

PRAXILABS VIRTUAL LABS

A brief Introduction

- ▶ The world is now witnessing what can be described as the technological invasion of all fields of life. It is the result of the unprecedented advances in scientific and technological fields throughout history.
- ▶ This new age of technology has helped us use digital devices in many fields, including education, which also helped spread e-learning platforms and distance education.

INTRODUCTION

- ▶ One way technology has benefited education is the emergence of virtual labs. Virtual labs are virtual environments designed for various experiments, through them the real science lab is simulated to link the practical side with the theoretical side.

INTRODUCTION

- ▶ All students have the freedom to do the experiments without a supervisor and without exposure to any kind of danger. This is done through computer applications that cover all fields of science. This saves a lot of effort and time for students and teachers. Teachers can prepare experiments at any time. Students are protected from directly handling dangerous chemicals and devices.
- ▶ Many universities and schools have started to use virtual labs because of their benefits.

INTRODUCTION

WHAT WE NEED?

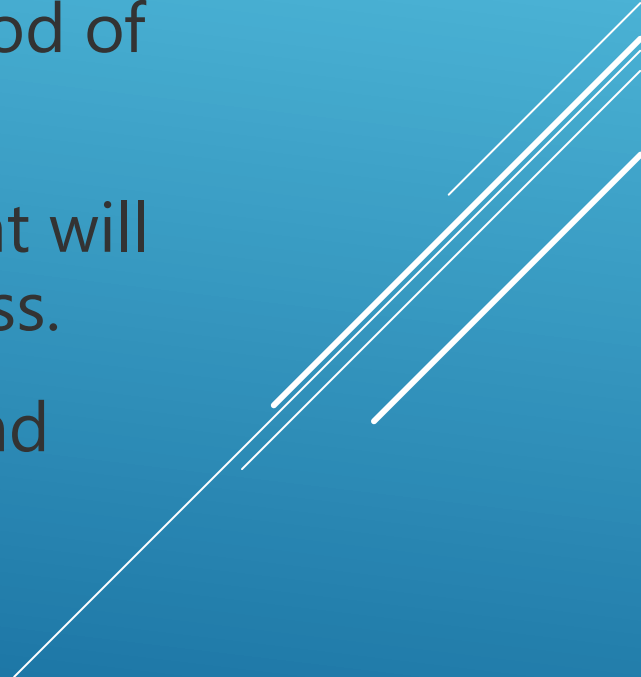
- ▶ Virtual lab users only need computers with suitable capabilities, and need to be connected to the Internet so the user can work on all the experiments. This is one of the advantages of virtual labs as computers and digital devices have become available and spread in schools, universities, and homes.



ADVANTAGES OF VIRTUAL LABS

- ▶ **1-** Virtual labs motivate students to conduct laboratory experiments.
- ▶ **2-** They satisfy the scientific passion of students, allowing them to access the various experiments easily regardless of time or place.
- ▶ **3-** Increase the understanding of scientific courses in physics, chemistry and biology; and Increase student achievement.
- ▶ **4-** Eliminate boredom, as it provides fun during the experiments.
- ▶ **5-** The virtual labs will increase the scientific research rates because it saves time and effort and enables researchers to use their time more effectively.

ADVANTAGES OF VIRTUAL LABS

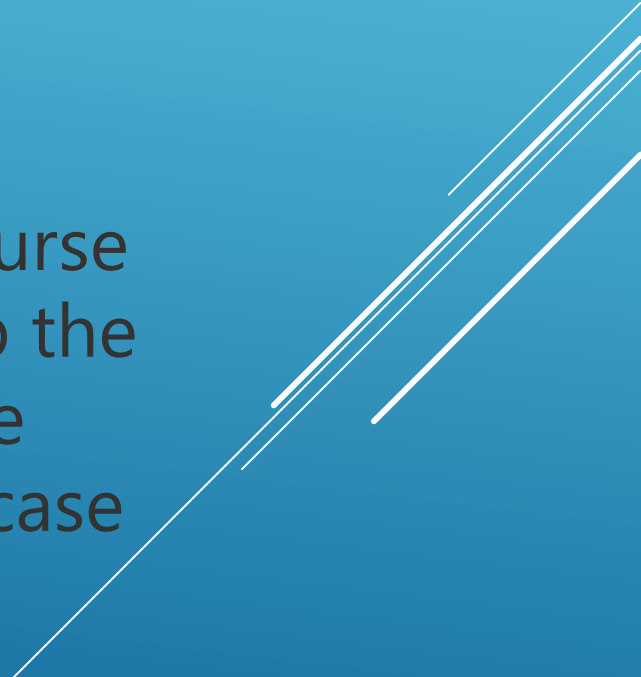
- ▶ **6-** The virtual labs will enable students to use modern technology and enable them to follow the tremendous progress of the information revolution.
 - ▶ **7-** Students will be able to use the scientific method of problem-solving.
 - ▶ **8-** Developing teaching and learning methods that will lead to the effectiveness of the educational process.
 - ▶ **9-** Increased communication between students and each other on the Internet, which helps with the exchange of ideas and experiences.
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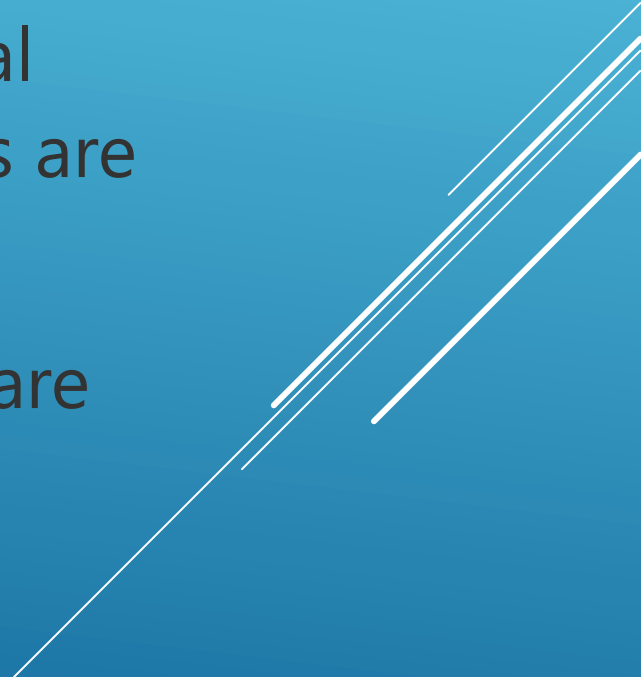
BENEFITS OF USING VIRTUAL LABS

