Co-funded by the
European Solidarity Corps
of the European Union

Ref. No: 2021-1-TR01-KA220-SCH-000032769

Lesson Plans and Activity Book for Teachers

2023

This project has been funded with the support of the European Commission. This publication reflects the views only of the author and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Contents

Introduction

This manual presents a comprehensive set of resources, the "Technology-Based Active Learning (TBAL) Lesson Plans and Activity Book," designed to facilitate the integration of technology into educational settings through active learning strategies. It aims to assist educators in enhancing student engagement and learning outcomes through the effective use of educational technology.

As the educational landscape continually evolves with advancements in technology, the necessity for educators to adapt and incorporate these tools into their curriculum becomes paramount. This resource offers a series of structured lesson plans and diverse activities that are rooted in active learning principles, promoting an environment where students actively participate in their learning process and construct knowledge through interaction and engagement.

The lesson plans provided in this book are scalable and adaptable, covering various levels of technical skill and applicable across different educational contexts. They are crafted to be flexible, allowing educators to tailor content to the specific needs, learning styles, and objectives of their students.

Included within are strategies to cultivate critical thinking, enhance collaboration, and encourage creativity. Each plan and activity is designed not just to integrate technology, but to leverage it as a transformative element in the classroom, enhancing the educational process and preparing students for a technology-driven world.

This resource supports educators in navigating the challenges of technology integration by providing practical tools and insights that promote dynamic, technology-enhanced learning environments. By engaging with these materials, educators will be equipped to foster meaningful and impactful learning experiences that resonate with and prepare students for future challenges.

Educators are encouraged to utilize this book to expand their pedagogical toolkit, embracing technology-based active learning to create compelling and effective educational experiences.

Technology-Based Active Learning Lesson Plan 1	
Name:	My Environment
Grade	9
Lesson:	English
Interdisciplinary Connections:	Science: Students will use spatial vocabulary (e.g., next to, across from) to describe locations within their neighborhood, incorporating basic concepts of directionality.
Course Duration:	40 minutes
Objectives and learning outcomes:	Students will be proficient in discussing the locations of various objects and places. Students will use spatial vocabulary effectively to describe their neighborhood. Students will make comparisons between different locations and features within their neighborhood. Students will create a detailed map using basic geometric shapes and symbols to represent different landmarks.
Relevance and Importance:	Students will be proficient in discussing the locations of various objects and places. Students will use spatial vocabulary effectively to describe their neighborhood. Students will make comparisons between different locations and features within their neighborhood. Students will create a detailed map using basic geometric shapes and symbols to represent different landmarks.
Teaching and learning methods:	Students will be proficient in discussing the locations of various objects and places.

	Students will use spatial vocabulary effectively to describe their neighborhood. Students will make comparisons between different locations and features within their neighborhood. Students will create a detailed map using basic geometric shapes and symbols to represent different landmarks.
Preparation and pre-requisites:	Students: Digital literacy and access to digital devices. Foundational English vocabulary. Familiarity with neighborhood Teacher: Setup of digital platforms and resources
Course materials, e-resources and ldditional resources :	Students: Should have basic digital literacy and access to digital devices, along with foundational English vocabulary. Teacher: Preparation involves setting up digital platforms and resources, and ensuring familiarity with neighborhood geography. Students: Should have basic digital literacy and access to digital devices, along with foundational English vocabulary. Teacher: Preparation involves setting up digital platforms and resources, and ensuring familiarity with neighborhood geography.
Activities(workflow in minutes):	Discussion-based activity where students view a picture and identify different locations within it, using targeted vocabulary. Pair or small group activity where students create a sketch map of their neighborhood, using symbols to denote specific features. Hands-on and technology-based exploration where students create digital versions of their neighborhood maps.

Assessment:	Online Quizzes: Assess understanding of spatial prepositions and vocabulary. Digital Portfolio: Compile students' sketches and digital maps for review and grading. Peer Reviews: Students use digital platforms to provide feedback on their classmates' maps.
Adjustment and adaptation	Adaptive Learning Software: Available for students who require additional practice with grammar and vocabulary. Multimedia Options: Incorporate audio, video, and text resources to cater to different learning preferences. Language Support Tools: Provide access to online dictionaries and grammar checkers to support language acquisition.
Hints and Hacks:	Discussion Boards: Encourage ongoing dialogue and collaboration outside of class hours through online forums. Tech Tips: Regularly share useful tips for effectively utilizing digital tools and resources in educational activities.
Developed by:	Antalya Directorate of National Education

Technology-Based Active Learning Lesson Plan 2	
Name:	Friendship
Grade:	9
Lesson:	English
Interdisciplinary Connections:	Digital Media: Understanding how friendship is portrayed in digital media. Cultural Studies: Exploring friendship norms in different cultures through digital resources.
Course Duration:	40 minutes
Objectives and learning outcomes:	Use simple present tense accurately in the context of friendship. Develop digital literacy through the use of technology-based resources. Understand and appreciate diverse perspectives on friendship.
Relevance and Importance:	Language Proficiency: Essential for English language learners. Digital Skills: Engages students in today's digital world. Cultural Sensitivity: Encourages understanding of global perspectives on friendship..
Teaching and learning methods:	Flipped Classroom: Utilize digital content for self-learning before class. Collaborative Learning: Group activities using digital platforms. Interactive Quizzes: Online quizzes for immediate feedback.
Preparation and pre-requisites:	Students: Basic digital literacy and access to digital devices. Teacher: Setup of digital platforms and resources
Course materials, e-resources and additional sources :	E-books and Online Articles: Digital readings on friendship and grammar. Educational Websites and Apps: For practicing simple present tense.

	Multimedia Content: Podcasts and videos about friendships across cultures.resources needed for the lesson, including both physical and digital resources. If the material/worksheet etc is created, please attach it as Annexes. Recommended bibliography. Further reading and electronic resources such as websites, online articles, or multimedia materials that complement the learning experience.
Activities(workflow in minutes):	Online Discussion Forums: Share thoughts on friendship in simple present tense. Digital Storytelling: Create digital stories or blogs about personal experiences of friendship. Interactive Grammar Games: Online games focusing on simple present tense. Virtual Cultural Exchange: Connect with a classroom in another country to discuss friendship norms.
Assessment:	Online Quizzes: Focused on simple present tense. Digital Portfolio: Collection of written assignments, digital stories, and forum contributions. Peer Reviews: Using digital platforms for feedback on classmates' work.
Adjustment and adaptation	Adaptive Learning Software: For students needing extra grammar practice. Multimedia Options: For different learning styles (audio, video, text). Language Support Tools: Like online dictionaries and grammar checkers.
Hints and Hacks:	Gamification: Incorporate elements of game playing (e.g., point scoring) in grammar exercises. Discussion Boards: For ongoing conversations outside class hours. Tech Tips: Regularly share tips for effectively using digital tools.
Developed by:	Gülveren Anadolu Lisesi

Technology-Based Active Learning Lesson Plan 3	
Name:	Flight Simulators and Techniques
Grade:	10
Lesson:	Model Aircraft Lesson
Interdisciplinary Connections:	Mathematics: Calculate flight parameters, angles, and distances. Physics: Understand the principles of aerodynamics. Technology: Explore the technology behind flight simulation systems. Geography: Discuss the impact of geography on flight routes.
Course Duration:	90 Minutes
Objectives and learning outcomes:	Understand the fundamentals of flight simulation technology. Apply principles of aerodynamics in virtual flight. Develop problem-solving and decision-making skills in simulated flight scenarios. Analyze the relevance of flight simulation in pilot training.
Relevance and Importance:	Understanding flight simulators is crucial for pilot training and aeronautical research. Simulations provide a safe environment for learning and practicing without real-world risks.
Teaching and learning methods:	Lecture: Introduce the basics of flight simulation technology. Demonstration: Showcase a flight simulator and its components. Hands-on Practice: Allow students to experience virtual flights. Group Discussion: Discuss the importance and applications of flight simulation.
Preparation and pre-requisites:	Ensure access to a flight simulator or simulation software. Basic knowledge of aerodynamics and physics is beneficial.
Course materials, e-resources and Additional resources :	Flight simulator software/hardware. Lecture slides on flight simulation technology. Online articles and videos on aerodynamics.

Activities(workflow in minutes):	Introduction (10 mins): Brief overview of the importance of flight simulation. Discuss key concepts and objectives. Lecture on Flight Simulation Technology (20 mins): Cover the basics of flight simulation systems. Explain different types of simulators and their applications. Demonstration (15 mins): Showcase a flight simulator and its components. Discuss how it replicates real-flight scenarios. Hands-on Practice (30 mins): Allow students to experience virtual flights. Demonstrate basic flight maneuvers. Group Discussion (15 mins): Discuss the relevance and significance of flight simulation in pilot training. Encourage students to share their experiences.
Assessment:	Practical Test (40%): Evaluate students based on their performance in the virtual flight. Class Participation (20%): Assess engagement in discussions and activities. Written Assignment (40%): Have students write a short essay on the applications of flight simulation in aviation.
Adjustment and adaptation	Provide additional resources for students who want to explore the topic further. Modify the practical test based on the students' prior knowledge and experience.
Hints and Hacks:	Encourage collaboration during hands-on activities. Incorporate real-world examples of successful applications of flight simulation in aviation
Developed by:	Gülveren Anadolu Lisesi
Notes:	Feel free to adjust the duration of each activity based on the available time and the pace of your students. Also, adapt the content to suit the specific needs and interests of your class.

Technology-Based Active Learning Lesson Plan 4	
Name:	How do planes fly?
Grade:	10
Lesson:	Model Aircraft Lesson
Interdisciplinary Connections:	Mathematics: Calculate angles, distances, and speeds related to flight. Physics: Understand the principles of lift, thrust, drag, and gravity. History: Explore the history of aviation and key milestones. Geography: Discuss global air travel routes and their significance.keşfetmeye teşvik eder.
Course Duration:	80 Minutes
Objectives and learning outcomes:	Objective 1: Understand the basic principles of flight. Outcome: Students can explain the forces involved in flight. Objective 2: Recognize the historical development of aviation. Outcome: Students can identify key events and figures in aviation history.
Relevance and Importance:	Understanding how planes fly is essential in a world where air travel is common. It fosters critical thinking, problem-solving, and an appreciation for scientific and technological advancements.
Teaching and learning methods:	Lecture: Introduce principles of flight. Group Discussion: Explore historical aspects of aviation. Hands-on Experiment: Conduct simple experiments demonstrating lift and drag. Audio-Visual Aids: Use videos/animations to illustrate concepts.
Preparation and pre-requisites:	Ensure access to a classroom with a projector or smartboard and whiteboard. Prepare materials for the hands-on experiment. Familiarize yourself with relevant historical events.
Course materials, e-resources and Iditional resources :	PowerPoint presentation on the principles of flight. Videos on aviation history. Reading materials on basic aerodynamics.
	Introduction (10 mins):

Activities(workflow in minutes):	Briefly discuss the importance of air travel. Ask students what they know about how planes fly. Lecture on Principles of Flight (15 mins): Explain lift, thrust, drag, and gravity. Use diagrams and animations for clarity. Group Discussion on Aviation History (20 mins): Break students into groups. Assign each group a specific era or key event in aviation history. Groups present their findings to the class. Hands-on Experiment (20 mins): Conduct a simple experiment to demonstrate lift and drag. Discuss the results and relate them to flight principles. Wrap-up and Q&A (10 mins): Summarize key points. Allow time for questions and discussion.
Assessment:	Individual Quiz: Assess understanding of flight principles. Group Presentation: Evaluate research and presentation skills.
Adjustment and adaptation	Provide additional resources for advanced learners. Offer extra support for students who need it.
Hints and Hacks:	Use real-life examples to make concepts relatable. Encourage students to explore aviation-related careers.
Developed by:	Gülveren Anadolu Lisesi
Notes:	Feel free to adjust the time allocation and activities based on the specific needs and dynamics of your class.

