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A3Learning

Learning Anywhere, Anytime, from Anyone

MODULE 2

Improving Digital Teaching Competence

Unit 2.4.

Practical Assignment

https://a3learning-platform.eu/

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INTRODUCTION

This final unit is dedicated to the **practical application of the knowledge and tools** acquired in module 2.

Educators will be challenged to **apply what they've learned** by creating and delivering a lesson that integrates their theoretical knowledge, tools, and best practices. This unit provides all the details and instructions needed to complete the practical assignment.

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LEARNING OUTCOMES

By the end of this unit, you will be able to:

1. **Apply the acquired knowledge** to create a comprehensive lesson plan.

2. **Effectively use digital tools and resources** in a teaching scenario.

3. **Evaluate the impact** of the practical assignment on student learning.

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TO REFLECT

- What **challenges** do you face when trying to use **digital tools and resources effectively** in your teaching scenarios?
- How do you **measure success** when **evaluating the impact** of a practical assignment on student learning?

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OVERVIEW

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I. CASE STUDIES

Why is it important?

- **Real-World Application:** Provide concrete examples of how theoretical knowledge can be applied in real-world situations;
- **Problem-Solving Skills:** Individuals can develop critical thinking and problem-solving skills;
- **Learning from Experience:** Showcases successful and unsuccessful scenarios, allowing learners to learn from both positive and negative outcomes.
- **Decision-Making Skills:** Often require learners to make decisions or recommendations based on the information provided. This helps develop decision-making skills.

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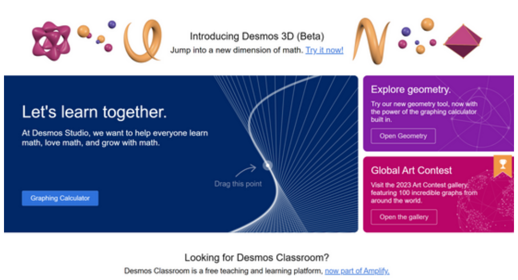
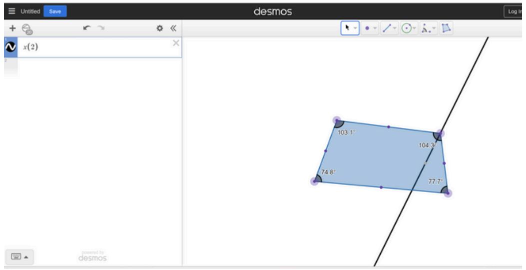
I. CASE STUDY 1 - MATHS

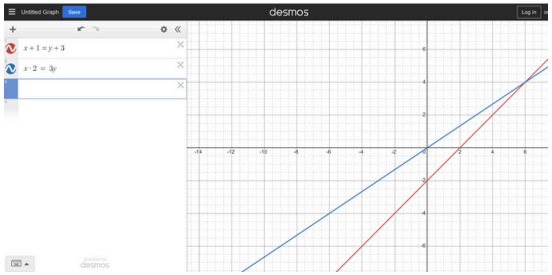
Using Online Interactive Tools

Online interactive tools offer **dynamic ways to engage** students in math lessons, providing **hands-on experiences** and **visual representations** of mathematical concepts. These tools can range from interactive whiteboard apps to graphing calculators and math game platforms.

Let's take a look at a specific tool called Desmos, a graphing calculator that offers a user-friendly interface for visualizing mathematical functions. Here are some screenshots demonstrating its features:







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I. CASE STUDY 1 – MATHS

Key Takeaways

Engaging Visualizations: Online interactive tools like Desmos **help students visualize abstract mathematical concepts**, making learning more **accessible** and **enjoyable**.

Hands-On Exploration: Students can actively **explore** mathematical principles through **interactive activities and simulations**, promoting deeper understanding.

Personalized Learning: Teachers can **customize** activities and assignments based on students' **needs** and provide **immediate feedback** on their progress.