- ▶ **1-** Help solve the problem of limited resources and funding for experiments.
- ▶ **2-** Protect students from the dangers they face during while conducting some dangerous laboratory experiments. It eliminates the need to deal with toxic or radioactive chemicals and other hazards such as electrical connections, etc. Subsequently, it is an effective way to avoid laboratory accidents.

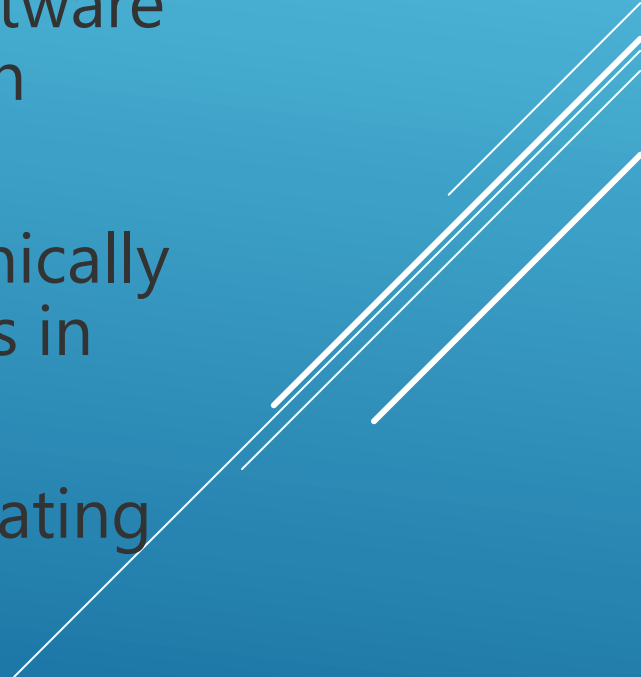
BENEFITS OF USING VIRTUAL LABS

- ▶ **3-** Ability to display very accurate phenomena and results that may not be measurable using simple laboratory tools and that require complex and expensive equipment.
 - ▶ **4-** Help the teacher cover all aspects of the course curriculum with practical applications and help the student understand all the points of the course curriculum; which is difficult to provide in the case of limited equipment and funding.
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BENEFITS OF USING VIRTUAL LABS

- ▶ **5-** Provide the synchronization between the process of explaining the theoretical ideas and practical application, just as real laboratory experiments are linked to theoretical lectures.
 - ▶ **6-** Help students and teachers study and prepare laboratory experiments at any time and place.
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BENEFITS OF USING VIRTUAL LABS

- ▶ **9-** Provide cooperation and interaction between the students and between the teachers and students.
 - ▶ **10-** The ability to record all the results electronically, which helps in analyzing them using the latest software programs and sharing the results and analysis with others.
 - ▶ **11-** Help the teacher to evaluate students electronically and easily to guide them and follow their progress in conducting experiments.
 - ▶ **12-** Save time and effort for researchers by eliminating the need to move between different laboratories.
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BENEFITS OF USING VIRTUAL LABS

- ▶ **13-** Provide a comprehensive overview for the learner about the hazardous experiments which are not safe in the real world, thus providing him/her with a greater absorption of the course.
 - ▶ **14-** Help educational institutions save money.
 - ▶ **15-** Add entertainment while conducting the experiment, which helps attract the students' attention.
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TRY YOUR VIRTUAL LAB FOR FREE

- ▶ PraxiLabs provides a virtual science lab for students, teachers, and researchers. Create your **free account** and enjoy conducting scientific experiments online.
 - ▶ You can access the virtual lab using the internet anywhere and anytime you want.
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▶ Thank you for your time! For more Info please visit:

[HTTPS://PRAXILABS.COM](https://praxilabs.com)

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