Technology-Based Active Learning Lesson Plan 5	
Name:	ID CARDS
Grade:	9
Lesson:	Social Science
Interdisciplinary Connections:	History: Tracing the historical development of personal identification methods. Technology: Examining the technological advancements in ID cards. Ethics: Discussing privacy and ethical concerns related to personal data.
Course Duration:	40 Minutes
Objectives and learning outcomes:	Understand the history and evolution of ID cards. Analyze the role of ID cards in society, including privacy and security concerns. Evaluate the implications of ID cards in various global contexts.
Relevance and Importance:	Civic Awareness: Understanding the significance of identification in civil and legal processes. Global Perspective: Gaining insight into how different societies manage identification. Critical Thinking: Encouraging analysis of privacy, security, and ethical implications.
Teaching and learning methods:	Case Studies: Analyze real-world examples of ID card systems. Group Discussions: Facilitate debates on the pros and cons of cards. Interactive Online Resources: Utilize digital platforms for research and presentations.
Preparation and pre-requisites:	Students: Basic understanding of civic systems and privacy rights. Teacher: Preparation of digital resources, case studies, and discussion guides.
Course materials, e-resources and ditional resources :	Digital Articles: For background reading on ID cards and their impact. Multimedia Presentations: Videos and slideshows on the evolution of ID cards.

	Educational Websites: For interactive learning about ID systems worldwide.
Activities(workflow in minutes):	Research Project: Investigate different countries' ID card systems and their implications. Online Discussion Forums: Share and debate findings with classmates. Digital Collage: Create a visual representation of the evolution of ID cards. Virtual Guest Lectures: Invite experts in law, technology, or ethics to speak.
Assessment:	Presentation: Students present their research on various ID card systems. Online Quizzes: Test comprehension of the material covered. Reflective Essays: Write about the impact of ID cards on individual privacy and security.
Adjustment and adaptation	Adaptive Tools: Provide additional resources for students needing extra support. Variety in Assessment: Offer different formats (oral, written, visual) for students to express their understanding. Ongoing Feedback: Utilize digital platforms for timely and constructive feedback.
Hints and Hacks:	Real-Life Scenarios: Discuss current news stories related to ID cards and privacy. Interactive Learning: Use online polling and quizzes during lessons for immediate engagement. Resource Sharing: Encourage students to share additional digital resources they find. Interactive Tools: Utilize online tools for collaborative project development. Real-World Application: Relate activities to real-world hydroponic farming scenarios.
Developed by:	Akdeniz University
Notes:	

Technology-Based Active Learning Lesson Plan 6	
Name:	Natural System Volcanism
Grade:	9
Lesson:	Social Science
Interdisciplinary Connections:	History: Tracing the historical Geology: Study of volcanic formations and processes. History: Impact of historical volcanic eruptions on human civilizations. Geography: Understanding how volcanoes affect landforms and ecosystems.
Course Duration:	40 Minutes
Objectives and learning outcomes:	Understand the geological processes of volcanism. Analyze the impact of volcanoes on the environment and human societies. Develop research and critical thinking skills through technological resources.
Relevance and Importance:	Environmental Awareness: Understanding volcanism's role in shaping Earth's landscape and climate. Risk Management: Learning about natural disasters and their impact on communities. Scientific Literacy: Enhancing knowledge about Earth's geological processes.
Teaching and learning methods:	Virtual Simulations: Interactive models of volcanic eruptions and their effects. Project-Based Learning: Research projects on specific volcanoes or volcanic events. Collaborative Learning: Group discussions and activities through digital platforms.
Preparation and pre-requisites:	Students: Basic understanding of earth sciences. Teacher: Setup of digital tools and resources; preparation of interactive content. Teacher: Preparation of digital resources, case studies, and discussion guides.
Course materials, e-resources and Iditional resources :	Educational Software: For simulations and visualizations of volcanic activity.

	Online Articles and Videos: Documentaries and case studies on major volcanic events. Interactive Websites: For exploring geology and volcanism.
Activities(workflow in minutes):	Virtual Field Trip: Explore an active volcano through virtual reality or video tours. Online Research Assignment: Study a specific volcanic eruption and its impacts. Digital Poster Making: Create informative posters using digital tools. Interactive Online Discussions: Debates and discussions on volcanic risk management.
Assessment:	Online Quizzes: To test understanding of volcanic processes and terminology. Research Project Presentations: Students present their findings on specific volcanic events. Reflective Journals: Write about the learning experience and insights gained.
Adjustment and adaptation	Adaptive Learning Resources: Tailor resources for different learning abilities. Varied Assessment Methods: Offer diverse formats (visual, oral, written) for assessments. Regular Check-ins: Monitor student progress and provide feedback through digital platforms.
Hints and Hacks:	Current Events Connection: Link recent volcanic activities to lessons. Peer Learning: Encourage students to share their research and learn from each other. Tech Tips: Regularly provide tips on effectively using digital tools for research.
Developed by:	Akdeniz University
Notes:	

Technology-Based Active Learning Lesson Plan 7	
Name:	Hydroponic Agriculture
Grade:	9
Lesson:	Problem solving and programming
Interdisciplinary Connections:	Biology: Understanding plant growth and nutrient requirements. Environmental Science: Sustainability and resource management in agriculture. Technology: Use of sensors and automation in modern farming.
Course Duration:	40 Minutes
Objectives and learning outcomes:	Understand the basics of hydroponic agriculture systems. Develop programming skills to simulate or control a hydroponic system. Apply problem-solving strategies to optimize hydroponic growth conditions.
Relevance and Importance:	Future of Farming: Hydroponics represents an innovative, sustainable farming method. Interdisciplinary Learning: Combines programming, biology, and environmental science. Problem-Solving Skills: Enhances critical thinking in a real-world context.
Teaching and learning methods:	Project-Based Learning: Develop a simulated hydroponic system using programming. Collaborative Learning: Team projects for designing and programming solutions. Interactive Tutorials: Online resources for learning programming concepts and hydroponics basics
Preparation and pre-requisites:	Students: Basic understanding of programming concepts. Teacher: Set up digital platforms and simulation software.
Course materials, e-resources and Iditional resources :	Programming Software: Such as Scratch or Python for creating simulations. Online Tutorials: Covering hydroponics and basic programming.

	Virtual Labs: For simulating hydroponic environments.
Activities(workflow in minutes):	Programming a Hydroponic Simulator: Create a simple program to simulate a hydroponic system. Problem-Solving Challenges: Address common issues in hydroponic systems through programming solutions. Research and Discussion: Explore the latest advancements in hydroponic technologies. Guest Speaker Sessions: Invite experts in hydroponics or agricultural technology.
Assessment:	Project Evaluation: Assess the hydroponic system simulation projects. Online Quizzes: Test knowledge on hydroponics and programming concepts. Peer Review: Students evaluate each other's projects based on a rubric.
Adjustment and adaptation	Adaptive Learning Resources: For students who need additional support in programming. Diverse Learning Methods: Incorporate videos, interactive simulations, and text resources. Regular Check-Ins: Monitor student progress and provide feedback.
Hints and Hacks:	Gamification: Introduce elements of gamification in problem-solving activities. Interactive Tools: Utilize online tools for collaborative project development. Real-World Application: Relate activities to real-world hydroponic farming scenarios.
Developed by:	Akdeniz University
Notes:	

Technology-Based Active Learning Lesson Plan 8	
Name:	Religion and Moral Knowladge
Grade:	10
Lesson:	Religious Culture and Moral Knowledge
Interdisciplinary Connections:	Positive Sciences and Existansialism and The Creature
Course Duration:	40 minutes
Objectives and learning outcomes:	Laws of Physics Philosophy of existence Religious words
Relevance and Importance:	Youngs are in a period of questioning, they are taught logical ways of thinking.
Teaching and learning methods:	Reminding them that there are laws in every substance and event with the laws they see in courses such as physics, chemistry and biology.
Preparation and pre-requisites:	Reminder of previous information
Course materials, e-resources and additional sources :	Biology Book Physics Book Chemistry Book Interactive board Youtube
Activities(workflow in minutes):	Introduction (10 minutes) Objective: Introduce the concept of scientific laws and their ubiquity in natural phenomena. Activity**:** Briefly explain that scientific laws govern every formula, event, or result. Discussion Points: Science answers the question "how" things happen. Humans seek to understand "why" things occur. Examples of scientific laws and their impact on understanding the world. Book Distribution and Selection (10 minutes) Activity: Distribute different science books to each student.

	Task: Students select a sentence or topic related to a scientific law or principle. Guidance: Encourage students to think about how this law explains natural phenomena. Student Presentations (20 minutes) Activity: Each student reads their selected sentence or topic to the class. Discussion Points: Explain the law or principle in their own words. Discuss its application in everyday life or scientific experiments. Examples to Consider: Newton's laws of motion Law of conservation of energy Principles of thermodynamics Group Discussion: The Role of Laws in Science (15 minutes) Discussion Points: How do scientific laws help us understand the world? The relationship between experimental conditions and observed results. The interconnectedness of natural phenomena and scientific laws. Question for Reflection: "Every village must have its headman, every needle must have its maker, and every letter must be written by someone. How, then, can such a well-ordered universe exist without a ruler?" Laboratory Connection (15 minutes) Activity: Relate the discussion to recent or upcoming laboratory experiments. **Discussion Points:** Observing results based on prepared conditions. Understanding the natural world, human body, and food systems through scientific laws.

Assessment:	Activity: Reflect on the interconnectedness of scientific laws. Task: Students write a short paragraph on how scientific laws help explain the natural world. Prompt: "How do scientific laws provide order and understanding in the universe?" Extension Activity (Optional) Activity: Create a visual representation (poster or digital slide) illustrating a chosen scientific law and its applications. Task: Students can present their visuals in the next class
Adjustment and adaptation	Thus, students are told that religion is related to fields such as physics, chemistry and biology, and that these scientific rules lead us to religious truths.
Hints and Hacks:	Using other textbooks or watching videos on YouTube about the structure of the human body, the structure of the eye, the structure of the heart and vessels, or the food chain and the water cycle may help the subject.
Developed by:	Gülveren Anadolu Lisesi
Notes:	Adjust the timing of each activity based on class needs. Ensure all students have access to relevant materials and resources. Encourage critical thinking and open discussion throughout the lesson.

