

## AP®, Honors, and Electives

## with Virtual Labs



**Virtual Labs** deliver a realistic, simulated lab experience that better prepare students with the fundamental skills for hands-on lab work—or, if needed, can supplant hands-on labs.



These simulations help students learn practical and conceptual skills, they check for understanding, and provide feedback. With adaptive pre-lab and post-lab assessments available, teachers can customize each assignment.



Available 24/7

-even if the lab space isn't!



Built with accessibility in mind.



easy-to-follow on-screen instructions.



Student progress is automatically saved.



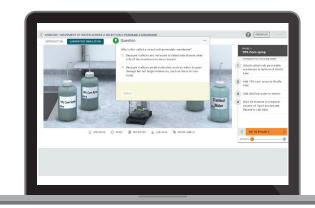
Visible progress bar.

Virtual Labs empower students outside the classroom and outside the laboratory with 24/7 access—the labs are compatible with screen readers and keyboard navigation to ensure an accessible experience for all learners. The easy-to-follow on-screen instructions guide students through each part of their lab journey and their progress is automatically saved and always visible to help them take ownership of their learning. Student feedback confirms that after working through the Virtual Labs, they come to class more prepared, more engaged, and more confident.

## The Virtual Labs Experience

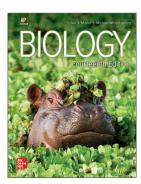
In each lab experience, students are guided through the step-by-step phases. They use their mouse to manipulate the materials and are prompted with checks for understanding that deliver instant and guided feedback.

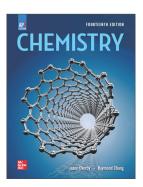
Students also have access to tools for notetaking, resetting the lab, labeling, and reviewing the list of methods at point of use. Once complete, the lab is automatically submitted to the teacher and students can save their work, print, or download a PDF for their records.

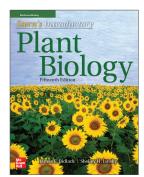


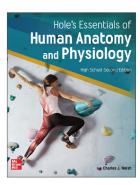
Virtual Labs are included with your digital resources for our AP Biology and AP Chemistry programs and in the Electives and Honors programs for Plant Biology, Anatomy & Physiology, and Environmental Science.

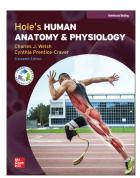














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1	Applying the Scientific Method - Pillot				
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	Lab Safety - Hand Washing Procedure	Chapter			skit. Hole's Essentials of Human Anatomy & Physiology, 02021, 2e
1	Lab Safety - Personal Safety	1	1" Lab - Chemistry Wirtual Labs Tutor		
1	Lab Skills - Using a Ralance	1	Applying the Scientific Method - Pills		
1	Lab Skills – Using a Graduated Cylinde	1	Basic Chemistry - Dessity of a cube	Chaoter	Lab Title
1	Lab Skills - Using an Alcohol Thermon	1	Density - Density of a Plastic Cube	1	54 DB - Withol DBs Tutorial
1	Lab Skills – Using a Ruler	1	Lab Skills – Deing a Balance	2	Back Chemictry-Density of a cube
1	Scientific Method - Pillbug Proference	1	Lab Skills – Liking a Graduated Cylinde	2	Basic Chemistry-Switchess of Colours carbonate
2	Basic Chemistry - Density of a cube	1	Lab Skills – Deing an Alcohol Thermon	2	tractions - traction on Solution
2	Basic Chemistry - Synthesis of calcium	1	Lab Skills – Using a Ruler		Solubity-Quality/e-Analysis
2	Basic Chemistry – Ybration of Vinegar	1	Metric Measurement - Length	2	Torrior - Consecution of Vinear
2	Buffers - Buffers and Buffer Capacity	1	Metric Measurement - Temperature	,	Tooder - Identify West Add Uses Touter Curve
2	Calcrimetry - Enthalpy of Newsonizati	1	Metric Measurement - Volume	-	Toppior - Standard Judge of Sedium Hydroxide
2	Calorimetry - Heat Capacity of a Calor	1	Metric Measurement - Weight	3	Cel Division - Summing Moses
2	Density - Density of a Plactic Cube	1	Specific Method - Pillbur Preference	_	
2	per Balance – Antacido ao Buffers	- 1	Staichiometry - Synthesis of Calcium		Cell Structure – Examining Mantand An implicels
2	pre Balance - Function of Buffers	4	tasic Chemistry - Synthesis of Calcium		Diffusion - Diffusion Acrossa Selectively Permeable Membrane  Diffusion - Office of Concentration on the Nate of Diffusion in a Seminolis
2	Titration - Concentration of Vinegar	-	Basic Chemistry - Titration of Vinegar	-	
2	Titration - Identify Weak Acid Uning 1	4	Spectrophotometry - Apply Beer's La	3	Diffusion – Affect of Density of Media on the Rate of Diffusion
2	Titration - Standardoption of Sodium		Diffusion - Effect of Molecular Weigh	3	Diffusion – Effect of Molecular Weight on the Rate of Diffusion in Air
1	Chemical Composition of Cells - Year	_		3	Microscopy-Animal Cells (Human Epidermal Cells)
	Chemical Composition of Cells – Sect	5	Gas Law - Ideal Gas Law Constant		Domosic - Movement of Water Across a Selectively Permissble Membrane
1	Chemical Composition of Cells – Yest	5	Respiratory/system - Mechanism of E	4	tacterial Genetics - Otto Profiling
3	Chemical Composition of Cells – Yest	- 6	Calorimetry - Exthalog of Neutralizat	4	Cedular Respiration – Measuring Energy Production in Hants
		- 6	Calorimetry - Heat Capacity of a Calo	4	Cellular Respiration - Transfermentation
	DNA Biology and Technology - DNA a	12	Colligative Properties - Freezing Pain	4	DNA Biologyand Technology - DNA and RNA Structure
		12	Diffusion - Diffusion Across a Selectiv	4	DNA Biology and Technology – Self Electrophoresis
		12	Diffusion – Effect of Concentration or	4	DNA Biology and Technology – solution of DNA
		12	Diffusion - Effect of Density of Media	4	How Engymec Work - Effect of Concentration
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A chapter-by-chapter correlation is embedded within each course to provide clear guidance for integrating labs into lessons.

Visit us online at **mheonline.com/advancedplacement** to learn more or contact your sales representative.