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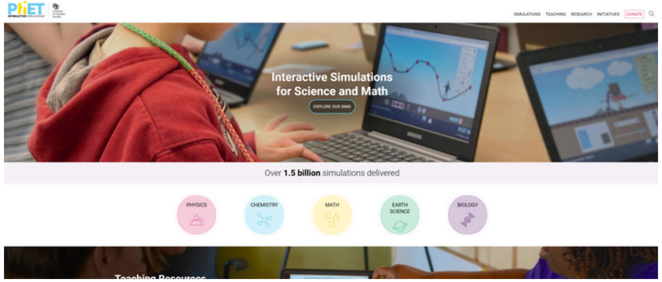
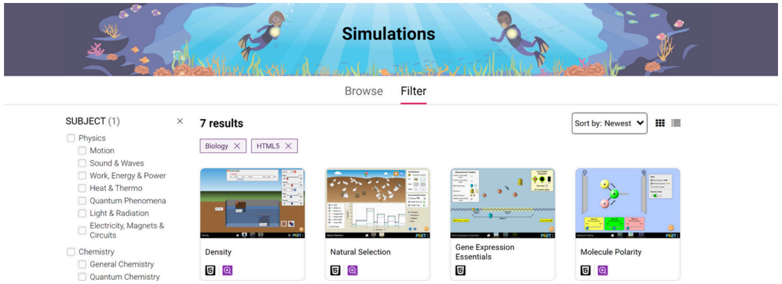
I. CASE STUDY 2 – SCIENCE

Virtual Labs and Simulations

Virtual labs and simulations offer **immersive experiences** that **replicate real-world** scientific experiments in a digital environment. These tools allow students to conduct experiments, manipulate variables, and observe outcomes, enhancing their understanding of scientific concepts.

Let's explore a virtual lab environment called PhET Interactive Simulations, developed by the University of Colorado Boulder. Here's an illustration of its features:





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I. CASE STUDY 2 – SCIENCE

Key Takeaways

Accessibility: Virtual labs **eliminate physical barriers and equipment constraints**, allowing students to access experiments anytime, anywhere.

Conceptual Understanding: Virtual labs provide **opportunities** for students to **manipulate variables**, **observe cause-and-effect** relationships, and **develop critical thinking skills** essential for scientific inquiry.

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II. PRACTICAL EXERCISE

Completing this practical exercise will allow educators to demonstrate their ability to **apply theoretical knowledge**, **utilize digital tools** effectively, and **implement best practices** in digital teaching.

By creating and delivering a lesson that integrates these elements, educators can **enhance student engagement**, **facilitate active learning**, and **promote meaningful** educational **experiences**.

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II. PRACTICAL EXERCISE

Instructions

1) **Select a Topic:** Choose a topic **from your curriculum** that you feel comfortable teaching and that aligns with the learning objectives of your course.

2) **Identify Learning Objectives:** Define **clear learning objectives** for your lesson. What do you want your students to know or be able to do by the end of the lesson?

3) **Choose Digital Tools:** Select **digital tools or resources that support** your teaching **objectives** and **enhance student engagement**. Consider tools discussed throughout the course, such as interactive presentation software, online collaboration platforms, or educational apps.

II. PRACTICAL EXERCISE

Lesson Planning

In this practical activity, we invite you to develop a detailed lesson plan that outlines the structure of your lesson. It should include:

- **Introduction:** Engage students and provide an overview of the lesson.
- **Content Delivery:** Present the core content using a variety of instructional strategies, incorporating digital tools as appropriate.
- **Activities:** Include interactive activities that promote active learning and student participation.
- **Assessment:** Plan formative or summative assessments to evaluate student understanding and learning outcomes.
- **Closure:** Summarize key points and provide opportunities for reflection.

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II. PRACTICAL EXERCISE

Keep in mind!