Technology-Based Active Learning Lesson Plan 9	
Name:	World War II Exploration (History)
Grade:	9th
Lesson:	Understanding Key Aspects of World War II through Technology
Interdisciplinary Connections:	This lesson plan integrates elements of history, technology, and communication.
Course Duration:	60 minutes
Objectives and learning outcomes:	By the end of this lesson, students will gain a foundational understanding of key events and aspects of World War II. Students will engage with history through immersive technology, including Virtual Reality (VR) and Augmented Reality (AR). Students will interact with an AI-powered virtual guide to enhance their learning experience.
Relevance and Importance:	World War II is a pivotal historical event that significantly impacted the world. Understanding its key aspects is essential for historical literacy and understanding the consequences of global conflicts.
Teaching and learning methods:	Expositive techniques TBAL - Technology-based activity learning
Preparation and pre-requisites:	Instructions for teachers and students on how to prepare for the lesson, including any necessary pre-reading, assignment or pre-requisites.
Course materials, e-resources and additional sources :	VR headsets or VR-ready smartphones. AR apps (e.g., ARKit, ARCore) on smartphones or tablets. AI-powered virtual guide software (e.g., chatbot or voice assistant). Recommended bibliography: "The Second World War" by Sir Winston Churchill. "The Diary of a Young Girl" by Anne Frank. Further reading and electronic resources:

	Dunkirk VR Experience: Find Yourself On The Shores Of Dunkirk Fighting To Survive | 360 | TIME (https://www.youtube.com/watch?v=zgdo7-RRjgo) WW2 VR interactive history lesson on Pointe du hoc Normandy France (https://www.youtube.com/watch?v=Swdq6nQK9EA) Experience the London Blitz in 360 VRRemembering Pearl Harbor VR: Experience History | 360 Video | TIME (https://www.youtube.com/watch?v=7fWNCUZjJ5Q)
Activities(workflow in minutes):	Introduction (5 minutes): Begin with a brief overview of World War II and its significance. Virtual Reality Tour (15 minutes): Provide students with VR headsets or access to a VR tour of key WWII locations, such as Normandy Beach or the Auschwitz concentration camp. Allow students to explore and interact with historical artifacts in a virtual environment. Augmented Reality Activity (15 minutes): Using AR apps on smartphones or tablets, students can superimpose WWII-era photographs and documents onto their surroundings. For example, they can overlay maps showing the progression of the war on a classroom wall. AI-Powered Virtual Guide (10 minutes): Introduce an AI-powered virtual guide (voice or chatbot) that students can interact with to ask questions about WWII. The AI guide can provide answers and engage in conversations related to the topic. Discussion and Reflection (10 minutes): Lead a class discussion where students share their VR/AR experiences and ask questions to the AI guide. Encourage critical thinking and reflection on what they've learned. Summarization (5 minutes): Conclude the lesson by summarizing key takeaways and highlighting the importance of understanding history.
Assessment:	Quiz (Annex 1)

Adjustment and adaptation	Ensure that VR/AR content is accessible to all students, including those with disabilities. Offer alternative assignments for students who may not have access to VR/AR technology.
Hints and Hacks:	Pre-test the VR/AR and AI systems to ensure they work smoothly during the lesson. Encourage students to ask thought-provoking questions when interacting with the AI guide to promote critical thinking.
Developed by:	COFAC.
Notes:	

Annex 1

World War II Quiz
When did World War II begin and end? a) 1914-1918 b) 1939-1945 c) 1941-1945 d) 1933-1941 Which two major alliances were formed during World War II? a) Axis and Allies b) Central Powers and Entente c) Triple Alliance and Triple Entente d) NATO and Warsaw Pact Which event prompted the United States to enter World War II? a) The attack on Pearl Harbor b) The Battle of Stalingrad c) The D-Day invasion d) The dropping of the atomic bomb on Hiroshima Who was the leader of Nazi Germany during World War II? a) Winston Churchill b) Joseph Stalin c) Adolf Hitler d) Benito Mussolini What was the Holocaust? a) A military strategy used by the Allies b) The code name for the D-Day invasion c) The systematic genocide of six million Jews by the Nazis d) A secret weapon developed by the Axis powers What was the significance of the D-Day invasion? a) It marked the end of World War II. b) It was the largest amphibious assault in history and opened a Western Front against the Axis powers.

c) It led to the capture of Berlin.

d) It took place in the Pacific theater of the war.

Which country was divided into East and West Germany after World War II?

a) France

b) Italy

c) Poland

d) Germany

What were the Nuremberg Trials?

a) A series of military battles

b) An international tribunal to prosecute Nazi war criminals

c) A diplomatic conference to negotiate post-war borders

d) A peace treaty signed at the end of World War II

Who were the "Rosie the Riveters"?

a) A group of women who worked in factories during the war

b) A famous jazz band during the war

c) A group of nurses who served on the front lines

d) A secret code name for Allied spies

What impact did World War II have on the world?

a) It led to the division of Germany.

b) It resulted in the formation of the United Nations.

c) It ended the Great Depression.

d) It had no long-lasting effects.

Answer Key: 1-b, 2-a, 3-a, 4-c, 5-c, 6-b, 7-d, 8-b, 9-a, 10-b

Technology-Based Active Learning Lesson Plan 10	
Name:	Conflict Resolution Workshop
Grade:	9th
Lesson:	Understanding and Applying Conflict Resolution Strategies
Interdisciplinary Connections:	This lesson plan integrates elements of social studies, technology, and communication skills.
Course Duration:	120 minutes
Objectives and learning outcomes:	By the end of this lesson, students will be able to define and explain the concept of conflict and conflict resolution. Students will understand the importance of effective conflict resolution in their personal and academic lives. Students will utilize technology to explore and practice conflict resolution strategies. Students will enhance their communication skills, including non-verbal communication, to resolve conflicts.
Relevance and Importance:	Conflict resolution is a crucial life skill that helps individuals manage conflicts in a constructive and peaceful manner. It is relevant to students' daily interactions and can improve their relationships and overall well-being.
Teaching and learning methods:	Technology-based Active Learning: Engage students in interactive digital scenarios that simulate real-life conflicts, enhancing their problem-solving and decision-making skills through technology. Blended Learning: Combine traditional classroom methods with digital multimedia content to facilitate understanding of conflict resolution strategies, ensuring a dynamic learning environment. Project-Based Learning: Allow students to apply what they have learned by developing projects or presentations that utilize ICT tools to explore and present conflict resolution strategies effectively.
Preparation and pre-requisites:	Teachers: Familiarize yourself with conflict resolution concepts and prepare the digital materials with captions for students with hearing impairments.

	Students: No pre-reading required. Ensure that hearing-impaired students have access to captioned videos and written instructions.
Course materials, e-resources and additional resources :	Laptops or tablets for scenario analysis and research. Projector for video presentation with captions. Digital discussion board for group discussions. Digital rubric for peer assessment. Recommended bibliography: The Handbook of Conflict Resolution Further reading and electronic resources: Section 6. Training for Conflict Resolution Conflict Management A hostage negotiator on how to resolve conflict | Karleen Savage | TEDxValparaisoUniversity Conflict Resolution Conflict Resolution Education Connection Teaching Tolerance - Conflict Resolution Resources References: Conflict Management Savage, K. (n.d.). *A hostage negotiator on how to resolve conflict*. TEDx Talk at Valparaiso University. Available on the TEDx platform. Conflict Resolution Conflict Resolution Education Connection. (n.d.). Comprehensive resources on conflict resolution education. Available through the Conflict Resolution Education Connection platform. Teaching Tolerance. (n.d.). *Conflict resolution resources*. Available on the Teaching Tolerance platform. The Handbook of Conflict Resolution Deutsch, M., Coleman, P. T., & Marcus, E. C. (Eds.). (2011). *The handbook of conflict resolution: Theory and practice* (3rd ed.). San Francisco, CA: Jossey-Bass.

Activities(workflow in minutes):	Interactive Lecture (15 minutes): Begin with an interactive lecture using digital slides to introduce the concept of conflict and conflict resolution. Incorporate visual elements and subtitles for students with hearing impairments. Video Presentation (20 minutes): Show a video with captions that illustrates common conflicts and the impact of different resolution strategies. Technology-Based Scenario Analysis (30 minutes): Provide tablets or laptops with interactive conflict scenarios for students to analyze and choose appropriate resolutions. Group Discussion (15 minutes): Students discuss their chosen resolutions in small groups, using a digital discussion board. Role-Play (20 minutes): Students engage in role-play exercises where they practice conflict resolution techniques. Use visuals and written instructions for students with hearing impairments. Reflection and Presentation (20 minutes): Each group creates a digital presentation summarizing their role-play experience and the strategies they applied. Peer Assessment (10 minutes): Groups assess each other's presentations using a digital rubric.
Assessment:	Formative Assessment: Use online quizzes or surveys to gather feedback on students' understanding of conflict resolution concepts. Summative Assessment: Evaluate group presentations and role-play performances based on content, clarity, and the application of conflict resolution strategies.
Adjustment and adaptation	Ensure that videos are captioned and provide written instructions for all activities. Assign roles within groups to ensure that hearing-impaired students have opportunities to participate fully. Provide additional visual aids and resources for students with hearing impairments.

Hints and Hacks:	Encourage students to actively participate in discussions and role-plays, emphasizing the importance of non-verbal communication. Use visual cues, gestures, and facial expressions to enhance communication with hearing-impaired students.
Developed by:	COFAC
Notes:	

Technology-Based Active Learning Lesson Plan 11	
Name:	Health Literacy
Grade:	10th
Lesson:	Understanding and Improving Health Literacy
Interdisciplinary Connections:	This lesson plan integrates elements of health education, technology, and language arts.
Course Duration:	90 minutes
Objectives and learning outcomes:	By the end of this lesson, students will be able to define and explain the concept of health literacy. Students will understand the importance of health literacy in making informed health decisions. Students will utilize technology to research and create a presentation on a health-related topic. Students will improve their communication skills by presenting their findings to the class.
Relevance and Importance:	Health literacy is a critical skill for making informed decisions about one's health. In today's digital age, being able to access, understand, and apply health information is essential for personal well-being.
Teaching and learning methods:	Interactive Learning: Engage students with multimedia presentations and digital tools to enhance understanding of health literacy concepts. Group Work: Students collaborate in small groups to research and present on assigned health topics, promoting teamwork and communication skills. Practical Application: Use real-world examples and case studies to illustrate the importance of health literacy in making informed health decisions. Technology Integration: Incorporate various digital resources and tools to facilitate research and presentation, enhancing digital literacy.
Preparation and pre-requisites:	Teachers: Familiarize yourself with health literacy concepts and prepare the video and digital materials. Students: No pre-reading required. Basic computer skills are needed.

Course materials, e-resources and Iditional resources :	Laptops or tablets for research and presentation. Projector for video presentation. Whiteboard or digital display for class discussion. Recommended bibliography: Health Literacy: A Prescription to End Confusion. Further Reading and Electronic Resources: CDC's Health Literacy website: https://www.cdc.gov/healthliteracy/index.html MedlinePlus Health Information: https://medlineplus.gov/ Health Literacy - What can you do? What is Health Literacy & How Is It Measured? (Health Communication) References: Health Literacy: A Prescription to End Confusion Institute of Medicine. (2004). *Health literacy: A prescription to end confusion*. Washington, DC: The National Academies Press. Further Reading and Electronic Resources: Centers for Disease Control and Prevention (CDC). (n.d.). *Health Literacy website*. Available at https://www.cdc.gov/healthliteracy/index.html MedlinePlus. (n.d.). *Health information*. Available at https://medlineplus.gov/ U.S. Department of Health and Human Services. (n.d.). *Health literacy - What can you do?* Available on the Health.gov platform. National Institutes of Health. (n.d.). *What is health literacy & how is it measured?* (Health Communication). Available on the NIH Health Communication platform.
Activities(workflow in minutes):	Class Discussion (10 minutes): Start with a class discussion on what health literacy means and why it's important. Use digital slides to facilitate the discussion.

