at any time.

We hope you've found our approach to preparing students for success in AP Chemistry valuable. It's important to mention that our resources are cost-effective, offering a wealth of content and an accessible learning management system at an affordable price. Our commitment is to support educators in their mission. By subscribing, you become a part of our community, and we're here to provide you with the best resources and support possible.

VALID THRU JAN 6, 2024

SPECIAL OFFER

$55 for your entire class

One Time Special Offer: $55 for Your Entire Class
(Normally $75 - $150)

If you have any questions, please email:

contact@viziscience.com