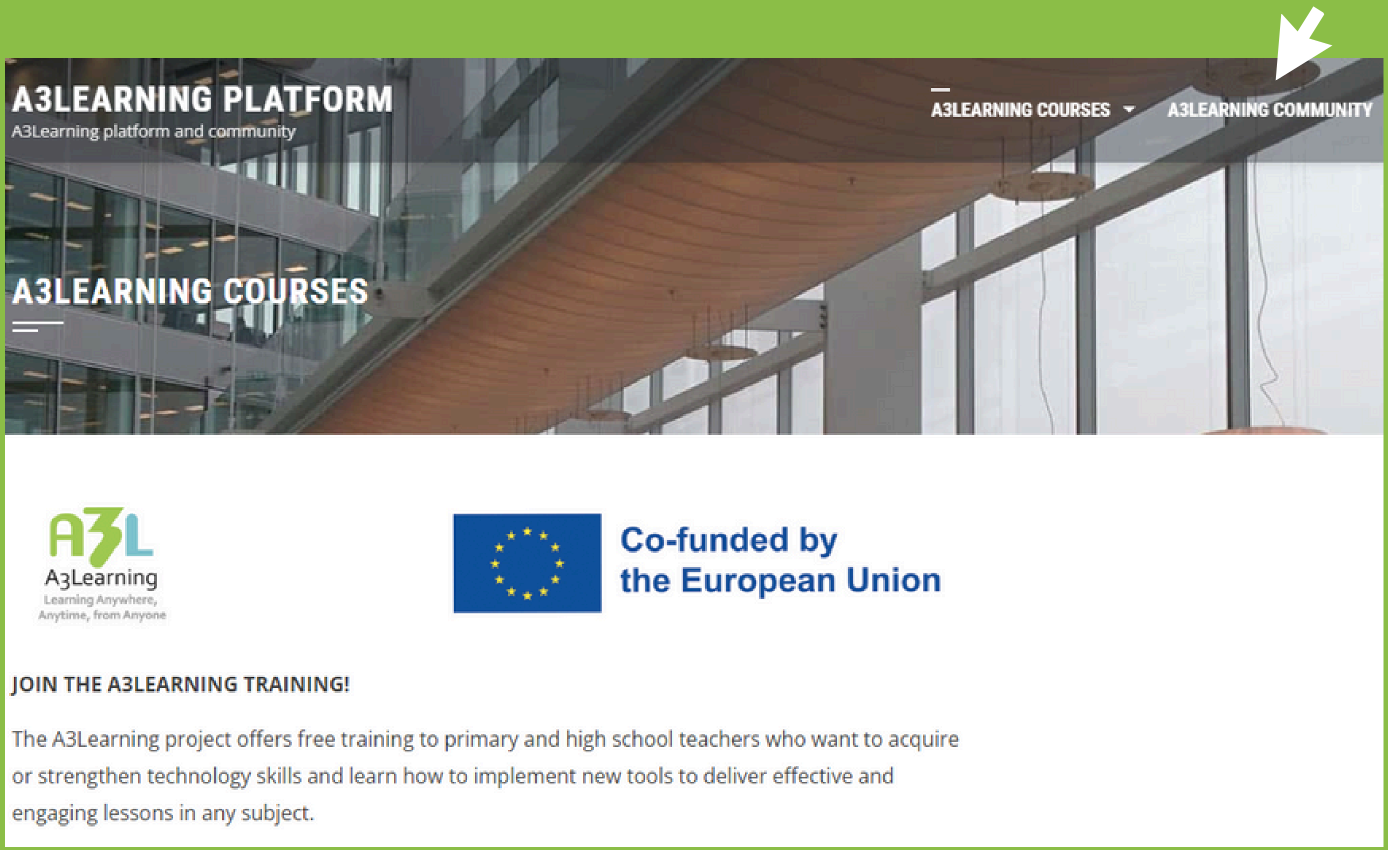
- **Integration of Digital Tools:** Integrate the chosen digital tools seamlessly into your lesson plan to enhance teaching and learning experiences. Ensure that each tool serves a specific purpose and aligns with your learning objectives.

- **Prepare Materials:** Gather any materials, resources, or multimedia elements needed for your lesson, including slides, videos, worksheets, or interactive exercises.

- **Practice Delivery:** Rehearse delivering your lesson to ensure smooth transitions, clear instructions, and effective use of digital tools. Pay attention to timing and pacing to keep the lesson engaging and on track.

II. PRACTICAL EXERCISE

After finishing this exercise, we encourage you to post it on the A3Learning community, where you can gather feedback and review your colleagues' work!



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