	Video Presentation (10 minutes): Show a short video on the importance of health literacy and how it impacts everyday life. Technology-Based Research (25 minutes): Provide laptops or tablets for students to explore health-related websites and gather information on a specific health topic. Presentation Preparation (20 minutes): In pairs or small groups, students will prepare a brief presentation summarizing their findings using digital tools (e.g., PowerPoint, Google Slides). Presentation (10 minutes per group): Each group presents their findings to the class using technology. Encourage questions and discussions after each presentation.
Assessment:	Self-assessment: ask the students do reflect on their performance Formative Assessment: Use online quizzes or polls to gauge students' understanding of health literacy concepts during the class discussion. (see attached) Summative Assessment: Evaluate the group presentations based on content, clarity, and use of technology. (see attached)
Adjustment and adaptation	Provide additional support or alternative assignments for students with learning disabilities. Encourage peer collaboration to support students with different learning styles.
Hints and Hacks:	Use interactive online platforms for the class discussion to engage students actively (i.e. kahoot!, Padlet). Assign roles within groups (researcher, presenter, timekeeper) to ensure equal participation.
Developed by:	COFAC
Notes:	This lesson plan promotes active learning through technology, fostering health literacy skills and critical thinking among 10th graders. Adjust the content and activities as needed to suit your students' specific needs and the available technology resources.

Technology-Based Active Learning Lesson Plan 12	
Name:	Light and Shadow in Paintings
Grade:	10th Grade
Lesson:	Arts and Drama
Interdisciplinary Connections:	Communication, Social Sciences, History
Course Duration:	120 minutes
Objectives and learning outcomes:	By the end of this lesson, students will be able to understand the concepts of light and shadow in paintings. They will be able understand how light and shadow are used to create depth, mood, and drama in the paintings. They will identify different techniques used by some artists to render light and shadow. Students will analyse and discuss the impact of light and shadow on famous artworks. Students will utilize technology to explore virtual museums and discover renowned paintings featuring masterful use of light and shadow.
Relevance and Importance:	Understanding the use of light and shadow in art enhances the artistic skills and visual perception of students. With the integration of technology, this lesson fosters the critical thinking and problem-solving skills as well.
Teaching and learning methods:	Visual Presentation Virtual Museum Exploration Technology Based Research Group Discussion Creative Application Presentation Peer assessment
Preparation and pre-requisites:	Teacher: The presentation of artworks is prepared beforehand by the teacher and necessary preparation is completed. Students: Students make sure that they have the necessary equipment and materials with them.
Course materials, e-resources, and Additional resources:	Whiteboard or projector Markers, pens, drawing materials.

	Laptops / tablet for the access to a virtual museum (Google Arts & Culture https://artsandculture.google.com/) Additional Material: Caravaggio: Master of Light: https://youtu.be/R1lcb_7gj5k?si=8HLMywKVG9Y_Ogwq
Activities (workflow in minutes):	Introduction (20 minutes): Teacher starts by showing the slideshow of famous paintings that use light and shadow effectively (The Calling of St. Mathew from Caravaggio, The Night Watch from Rembrandt, etc.) then asks students to share their observations and discuss how light and shadow contribute to the overall effect of each artwork. Teacher introduces the main concepts and explains how artists use them to create depth and contrast. Virtual Museum (20 minutes): Teacher divides the classroom into groups and assigns them a specific artist known for the use of light and shadow (Rembrandt, Caravaggio, Vermeer, Goya, etc.). Teacher gives students some time to explore the virtual museum of Google arts and Culture (https://artsandculture.google.com/) and search for the famous paintings of the assigned artist. Teacher asks each group to select three paintings and analyse the use of light. Group Discussion (20 minutes): Teacher brings the classroom back together and asks them to present their findings from the virtual tour. Teacher facilitates the discussion with the guide questions and encourages the students to compare the use of light in different artistic styles. Creative Application (45 minutes): Teacher asks students to create their own paintings that focus on the use of light and shadow. Teacher encourages them to experiment different techniques learnt during the lesson. Conclusion (20 minutes): Teacher asks students to share their artworks with the class and discuss their creative choices regarding light and shadow. Constructive feedback

	is provided by the teacher and classmates for the improvement of each student.
Assessment:	Formative Assessment: Teacher evaluates the participation in class discussion, application of the techniques in the students' artworks. Summative Assessment: Teacher evaluates the final artwork of the students and their presentation.
Adjustment and adaptation	For students who need additional support, provide them with specific examples of techniques and guided practice. For advanced students, encourage them to analyse the use of light and shadow in more complex artworks and research the theoretical aspects of chiaroscuro and other techniques. Offer students the option to create their own artwork in a different medium, such as photography or digital art, that still focuses on the concept of light and shadow.
Hints and Hacks:	Encourage students to take part in the discussions and creative application actively. Use different artworks to explain the techniques and methods used in light and shadow. Teacher can use the additional video to extend the lesson or as an assignment for the analysis of some techniques.
Developed by:	The Governorship of Istanbul (GOI)
Notes:	

Technology-Based Active Learning Lesson Plan 13	
Name:	Shapes and Movements of the Planet Earth
Grade:	9th
Lesson:	Natural Sciences
Interdisciplinary Connections:	Science, Geography, Geometry
Course Duration:	60 minutes
Objectives and learning outcomes:	By the end of this lesson, students will understand the concept of Earth's sphericity and its evidence. Students will explore the different rotational and orbital movements of Earth. Students will learn how these movements impact our daily lives and natural phenomena.
Relevance and Importance:	This lesson provides an opportunity for students to gain fundamental scientific knowledge, and develop critical thinking skills.
Teaching and learning methods:	Visual Presentation: Interactive Demonstration Hands-on Activity: Discussion Collaborative Learning
Preparation and pre-requisites:	Teacher: Teacher prepares a slideshow presentation with relevant images illustrating Earth's shape and movements. Explores and familiarizes with virtual tools and websites like Google Earth, NASA's Eyes. Makes sure the necessary materials for the hands-on activity are ready.
Course materials, e-resources, and ditional resources:	Projector / Smartboard; Laptops / tablets with internet connection for the visualization.
Activities (workflow in minutes):	Introduction (15 minutes): Teacher begins by asking students what they already know about Earth's shape and movements then introduces the concept of Earth's sphericity and provide evidence supporting it. Teacher briefly discusses the different types of movements Earth undergoes. Visual Presentation and Exploration (15 minutes): Teacher shows a slideshow presentation illustrating Earth's shape,

	rotation, and revolution then utilizes NASA's Eye (https://eyes.nasa.gov/) to allow students to explore Earth's globe, observe its rotation and revolution in real-time, and witness natural phenomena like day and night. Hands-on Activity (15 minutes): Teacher divides students into groups and provide each group with a globe and flashlight then guides them through a hands-on activity using the globe and flashlight to demonstrate Earth's rotation and its impact on day and night. Guided Discussion (10 minutes): Teacher facilitates a class discussion to address student questions and reinforce key concepts and encourages students to share their observations and insights from the hands-on activity. Conclusion (5 minutes): Teacher summarizes the key take-aways and encourages students to continue exploring Earth's movements through further research and observation.
Assessment:	Formative Assessment: Teacher evaluates the participation in class discussion, observation, and hands-on activity. Summative Assessment: Teacher evaluates the final understanding of students through discussions.
Adjustment and adaptation	Teacher should use detailed audio descriptions for the students who have visual impairment. Teacher should use transcriptions for the hearing-impaired students. Teacher should avoid complex structures and provide clear instructions for students with learning disabilities.
Hints and Hacks:	Encourage students to take part in the discussion and express themselves. Use different virtual tools according to the level of students and their learning styles.
Developed by:	The Governorship of Istanbul (GOI)
Notes:	

Technology-Based Active Learning Lesson Plan 14	
Name:	Mental Health: Myths and Facts
Grade:	9th Grade
Lesson:	Social Sciences
Interdisciplinary Connections:	Mental Health and Psychology
Course Duration:	90 minutes
Objectives and learning outcomes:	By the end of this lesson, students will understand the concept of mental health, distinguish between the facts and myths about mental health disorders.
Relevance and Importance:	Supporting youth mental health is crucial for promoting understanding, challenging stigma, and empowering young people to take charge of their mental health and well-being.
Teaching and learning methods:	Instruction Brainstorming Group Discussion Collaborative Learning Project-based Learning
Preparation and pre-requisites:	Teacher: Teacher gets familiarized with the necessary digital tools and mental health and stigma concepts. Handouts with the mental health myths and facts are prepared beforehand.
Course materials, e-resources, and additional resources:	Projector / Smartboard Markers and pens Laptops and tablets Handouts with mental health myths and facts
Activities (workflow in minutes):	Introduction (20 minutes): Teacher begins by asking students what they know about mental health and stigma then provides a brief overview of mental health and common disorders and introduces the concept of stigma. Pair Activity (20 minutes): Teacher divides students into pairs and distributes the handout with mental health myths and facts. Teacher asks students to read the statements and categorize them as myths or facts and

	encourages them to discuss and provide evidence to support their answers. Group Discussion (20 minutes): Teacher asks students to brainstorm the negative impacts of mental health stigma on individuals and communities. Then asks them to share their responses on Padlet (https://padlet.com/) with their classmates. Teachers asks students to brainstorm again to find strategies to overcome each stigma and impact on Padlet and encourages them to consider individual and collective actions they can do. Digital Campaign for Mental Health Stigma (30 minutes): Teacher divides the classroom into small groups assign each group a strategy and challenges them to create a short digital campaign (social media post, e-newsletter, videoclip, etc.) then has each group present their campaign and explain their reasoning and target group.
Assessment:	Formative Assessment: Teacher evaluates the students by their participation to the group discussions and activities. Summative Assessment: Teacher assesses the presentations of digital campaigns.
Adjustment and adaptation	Teacher should adjust the level of instructions and explanations for the students with learning disabilities. Teacher should use visual presentations/written instructions for the visual impaired students. Teacher should use audio descriptions, explanations and instructions for the hearing impaired students.
Hints and Hacks:	Encourage students to take part in the discussion and express themselves.
Developed by:	The Governorship of Istanbul (GOI)
Notes:	

Technology-Based Active Learning Lesson Plan 15	
Name:	Exploring 'If' Clauses through Digital Storytelling
Grade:	11
Lesson:	English
Interdisciplinary Connections:	Philosophy: Exploring the concept of desires and their impact on decision making. Psychology: Understanding the psychology behind wishes and aspirations.
Course Duration:	110 Minutes
Objectives and learning outcomes:	Understand and apply different types of 'If' clauses in various contexts. Explore the concept of wishes and hypothetical scenarios. Enhance critical thinking and creative writing skills.
Relevance and Importance:	Language Skills: 'If' clauses are crucial for expressing conditions and hypothetical situations in English. Creative Expression: Encourages imaginative thinking and articulation of desires and possibilities. Decision Making: Understanding conditional statements aids in logical thinking and decision-making processes.
Teaching and learning methods:	Flipped Classroom: Utilize digital content for understanding 'If' clauses before class. Collaborative Projects: Group activities that involve creating hypothetical scenarios. Interactive Quizzes and Games: Online resources for practicing 'If' clauses.
Preparation and pre-requisites:	Students: Basic understanding of English grammar structures. Teacher: Set up digital platforms and gather multimedia resources.
Course materials, e-resources and additional resources :	Educational Websites: For grammar exercises focusing on 'If' clauses. E-books and Online Articles: Related to the theme of wishes and decision-making.

