LABSTER

www.labster.com

CATEGORY: Simulation Game

GRADE AND SUBJECT: Labster's target audiences are professors, students, university administrators (especially in science, biology, or medical subjects), and those looking for better ways to teach STEM courses with technology.

SHORT DESCRIPTION: Labster is the world's leading platform for virtual labs and science simulations. Students' learning results improve with Labster because they are engaged with game-based elements that inspire them to explore science. Students then apply their knowledge to solve a real-world problem in the context of a story.

READING TIME: 4 minutes

LEARNING GOALS: The Labster's goal is to build simulations that give students the benefits of traditional explicit instruction in an environment that offers them choice and maintains focus by adapting the teaching method to the learner's comfort level.

MOMENTS OF NEED OF THE TOOL: Expanding on what they have learned; Plan & act upon what they have learned.

LEVEL OF DIFFICULTY (RATING) AND AGE LEVEL: Medium, 14-16, 17-18, 19+

WHY USE THIS TOOL: Labster helps students succeed. It can help increase learning outcomes. Teachers who teach with Labster often observe that students' average grades increase by one or more. **Increase student involvement**. Students spend a lot of their free time looking at the screen daily. With immersive 3D science simulations, you can meet students in their native environment and make it fun. Labster uses gamification and storytelling approaches to engage students in the course material. **Make students comfortable with the lab**. The science lab can be overwhelming and dangerous if students do not know how to interact with it. Labster offers students a realistic virtual laboratory simulation before performing any physical experiments. This means that students can make mistakes and repeat experiments as often as they need to, without real consequences. **Save time on assessment and easily monitor student progress**. Labster allows you to see everything students do on the platform, including the number of quiz attempts, answers to questions, duration of the game and final grades obtained. In this way, you can constantly monitor student progress and use behavioural data as feedback to make changes.

TOOL DESCRIPTION: Labster's virtual lab simulations permit students to work on real cases, interact with lab equipment, perform experiments, and learn with theoretical questions and quizzes. A Labster virtual lab simulation is an interactive and immersive 3D learning environment. The learning environment can resemble a laboratory or even other locations.

PREPARATION AND HOW TO USE THE TOOL: Teachers can assign simulations in a course, and once students complete the simulation, the teacher can review the progression and grades. The teacher has a dashboard to ensure the students' progress and evaluate the assignments. For more information visit: https://www.labster.com/complete-guide-to-virtual-labs/.

RESOURCES NEEDED: Computer/Notebook

ADDITIONAL REFERENCES:
- Labster, *Virtual Labs for High School/ Discover Labster* https://www.youtube.com/watch?v=O5cefq7jcVs

PROS AND CONS OF USING THE TOOL:
PROS Excellent laboratory practice as an introduction, review; a good complement to the classroom for students of STEM subjects; lab exercises cover a wide range of topics, including chemistry, physics, biology, etc.; lab practice without the need for expensive equipment or open flames; enhance learning through fun and engaging ways as well as substantially reduce costs.
CONS Although designed to be user-friendly and relatively easy to use, there are sometimes problems with the operation; depending on network speed, there may be a delay when first loading the scene; No voice illustration available for visually impaired users.

TEACHERS' RECOMMENDATION RATE (SCORE): 4/5