	Videos/Podcasts: Exploring the nature of wishes in different cultural contexts.
Activities(workflow in minutes):	Introduction to 'If' Clauses (10 minutes) Objective: Introduce different types of 'If' clauses and their usage in expressing wishes and hypothetical scenarios. Activity: Brief lecture or presentation on the three types of 'If' clauses (Type 0, Type 1, Type 2, and Type 3). Materials: Presentation slides, examples of sentences using 'If' clauses. Digital Storytelling (20 minutes) Objective: Create digital stories or blogs incorporating 'If' clauses to describe wishes. Activity: Students brainstorm ideas for stories or blogs. Use digital tools (e.g., blogging platforms, digital storytelling apps) to create stories. Emphasize the use of 'If' clauses to articulate wishes and hypothetical situations. Materials: Computers or tablets with internet access, digital storytelling platforms (e.g., Storybird, Blogger). Online Discussion Forums (20 minutes) Objective: Facilitate discussions on the impact of wishes on decision-making. Activity: Students join an online discussion forum (e.g., Google Classroom, Edmodo). Debate topics such as "How do wishes influence our choices?" and "Can wishes shape our reality?" Encourage the use of 'If' clauses in arguments. Materials: Access to online discussion platforms. Scenario Building (25 minutes) Objective: Use digital tools to create hypothetical scenarios using different types of 'If' clauses. Activity:

	Students work in pairs or small groups. Use digital tools (e.g., mind mapping software, interactive whiteboards) to build scenarios. Focus on crafting scenarios that use Type 0, Type 1, Type 2, and Type 3 'If' clauses. Materials: Mind mapping software (e.g., MindMeister), interactive whiteboard apps. Virtual Class Debates (20 minutes) Objective: Discuss the philosophical and psychological aspects of wishes. Activity: Organize a virtual debate session. Assign roles (e.g., proponent, opponent, moderator). Debate topics such as "Are wishes a reflection of our deepest desires?" or "Do unfulfilled wishes affect our psychological well-being?" Encourage critical thinking and the use of 'If' clauses. Materials: Video conferencing tools (e.g., Zoom, Microsoft Teams).
Assessment:	Reflection and Conclusion (15 minutes) Objective: Reflect on the use of 'If' clauses and the insights gained from the activities. Students write a short reflection or journal entry on what they learned. Share key takeaways and discuss how 'If' clauses can be used in real-life contexts. Materials: Journaling apps or notebooks, pens. Assesment Objective: Evaluate understanding and application of 'If' clauses. Methods: Review digital stories or blogs for correct use of 'If' clauses. Participation in online forums and debates. Quality of scenarios built using digital tools.

	Materials: Rubrics for storytelling, discussion participation, and scenario creation.
Adjustment and adaptation	Adaptive Learning Platforms: For students needing extra grammar support. Multimedia Options: Incorporate various media types for different learning styles. Language Tools: Online dictionaries and grammar correction tools for assistance.
Hints and Hacks:	Real-Life Application: Relate 'If' clauses to real-life decisions and events. Interactive Learning: Incorporate games that require the use of 'If' clauses. Tech Tips: Regularly share useful digital tools and resources for learning grammar. Discussion Boards: For ongoing conversations outside class hours. Tech Tips: Regularly share tips for effectively using digital tools.
Developed by:	Gülveren Anadolu Lisesi
Notes:	Adjust the duration of each activity based on class needs and engagement levels. Ensure all students have access to necessary digital tools and resources. Provide additional support or resources for students unfamiliar with digital platforms.

Technology-Based Active Learning Lesson Plan 16	
Name:	Exploring flight history of a mankind in Istanbul through interactive technology
Grade:	11. Grade
Lesson:	History
Interdisciplinary Connections:	This lesson plan integrates elements of English, Technology and History
Course Duration:	90 minutes
Objectives and learning outcomes:	Students will be able to; -explore the importance of the Galata tower on the history of flight. -search for information by using vlogs, podcasts and other applications. -improve their listening, writing and communication skills, searching skills and technology usage. -develop their creativeness of using technology as a source or tool.
Relevance and Importance:	History class is a course where abstract learning is at the forefront. It is important to use technology to better understand historical events.
Teaching and learning methods:	Technology-based active learning These activities foster active participation and understanding, and provide opportunities for students to use technology to enrich their learning experience. Blended Learning: Combination of digital content and in-class discussions. Project-Based Learning: Research and presentation projects using digital tools Peer Collaboration: Group activities facilitated through digital platforms.
Preparation and pre-requisites:	Basic knowledge of English language and grammar: Students should have a foundational understanding of English language and grammar to be able to participate in the listening, writing and discussion activities.

	Students should be familiar with the different types of information and words that can be found in a vlogs and podcasts. Familiarity with technology Students should have some prior experience using technology, such as computer, virtual learning platforms, audio recording software
Course materials, e-resources and additional resources :	Materials: Vlogs, Podcasts and interactive applications such as virtual reality tools, computers and game consoles, mobile phone for recording and note taking, presentation application, computers with internet access Resources: History Course book, Virtual tour applications and web sites Further Reading and Electronic Resources: E-books of Galata Tower Vlogs and podcasts about Galata Tower: - Galata Tower Facts by Inspirich - Galata Tower by Bery İstanbul Tips References: **Galata Tower Facts** Inspirich. (n.d.). *Galata Tower Facts* [Video]. YouTube. https://www.youtube.com/watch?v=dmKTThTLZGY **Galata Tower** Bery Istanbul Tips. (n.d.). *Galata Tower* [Video]. YouTube. https://www.youtube.com/watch?v=2xyjDWa1DkQ
Activities(workflow in minutes):	Introduction (20 minutes) Virtual tour of the Galata Tower Google Earth tool to discover The district of the Galata Tower Short video about The Galata Tower https://www.youtube.com/watch?v=mLAwnocHaL0 Searching information (20 mimutes)

	Separate students into small groups and assign each group a podcast and vlogs to listen to and watch. Instruct students to listen and watch to the podcast and vlogs carefully and take notes on the historical information presented. Let them use ChatCPT program to reach information about The Galata Tower and Flight Creating podcats and Vlogs about The Galata Tower and Flight History. (30 minutes) Each group prepare a 10 minutes podcast or Vlogs Each group present their outcomes Extension Activity (20 mimutes) Using the game consoles to experience of the first flight from The Galata Tower
Assessment:	Formative and summative assessment, allowing teachers to monitor student progress and provide timely feedback by using educational technology.
Adjustment and adaptation	Provide additional support or alternative assignments for students with learning disabilities. Encourage peer collaboration to support students with different learning styles. Provide technological tools if needed.
Hints and Hacks:	Use interactive online platforms for listening activities to engage students actively (i.e. kahoot!, Padlet). Have the students use online tools to prepare their presentations. Have the students upload their Works to the cloud or Padlet to evaluate them easier and faster.
Developed by:	Tavşanlı 15 Temmuz Şehitler Fen Lisesi
Notes:	This lesson plan promotes active learning through technology, fostering History knowledge and usage of the technology among 10th graders. Adjust the content and activities as needed to suit your students' specific needs and the available technology resources.

Technology-Based Active Learning Lesson Plan 17	
Name	Rational Numbers
Grade:	9
Lesson:	Maths
Interdisciplinary Connections:	Science: Use of rational numbers in scientific measurements and calculations. Economics: Understanding interest rates and financial calculations.
Course Duration:	40 Minutes
Objectives and learning outcomes:	Identify and understand rational numbers. Perform basic operations (addition, subtraction, multiplication, division) with rational numbers. Apply the concept of rational numbers to real-life situations.
Relevance and Importance:	Foundation for Advanced Math: Essential for understanding higher-level mathematical concepts. Practical Application: Relevant in various real-world contexts such as finance and science. Critical Thinking: Enhances problem-solving and analytical skills.
Teaching and learning methods:	Interactive Tutorials: Use digital platforms to teach concepts. Collaborative Learning: Facilitate group activities and discussions via online forums. Problem-Based Learning: Engage students with real-world problems requiring rational numbers.
Preparation and pre-requisites:	Students: Basic understanding of fractions and decimals. Teacher: Prepare digital platforms and create interactive content.
Course materials, e-resources and Iditional resources :	Educational Software: For interactive learning and practice. Digital Textbooks and Worksheets: Available online for additional practice. Videos: Explain concepts and applications of rational numbers.

Activities(workflow in minutes):	Digital Storytelling (10 minutes): Create digital stories or blogs using 'If' clauses to describe wishes. Online Quizzes (10 minutes): Provide immediate feedback on understanding of concepts. Digital Group Projects (10 minutes): Develop presentations or documents explaining the use of rational numbers in real-life scenarios. Interactive Simulations (5 minutes): Use digital tools to explore rational numbers in different contexts. Virtual Math Lab (5 minutes): An online space for experimenting with rational numbers.
Assessment:	Online Tests: Focused on operations with rational numbers and their applications. Project Evaluation: Assess group projects for accuracy, creativity, and understanding. Reflective Journaling: Students write about their learning experiences and challenges.
Adjustment and adaptation	Adaptive Learning Tools: Provide extra support for students needing additional help. Multimedia Learning Options: Cater to various learning styles (visual, auditory, kinesthetic). Regular Feedback: Use digital platforms for timely feedback and support.
Hints and Hacks:	Real-Life Examples: Connect concepts to everyday situations (e.g., cooking, shopping). Gamification: Integrate game elements into learning activities. Collaboration Tools: Use online tools for group activities and projects. Collaboration Tools: Utilize online collaborative tools for group activities.

Developed by:	Gülveren Anadolu Lisesi
Notes:	

Technology-Based Active Learning Lesson Plan 18	
Name:	Understanding Ecosystems and Biodiversity Through Virtual Exploration
Grade:	9
Lesson:	Biology
Interdisciplinary Connections:	This lesson plan integrates elements of Technology, Biology, Geography and English
Course Duration:	90 minutes
Objectives and learning outcomes:	Through interactive technology, students will be able to; -explore ecosystems and its importance. -Understand biodiversity and its effects. -Relate these concepts to human impact. -improve using technology on virtual learning.
Relevance and Importance:	-Biology class is a course where abstract learning is at the forefront. It is important to use technology to better understand biological processes.
Teaching and learning methods:	Technology-based active learning: These activities foster active participation and understanding, and provide opportunities for students to use technology to enrich their learning experience. Blended Learning: Combination of digital content and in-class discussions. Project-Based Learning: Research and presentation projects using digital tools Peer Collaboration: Group activities facilitated through digital platforms.
Preparation and pre-requisites:	Basic knowledge of English language and grammar: Students will mostly use technological tools in English. Students should be familiar with the different types of information and words that can be found in applications. Familiarity with technology Students should have some prior experience using technology, such as computer, virtual learning platforms, audio recording software
Course materials, e-resources and additional resources :	Materials: Computers/laptops/tablets with internet access Projector or interactive whiteboard

	Selected interactive biology/ecology software/apps (e.g., EcoKids, National Geographic Kids) Handouts or worksheets for note-taking and activities Access to online videos or virtual tours of ecosystems Resources: Biology Course book Virtual Reality applications and web sites Further Reading and Electronic Resources: National Geographic Kids - Ecosystems National Geographic Virtual Field Trips NOAA Fisheries Habitat Conservation Simulations
Activities(workflow in minutes):	Introduction (10 minutes) Discuss the definition of an ecosystem and its components. Introduce the concept of biodiversity and its importance. Show a short video on biodiversity. (Video). Virtual Ecosystem Exploration (25 minutes) Introduce the selected interactive biology/ecology software/application. (e.g., EcoKids) Demonstrate how to navigate the software and show features allowing exploration of different ecosystems, habitats, and species. Assign students to pairs or small groups and provide access to computers/laptops/tablets with the software/application. Instruct students to explore various ecosystems virtually, focusing on tasks such as: Identifying different biomes (e.g., forests, grasslands, aquatic ecosystems). Observing and noting specific species and their adaptations. Exploring interactions between organisms and their environments Encourage students to take notes or complete assigned worksheets while exploring the virtual ecosystems Discussion and Reflection (10 minutes)

	Bring the class together for a discussion. Ask students to share their observations, interesting discoveries, or species they encountered during the virtual exploration. Discuss the importance of biodiversity in different ecosystems and its role in maintaining ecological balance. Session 2: Human Impact and Biodiversity (45 minutes) Introduction and Video Exploration (10 minutes) Recap the previous session's discussion on biodiversity and ecosystems. Introduce the concept of human impact on ecosystems and biodiversity. Play an online video or showcase virtual tours highlighting human activities affecting ecosystems (e.g., deforestation, pollution). Interactive Activity- Understanding Human Impact (25 minutes) Utilize the interactive whiteboard or projector to guide students through an interactive activity or case studies related to human impact on ecosystems. Engage students in discussions about the consequences of human actions on biodiversity and ecosystems. Encourage critical thinking by asking students to propose solutions or actions to mitigate negative impacts on biodiversity. Conclusion and Application (10 minutes) Summarize key points learned about ecosystems, biodiversity, and human impact. Extension Activity Assign a reflective presentation or video task where students describe how they can contribute to preserving biodiversity in their local environment.
Assessment:	Formative and summative assessment, allowing teachers to monitor student progress and provide timely feedback by using educational technology.

Adjustment and adaptation	Provide additional support or alternative assignments for students with learning disabilities. Encourage peer collaboration to support students with different learning styles. Provide technological tools if needed.
Hints and Hacks:	Use interactive online platforms for activities to engage students actively (i.e. kahoot!, Padlet). Have the students use online tools to prepare their presentations. Have the students upload their Works to the cloud or Padlet to evaluate them easier and faster.
Developed by:	Tavşanlı 15 Temmuz Şehitler Fen Lisesi
Notes:	This lesson plan promotes active learning through technology, fostering Biology knowledge and usage of the technology among 9th graders. Adjust the content and activities as needed to suit your students' specific needs and the available technology resources.

Technology-Based Active Learning Lesson Plan 19	
Name:	Interesting Cultural Differences
Grade:	10
Lesson:	English
Interdisciplinary Connections:	This lesson plan integrates elements of English, Technology and Social Science
Course Duration:	90 Minutes
Objectives and learning outcomes:	Upon successful completion of this course, the student will be able to: -Learn about different cultures from different countries around the World with the help of listening activity. -identify the main points of a listening passage. -answer questions about a listening passage. -take notes while listening to a passage. -utilize technology to listen to and record listening passages.
Relevance and Importance:	Understanding cultural differences is an important topic for people. In this digital age, people can keep in touch with people around the World easily. For this reason, to prevent misunderstanding among people is is crucial for public.
Teaching and learning methods:	Technology-based active learning: These activities foster active participation and understanding, and provide opportunities for students to use technology to enrich their learning experience. Blended Learning: Combination of digital content and in-class discussions. Project-Based Learning: Research and presentation projects using digital tools Peer Collaboration: Group activities facilitated through digital platforms.
Preparation and pre-requisites:	Basic knowledge of English language and grammar: Students should have a foundational understanding of English language and grammar to be able to participate in the listening, writing and discussion activities.

	Students should be familiar with the different types of information about countries and cultures that can be found in a listening passage. Familiarity with technology: Students should have some prior experience using technology, such as computer, virtual learning platforms, audio recording software
Course materials, e-resources and additional resources :	Materials: Computers with internet access Virtual learning platform (such as Google Classroom or Canvas) Listening passages Smartphones Question sheets Note-taking templates Audio recording software Resources: Learn English Teens listening activities Course book listening activities Further Reading and Electronic Resources: https://www.thegoodtrade.com/features/podcasts-improving-cultural-awareness/ https://www.fh.org/blog/podcasts-for-learning-about-world/ https://pnesterovacom.wordpress.com/2021/02/16/english-listening-traditions/ https://www.liveworksheets.com/w/en/english-second-language-esl/1382257
Activities(workflow in minutes):	Class Discussion (10 minutes): Start with a class discussion on cultures around the world and why they are important. Use digital slides to facilitate the discussion.

	Listening Activity (25 minutes): Listen to the audio about the differences of cultures of the countries and how it impacts everyday life. https://l24.im/oiNIO4 Technology-Based Research and Recording (25 minutes): Provide laptops or tablets for students to explore the cultural differences around the World. Presentation Preparation (20 minutes): In pairs or small groups, students will prepare a brief presentation summarizing their findings using digital tools (e.g., PowerPoint, Google Slides).
Assessment:	Assessment Formative Assessment: Use online quizzes or polls to gauge students' understanding of different cultures during the listening activity. (see attached) Summative Assessment: Evaluate the group presentations based on content, clarity, and use of technology. (see attached) Extension (out-of school context): Have students listen to listening passages in different accents or dialects. Have students use podcast and VoScreen applications. Have students listen to listening passages about different cultures. Have students create their own listening passages and share them with a wider audience by using various recording tools
Adjustment and adaptation	Provide additional support or alternative assignments for students with learning disabilities. Encourage peer collaboration to support students with different learning styles. Provide technological tools if needed

Hints and Hacks:	Use interactive online platforms for listening activities to engage students actively (i.e. kahoot!, Padlet). Have the students use online tools to prepare their presentations.
Developed by:	Tavşanlı 15 Temmuz Şehitler Fen Lisesi
Notes:	This lesson plan promotes active learning through technology, fostering cultural awareness and usage of the technology among 10th graders. Adjust the content and activities as needed to suit your students' specific needs and the available technology resources.

Technology-Based Active Learning Lesson Plan 20	
Name:	Aquatic ecosystem
Grade:	10
Lesson:	Problem solving and programming
Interdisciplinary Connections:	Biology: Understanding aquatic organism's growth and nutrient requirements. Environmental Science: Sustainability and resource management in aquatic ecosystem. Technology: Use sensors and cameras
Course Duration:	45 Minutes
Objectives and learning outcomes:	Understand the basics of aquatic systems. Develop programming skills to control a system.
Relevance and Importance:	Future of Farming: Using aquatic organisms for creating sustainable food industry. Interdisciplinary Learning: Combines programming, biology, chemistry and natural science. Problem-Solving Skills: Enhances critical thinking in a real-world context.
Teaching and learning methods:	Project-Based Learning: Develop an artificial aquatic ecosystem (pool) using programming. Collaborative Learning: Team projects for designing and programming solutions. Interactive Tutorials: Online resources
Preparation and pre-requisites:	Students: Basic understanding of programming concepts. Teacher: Set up digital platforms and simulation software.
Course materials, e-resources and Iditional resources:	Programming Software: Such as Scratch or Python for creating simulations. Online Tutorials: Covering aquatic ecosystem and basic programming. Virtual Labs: For simulating aquatic environments.
Activities (workflow in minutes):	Programming an Aquatic Simulator: Create a simple program to simulate an aquatic system.

	Problem-Solving Challenges: Address common issues in aquatic systems through programming solutions. Research and Discussion: Explore the latest advancements in creating an artificial aquatic ecosystem.
Assessment:	Project Evaluation: Simulation aquatic system projects. Online Quizzes: Test knowledge on aquatic ecosystem and programming concepts.
Adjustment and adaptation	Adaptive Learning Resources: For students who need additional support in programming. Diverse Learning Methods: Incorporate videos, interactive simulations, and text resources.
Hints and Hacks:	Interactive Tools: Utilize online tools for collaborative project development.
Developed by:	SUGS '' Zef Lush Marku" – Skopje
Notes:	Promoting active learning, critical thinking, using of technology in teaching and cooperation.

Technology-Based Active Learning Lesson Plan 21	
Name:	Balkan Wars
Grade:	11th
Lesson:	History
Interdisciplinary Connections:	This lesson plan integrates elements of history, technology and language skills.
Course Duration:	45 minutes
Objectives and learning outcomes:	By the end of this lesson, students will be able to define and explain the role of Balkan Nations in the war for their independent. Students will understand the role of European nations in the War. Students will search for information by using vlogs, podcasts and other applications. Students will enhance their communication skills and creativity using technology.
Relevance and Importance:	Using technology in such an abstract course is vital tool for better learning and understanding.
Teaching and learning methods:	Technology-based active learning these activities allowed students in active participation and understanding, and provide opportunities for students to use technology to enrich their learning experience. Blended Learning: Combination of digital and theoretical teaching method give us better discussions. Project-Based Learning: Research and presentation projects using digital tools
Preparation and pre-requisites:	Teachers: Familiarize yourself with conflict resolution concepts and prepare the digital materials with captions for students Encourage students to take notes and gather multimedia content (images, videos) for their presentations
Course materials, e-resources and ditional resources :	Laptops or tablets for scenario analysis and research. Projector for video presentation with captions. Recommended bibliography Digital materials from YouTube or other Social Media

Activities(workflow in minutes):	Interactive Lecture (5 minutes): Objective: Introduce the Balkan Wars and outline the session. Activity: Briefly discuss the key events and figures of the Balkan Wars using a digital timeline. Highlight the lesson's objectives and how technology will be integrated. Video Presentation (10 minutes): Objective: Provide a visual and auditory overview of the Balkan Wars. Activity: Show a short, captioned documentary or a compilation of archival footage. Pause briefly to explain critical scenes or add context to the visuals. Group Discussion (20 minutes): Objective: Analyze the role of Balkan and European nations using guided questions. Activity: Divide students into small groups, each focusing on a different aspect such as political alliances, military strategies, or cultural impacts. Provide digital tools like Padlet or Google Docs for groups to compile their findings and prepare a short presentation. Reflection and Presentation (10 minutes): Objective: Synthesize learning and share insights. Activity: Each group presents their findings, using the projector to display their digital presentations.

	Conduct a quick round of feedback from peers and teachers, focusing on the clarity of information and creative use of technology.
Assessment:	Formative Assessment: Use online quizzes or surveys to gather feedback on students' understanding of conflict resolution concepts. Summative Assessment: Evaluate group presentations.
Adjustment and adaptation	Ensure that videos are captioned and provide written instructions for all activities. Assign roles within groups to ensure the students have opportunities to participate. Provide additional visual aids and resources for students with hearing impairments.
Hints and Hacks:	Encourage students to actively participate in discussions and role-plays, emphasizing the importance of non-verbal communication. Use visual cues, gestures, and facial expressions to enhance communication with hearing-impaired students.
Developed by:	SUGS" Zef Lush Marku" - Skopje
Notes:	Promoting active learning, critical thinking, using of technology in teaching and cooperation.

Technology-Based Active Learning Lesson Plan 22	
Name:	Let’s hunt
Grade:	9
Lesson:	Maths
Interdisciplinary Connections:	Information Technology: The lesson heavily relies on the use of various technological tools and platforms. Art and History: Ss will connect divisibility rules to identifying symmetrical elements in art and they will also explore how ancient civilizations used divisibility in construction or calendar creation.
Course Duration:	40 Minutes
Objectives and learning outcomes:	Students will be able to define divisibility rules for whole numbers Students will be able to use divisibility rules to solve everyday problems.
Relevance and Importance:	Digital Skills: Encouraging students to utilize various technological tools, developing basic IT skills and media literacy. Problem-Solving: Students can apply their learnings to efficiently determine if objects can be grouped equally, calculate quantities needed for tasks, or solve problems involving remainders. Real-World Applications: Divisibility has numerous applications in daily life. This connection to real-world scenarios makes math more relatable and engaging.
Teaching and learning methods:	Collaborative Learning: The activities encourage students to work together in pairs or small groups. Problem Solving: The lesson emphasizes problem-solving through the inclusion of "challenge" locations within the ActionBound. Students encounter word problems that require applying divisibility rules in a practical context. Active Learning: The lesson promotes active learning by encouraging students to move around the classroom. Technology Integration: Using digital tools to complete the missions in the lesson.

Preparation and pre-requisites:	Students: basic understanding of whole numbers, addition, subtraction, and multiplication. Access to tablets or smartphones with the ActionBound app installed. Teacher: Setup of digital platforms and resources
Course materials, e-resources and Iditional resources :	Projector Computer Internet access Tablets or smartphones with ActionBound app installed Markers Whiteboard
Activities(workflow in minutes):	Icebreaker Activity: Guess My Number with Mentimeter (10 minutes) This icebreaker uses Mentimeter, a free web-based tool that allows for interactive presentations and audience participation. It's a fun way for students to get to know each other and practice basic math skills related to divisibility. “Divisibility Challenge”: Students in pairs use the ActionBound app on tablets to navigate a scavenger hunt. At each location, they encounter challenges testing their understanding of divisibility rules (2, 3, 5, etc.). They might answer questions, identify divisible numbers, or use hidden clues for hints. Working together, they solidify their grasp of divisibility while moving around the classroom and having fun.
Assessment:	Class Discussion: Review key concepts and address any misconceptions. Exit Ticket: Students complete a short exit ticket with individual questions to assess understanding
Adjustment and adaptation	Time: Adjust the time allocation for each activity section (introduction, instruction, practice, assessment) based on your class size and student needs. You can shorten the

	introduction or instruction if students have some prior knowledge. Technology: If some students lack access to tablets or smartphones, consider alternative options. You can create a paper-based scavenger hunt with similar challenges or use a classroom computer for students to access the ActionBound in turns. Differentiation: Provide different difficulty levels within the ActionBound for students with varying abilities. Offer modified questions with clearer instructions for struggling students and bonus challenges for advanced students.
Hints and Hacks:	Alternative Devices: If not all students have tablets or smartphones, consider having a classroom computer available for students to access the ActionBound in turns. Tech Troubleshooting: Be prepared for minor technical glitches. Have a backup plan in mind, such as a paper-based scavenger hunt activity with similar divisibility challenges, in case of technology issues. Classroom Management: Set clear expectations for students regarding responsible use of technology during the lesson.
Developed by:	Antalya Directorate of National Education

Technology-Based Active Learning Lesson Plan 23	
Name:	Model Planes Control Systems
Grade:	10th Grades
Lesson:	Model Aircraft Lesson
Interdisciplinary Connections:	Physics: Explore electronic circuits and components used in model planes. Engineering: Apply principles of mechanical design and control systems to model aviation.
Course Duration:	120 minutes
Objectives and learning outcomes:	Objective 1: Understand the basic principles of control systems in model planes. Outcome: Students will be able to explain the role of control systems in model aviation. Objective 2: Analyze and apply knowledge to design a simple control system for a model plane. Outcome: Students will be able to create a basic control system prototype.
Relevance and Importance:	Understanding control systems is crucial for designing effective and efficient model planes. Enhances problem-solving skills and promotes a deeper understanding of physics and engineering concepts.
Teaching and learning methods:	Lecture (15 minutes): Introduce the basics of control systems in model planes. Demonstration (20 minutes): Show examples of different control systems and their components. Group Work (30 minutes): Divide students into groups to discuss and design a simple control system. Hands-on Activity (25 minutes): Build a basic prototype of the designed control system. Discussion (10 minutes): Reflect on the activity and share insights.
Preparation and pre-requisites:	Ensure a classroom or workshop space with sufficient tables and materials for hands-on activities. Pre-print materials for the hands-on activity (diagrams, instructions, etc.).

	Confirm that students have a basic understanding of physics principles.
Course materials, e-resources and additional resources :	Whiteboard and markers Presentation slides Model plane control system kits Relevant textbooks and online resources
Activities(workflow in minutes):	Introduction (15 minutes) Objective: Introduce the concept of control systems in model aviation. Activity: Start with a quick overview of what control systems are and their importance in model planes. Explain how these systems integrate with physics and engineering principles. Tools: Use a presentation slide to show visual examples of control systems in different aircraft. Demonstration (20 minutes) Objective: Illustrate different types of control systems and their components. Activity: Display various control systems through a series of videos and live models. Discuss the function of each component and how they work together to control the model plane. Tools: Videos, model plane kits, and component diagrams on a projector. Group Work (30 minutes) Objective: Encourage collaboration to design a specific type of control system. Activity: Divide students into small groups and assign each a different type of control system to design, based on the complexity and their comfort level. Provide each group with a scenario or problem that their control system must solve.

	Tools: Worksheets with design parameters, access to online resources for research. Hands-On Activity (25 minutes) Objective: Build a prototype of the designed control system. Activity: Provide physical or virtual simulation tools for students to construct their control system. Assist and guide the groups as they implement their designs, ensuring they apply the concepts discussed. Tools: Model plane control system kits, basic electronic components, simulation software. Discussion (10 minutes) Objective: Analyze and reflect on the hands-on activity and its applications. Activity: Invite each group to present their prototype and explain the rationale behind their design choices. Facilitate a class discussion on the challenges faced during the design and build process and how they overcame them. Highlight how these systems can be applied in real-world aviation. Tools: None specific; focus on open dialogue and sharing experiences. Feedback and Wrap-Up: Conclude the session by summarizing key points learned throughout the activities. Provide immediate verbal feedback and encourage students to think about further applications of control systems in technology and engineering.
Assessment:	Group Presentation (30%): Evaluate clarity, understanding, and creativity. Prototype (40%): Assess functionality and accuracy of the built control system.

	Participation (20%): Evaluate engagement and contribution to group work and discussions. Reflection (10%): Students write a reflection on their learning experiences.
Adjustment and adaptation	Provide additional support for students struggling with hands-on activities. Encourage peer collaboration to enhance learning outcomes.
Hints and Hacks:	Use real-world examples to illustrate the importance of control systems in aviation. Relate the lesson to current developments in model aviation technology.
Developed by:	Gülveren Anadolu Lisesi
Notes:	This lesson plan is flexible and can be adjusted based on the specific needs and resources available in your teaching environment.

Technology-Based Active Learning Lesson Plan 24	
Name:	Arts and Drama
Grade:	10th
Lesson:	Exploring Arts and Drama through Interactive Technology
Interdisciplinary Connections:	This lesson plan integrates elements of Arts and Drama ducation, Informatics, Technology and language.
Course Duration:	90 minutes
Objectives and learning outcomes:	Students will integrate arts and drama activities with Information and Communication Technology (ICT) tools to enhance their creativity, collaboration, and presentation skills.
Relevance and Importance:	Arts and drama play a crucial role in the overall development of students, contributing significantly to their intellectual, emotional, and social growth. Here are some reasons highlighting the relevance and importance of arts and drama Creativity and Imagination, Emotional Expression, Critical Thinking Skills,Communication Skills, Collaboration and Teamwork, Cultural Awareness, Confidence Building, Life Skills Development, Personal Growth and Well-being
Teaching and learning methods:	Blended Learning: Combines digital media with traditional arts and drama techniques to explore new creative landscapes. Project-Based Learning: Students undertake projects that require them to apply digital tools to traditional art and drama concepts.
Preparation and pre-requisites:	Teachers: Familiarize yourself with Social Science concepts and prepare the video and digital materials. Students: No pre-reading required. Basic computer skills are needed.

Course materials, e-resources and additional resources :	Computers or tablets with internet access Projector and screen Various art supplies (markers, colored pencils, paper, etc.) Props and costumes for drama activities Presentation software (e.g., PowerPoint, Google Slides) Digital drawing software or apps (e.g., Adobe Illustrator, Procreate) Video editing software or apps (e.g., iMovie, Adobe Premiere Pro) Recommended bibliography: https://dbp.theatredance.utexas.e du/bibliography Further Reading and Electronic Resources: Ways to Use Art in Content Classes https://www.edweek.org/teaching-learning/opinion-13-ways-to-use- art-in-contentasses/2021/10 Exploring the Power of Drama Education in the Classroom https://www.teacheracademy.eu/ blog/drama-education/

Activities (workflow in minutes):	1st class period: Introduction to Arts, Drama, and ICT Integration: TBAL Begin with a brief discussion about the importance of arts, drama, and technology in today's world. Show examples of how technology is used in the arts and drama, such as digital art, animation, and virtual reality experiences. Introduce the concept of ICT tools that can enhance arts and drama activities. 2nd class period: Hands-on Activities with ICT Tools: TBAL Review the assigned ICT tools and their basic functions. Provide hands-on time for students to experiment with the assigned ICT tools. Encourage them to create digital artworks, edit short videos, or design interactive presentations related to a chosen theme (e.g., a story, historical event, or scientific concept). Circulate around the classroom to assist students and answer questions. Encourage collaboration within the groups and emphasize the importance of creativity and innovation. 3rd class period: Arts and Drama Showcase with ICT Integration: TBAL Instruct each group to finalize their digital projects and prepare a short presentation. Groups present their projects to the class using the projector and screen. Encourage them to explain how they integrated arts, drama, and ICT tools in their projects. Divide students into small groups and assign each group a specific ICT tool to explore (e.g., digital drawing, video editing, interactive presentation).

	Presentation (10 minutes per group): Each group presents their findings to the class using technology. Encourage questions and discussions after each presentation. After each presentation, allow time for questions and feedback from the class. Discuss as a class the impact of ICT tools on enhancing their arts and drama projects. Ask students about the challenges they faced and how they overcame them. Conclude the lesson by emphasizing the importance of creativity, collaboration, and adaptability in the digital age.

Assessment:	Formative Assessment: Use online quizzes or polls to gauge students' understanding of arts and drama concepts during the class discussion. (see attached) Summative Assessment: Evaluate the group presentations based on content, clarity, and use of technology. (see attached)
Adjustment and adaptation	Provide additional support or alternative assignments for students with learning disabilities. Encourage peer collaboration to support students with different learning styles.
Hints and Hacks:	Use interactive online platforms for the class discussion to engage students actively (i.e. kahoot!, Padlet). Assign roles within groups (researcher, presenter, timekeeper) to ensure equal participation.
Developed by:	Directorate of Secondary Education Trikala
Notes:	This lesson plan promotes active learning through technology, fostering arts and drama skills and critical thinking among 10th graders. Adjust the content and activities as needed to suit your students' specific needs and the available technology resources.

Technology-Based Active Learning Lesson Plan 25	
Name:	Exploring Social Science through Interactive Technology TBAL
Grade:	10th
Lesson:	Social Science
Interdisciplinary Connections:	This lesson plan integrates elements of Social Science education, Informatics, Technology and language.
Course Duration:	90 minutes
Objectives and learning outcomes:	Students will use Technology TBAL tools to enhance their understanding of social science concepts, improve research skills, and present their findings effectively.By the end of this lesson, students will be able to define and explain the concept of Social Science Students will utilize technology to research and create a presentation on a social Science topic. Students will improve their communication skills by presenting their findings to the class.
Relevance and Importance:	The inclusion of social science in school curricula holds significant relevance and importance for several reasons such as: Understanding Society, Critical Thinking Skills, Civic Engagement, Cultural Awareness and Diversity, Preparation for Citizenship, Global Awareness, Interdisciplinary Learning
Teaching and learning methods:	First Class Period: Introduction to Cultural Diversity and Digital Exploration Introduction: Discuss cultural diversity's significance in social sciences. Interactive Mapping Activity: Students use interactive maps and apps to explore different countries, focusing on language, customs, and history.

	Second Class Period: Presentation and Reflection Presentation Preparation: Guide students to create engaging digital presentations on their assigned cultures. Peer Presentations: Students present their findings using digital tools, followed by a Q&A session. Reflection and Discussion: Discuss the impact of technology on understanding diverse cultures and promoting global awareness.
Activities (workflow in minutes):	Introduction to Cultural Diversity and Digital Exploration (15 minutes): Objective: Set the stage for the importance of cultural diversity within the study of Social Science. Activity: Start with a brief introduction about the relevance of cultural diversity in today's globalized society. Discuss how technology can enhance our understanding of different cultures and traditions worldwide. Tools: Use a presentation slide to highlight key points and visualize the concept of cultural diversity. Interactive Mapping Activity (25 minutes): Objective: Engage students in an interactive exploration of different cultures using digital tools. Activity: Introduce geography-related apps and interactive maps. Assign each student or group a specific country. Their task will be to research various cultural

	aspects such as language, customs, traditions, and historical background using the assigned digital tools. Guide students to create digital mind maps or concept maps to organize their findings effectively. Tools: Computers or tablets, access to interactive maps, digital mind mapping software like MindMeister or XMind. Resources: Provide a curated list of online resources, websites, and videos that offer deep dives into different cultures. Presentation Preparation (20 minutes): Objective: Prepare students to present their findings in an engaging digital format. Activity: Instruct students on how to use presentation software to compile their research into a visually appealing format. Emphasize the integration of multimedia elements such as images, videos, and interactive content to enhance their presentations. Support: Provide continuous guidance and support as students work on their digital presentations, ensuring they can troubleshoot any issues with the software or design elements. Group Presentations (30 minutes total, 10 minutes per group): Objective: Facilitate the sharing of researched cultures through student presentations. Activity:

	Have each group present their findings about the assigned culture to the class using the digital presentation software. Conduct brief Q&A sessions after each presentation to allow for peer interaction and to deepen the class's understanding of each culture. Feedback: Encourage peer feedback focusing on the content, creativity, and effectiveness of ICT integration. Use structured guidelines to help students provide constructive feedback. Reflection and Discussion (10 minutes): Objective: Reflect on the learning experience and discuss the impact of ICT tools on understanding diverse cultures. Activity: Lead a class discussion on the similarities and differences between the cultures presented. Discuss how the use of technology influenced their learning and perspectives on global awareness. Encourage students to share how this understanding might apply to their own lives and future studies. Reflection: Ask students to reflect on the importance of cultural understanding in today's interconnected world and how this lesson might influence their perspective on global issues. Closure: Summarize the day's activities and key learnings. Highlight the role of technology in bridging cultural gaps and enhancing educational experiences.

Assessment:	Formative Assessment: Use online quizzes or polls to gauge students' understanding of health literacy concepts during the class discussion. (see attached) Summative Assessment: Evaluate the group presentations based on content, clarity, and use of technology. (see Annex 2 and Annex 3)
Adjustment and adaptation	Provide additional support or alternative assignments for students with learning disabilities. Encourage peer collaboration to support students with different learning styles.
Hints and Hacks:	Use interactive online platforms for the class discussion to engage students actively (i.e. kahoot!, Padlet). Assign roles within groups (researcher, presenter, timekeeper) to ensure equal participation.
Developed by:	Directorate of Secondary Education of Trikala
Notes:	This lesson plan promotes active learning through technology, fostering social science skills and critical thinking among 10th graders. Adjust the content and activities as needed to suit your students' specific needs and the available technology resources.

Annex 2

Formative assessment:
1. Question: What is a primary goal of social science education in schools?
A) Memorization of Facts
B) Development of Critical Thinking and Analytical Skills
C) Exclusive Focus on Historical Events
D) Promotion of Artistic Expression
2. Question: How does the study of social science contribute to a student's understanding of the world?
A) By Ignoring Cultural Diversity
B) By Narrowing Worldview
C) By Fostering Cultural Awareness and Global Perspectives
D) By Limiting Focus to Local Issues
3. Question: What role does social science play in promoting civic education?
A) Isolating Students from Civic Engagement
B) Fostering Apathy towards Civic Responsibilities
C) Enhancing Civic Awareness and Participation
D) Disregarding the Importance of Government Structures
4. Question: Why is the study of history within social science considered important?
A) To Encourage Forgetfulness of the Past
B) To Develop a Sense of Historical Empathy and Context
C) To Focus Solely on Recent Events
D) To Minimize the Significance of Historical Figures
5. Question: In what way does social science contribute to the development of well- rounded individuals?
A) By Isolating Students from Society
B) By Promoting Narrow Specialization
C) By Nurturing Critical Thinking, Cultural Awareness, and Social Skills
D) By Disregarding the Importance of Human Behavior

6. True or False: Social Science is only important for adults.

7. Explain in one sentence the Importance of Social Science in School Curriculum

Indicated answer: It familiarizes students with the principles of democracy, human rights, and social justice. It teaches them about their rights and duties as citizens and encourages them to participate in community affairs and public life.

8. How technology can contribute to a better understanding and appreciation of these creative disciplines social science?

Indicated answer: Online Resources and Digital Libraries, Interactive Simulations and Virtual Reality, Data Visualization and Analysis Tools, Online Collaborative Platforms, E-learning Platforms and Educational Apps, Digital Storytelling and Multimedia Presentations, Cultural Exchange Programs and Virtual Field Trips, Digital Mapping and Geographic Information Systems

In summary, technology offers a wide range of tools and platforms that can be leveraged to enhance the study of social science, providing students with dynamic and interactive learning experiences. These technological advancements contribute to a better understanding and appreciation of the complexities within the social sciences.

Answer Key:

1.B, 2. C, 3. C, 4. B, 5. C, 6. False, 7. It familiarizes students with the principles of democracy, human rights, and social justice, teaches them about their rights and duties as citizens, and encourages them to participate in community affairs and public life., 8. Technology enhances the study of social science through tools such as online resources and digital libraries, interactive simulations, virtual reality, data visualization, and digital storytelling, which provide dynamic and interactive learning experiences.

Annex 3

Summative criteria for group presentations

Criteria	Excellent (4)	Proficient (3)	Basic (2)	Below Basic (1)
Assessment for Students by teacher				
Content Clarity and Relevance	The presentation is exceptionally clear, organized, and highly relevant to the topic of social science. Information is well-structured and effectively conveys key points.	The presentation is clear, well-organized, and relevant to the topic of social science . Information is generally well-structured and conveys key points.	The presentation lacks clarity or organization at times and may include some less relevant information. Key points are somewhat clear but may need further refinement.	The presentation lacks clarity, organization, and relevance to the topic of social science. Key points are unclear, and the presentation may contain substantial irrelevant information.
Use of Technology	The group makes excellent use of technology tools (e.g., slides, multimedia) to enhance the presentation's quality and engagement. Technology is seamlessly integrated and enhances the understanding of the content.	The group effectively uses technology tools to support the presentation, enhancing its quality and engagement. Technology is appropriately integrated into the presentation.	The group's use of technology is somewhat effective but may not consistently enhance the presentation's quality and engagement. Some improvements could be made in integrating technology.	The group's use of technology is minimal, inconsistent, or distracting, and it does not enhance the presentation's quality or engagement. Technology integration is lacking or ineffective.

Communication and Presentation Skills	All group members communicate clearly, confidently, and effectively. They maintain eye contact, engage the audience, and use appropriate gestures and tone. Transitions between speakers are smooth.	Most group members communicate clearly and confidently, but there may be occasional lapses in eye contact or engagement with the audience. Transitions between speakers are generally smooth.	Some group members may struggle with communication clarity or confidence, resulting in occasional disruptions. Transitions between speakers may be somewhat abrupt.	Communication is unc hesitant, or lacking co among several group members. Transitions between speakers are frequently disruptive.
Engagement and Interaction with the Class	The group actively engages the class through thought-provoking questions, discussion, and audience participation. They effectively respond to questions and feedback from the audience.	The group encourages class engagement through questions and discussion, and they generally respond well to audience questions and feedback.	The group attempts to engage the class but may not consistently facilitate active participation. Responses to audience questions and feedback may be limited.	The group makes minimal effort to engage the class or fails to respond effectively to audience questions and feedback.

Self Reflection (Teacher)				
Overall Impact and Contribution	The presentation has a significant impact, leaving a memorable impression on the audience. All group members contribute equally to the presentation's success.	The presentation has a positive impact and is generally memorable. Most group members contribute effectively to the presentation's success.	The presentation has some impact but may not be particularly memorable. Contributions from group members vary in effectiveness.	The presentation lacks a significant impact and may not leave a lasting impression. Contributions from group members are uneven or limited.

Total Score Range: 16- 20 (Excellent), 12- 15 (Proficient), 8- 11 (Basic), 4- 7 (Below Basic)

This rubric can be used to assess each group's presentation on social science. Assign scores for each criterion and provide constructive feedback to help students understand their strengths and areas for improvement.

Technology-Based Active Learning Lesson Plan 26	
Name:	Techno-Authors
Grade:	9
Lesson:	Turkish Language
Interdisciplinary Connections:	Information Technology: Students utilize digital tools to create and share their stories. Visual Arts: Integration of visual elements like images or animations in digital storytelling enhances the narrative.
Course Duration:	40 Minutes
Objectives and learning outcomes:	Students will define and identify auxiliary verbs in Turkish. Students will differentiate the functions of various auxiliary verbs within sentences. Students will construct digital stories using auxiliary verbs, enhancing their grammar and digital storytelling skills.
Relevance and Importance:	Digital Skills: Students develop IT skills and media literacy by using various technological tools. 21st-Century Skills: Enhances critical thinking and evaluates the credibility of digital content. Collaboration and Communication: Promotes effective communication and teamwork in a digital setting.
Teaching and learning methods:	Collaborative Learning: Students work in pairs or small groups to discuss and construct texts using auxiliary verbs. Technology Integration: Students employ digital tools to create engaging digital stories that incorporate auxiliary verbs.
Preparation and pre-requisites:	Students: Should have basic digital literacy, access to digital devices, and an understanding of Turkish grammar, including verb conjugations. Teacher: Needs to set up digital platforms and resources prior to the lesson.
Course materials, e-resources and additional resources :	-Projector and smartboard/whiteboard for displaying instructional content. -Computers, tablets, or smartphones with internet access for student use. -Access to digital storytelling tools like Adobe Spark Video or Biteable. -Online platforms for collaborative writing such as Google Docs or Padlet.

Activities(workflow in minutes):	Discussion-based activity: Teacher writes "auxiliary verb" (ek fiil) on the smartboard/board. Then use a polling application like Mentimeter or Kahoot! Briefly discuss their answers. Pair or Small Group work: Teacher divides students into small groups, assigns each group a topic (e.g., morning routine, school day, weekend activities). Students create a collaborative document using a platform like Google Docs or Padlet to write a short text using auxiliary verbs related to their assigned topic. This allows for real-time collaboration and easy editing. Groups present their collaborative texts to the class. Other students evaluate the correct use of auxiliary verbs using the document's comment feature. Hands-on Activity: Students can create a digital story using auxiliary verbs related to a topic of their choice. Storytelling apps like Spark Video or Biteable
Assessment:	Digital Quiz: Focused on auxiliary verbs. Digital Portfolio: Collection of students' Google docs, and digital stories. Peer Reviews: Using digital platforms for feedback on classmates' work. Exit Ticket (Online): As students leave the class, Teacher can provide a quick exit ticket where they answer a simple question or write a sentence using an auxiliary verb.
Adjustment and adaptation	Differentiated Instruction: Modify activities to accommodate diverse learning styles and abilities. Technology Accessibility: Ensure all students have access to necessary technological tools.
Hints and Hacks:	Chunk Information: Break down tasks to manage workload and maintain student engagement. Clear Instructions: Provide explicit, step-by-step instructions for technology use and activity expectations. Flexibility: Be prepared to adjust the pace and content based on real-time feedback and class dynamics.
Developed by:	Antalya Directorate of National Education