Syllabus on

Minecraft Education for Inclusive and Sustainable Learning

Contact us

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SDDF Minecraft Education Program – Professional Syllabus

Program Title: Minecraft Education for Inclusive and Sustainable Learning
Duration: 3 Months
Delivery Mode: Online
Target Audience: Students (8 to 18 years),
Implemented by: Sustainable Disadvantaged Development Foundation
Certification: SDDF Minecraft Education Junior Ambassador

☐Program Overview

The SDDF Minecraft Education Program is an innovative, inclusive learning initiative designed to empower students, teachers, and community leaders with digital skills, creativity, and sustainability awareness. Leveraging the globally recognized Minecraft Education Edition, this program integrates game-based learning, STEM education, and the United Nations Sustainable Development Goals (SDGs) to create a transformative educational experience.

Through hands-on projects, coding exercises, and collaborative virtual environments, participants will develop critical thinking, problem-solving, and computational skills while exploring real-world challenges in a safe and engaging digital space. The program emphasizes accessibility for disadvantaged communities, ensuring that every learner has the opportunity to thrive in the digital era.

☐ Program Objectives and Key Goals

- ☐ Empower disadvantaged learners with digital literacy and creativity skills.
- ☐ Equip teachers with game-based learning strategies.
- ☐ Promote sustainability and SDG awareness through immersive learning.
- ☐ Foster collaboration, problem-solving, and computational thinking.

☐ Expected Learning Outcomes

By the end of this program, participants will:

- ☐ Demonstrate proficiency in Minecraft Education tools and classroom integration.
- ☐ Apply STEM and sustainability concepts in virtual projects.
- ☐ Develop coding and computational thinking using Code Builder.
- ☐ Design and implement project-based learning activities.
- ☐ Exhibit leadership in digital education and inclusive learning environments.

☐ Comprehensive Module Breakdown

Module	Objectives	Content	Activities	Assessment
Module 1: Orientation & Digital Citizenship	❖ Introduce participants to the vision and mission of SDDF and the role of Minecraft Education in promoting inclusive and sustainable learning. ❖ Familiarize learners with the Minecraft Education platform, its features, and its relevance to modern education. ❖ Develop an understanding of digital citizenship, including online safety, responsible communication, and ethical use of technology. ❖ Build confidence in navigating the platform and setting up accounts for classroom use.	❖ Introduction to SDDF and Program Goals ❖ Overview of Minecraft Education Edition ❖ Minecraft Digital Citizenship and Online Safety ❖ Cybersecurity basics for students and teachers ❖ Getting Started with Minecraft Education	❖ Icebreaker Activity: Virtual introduction session where participants share their favorite game or learning tool. ❖ Platform Setup: Install Minecraft Education, create accounts, and join the SDDF learning hub. ❖ Digital Citizenship Role-Play: Simulate scenarios on online safety and responsible communication. ❖ First Build Challenge: Create a personal "Welcome Space" in Minecraft to introduce yourself.	❖ Quiz on Digital Citizenship: Multiple-choice questions on online safety, responsible communication, and ethical use. ❖ Practical Task: Successfully set up Minecraft Education account and join the SDDF learning hub. ❖ Participation Score: Engagement in role-play scenarios and icebreaker activities.
Module 2: Minecraft Fundamentals	❖ Equip participants with core navigation and building skills within Minecraft Education. ❖ Demonstrate the use	❖ Basic Navigation and Controls ❖ Movement, camera angles, and inventory management	❖ Navigation Drill: Explore a pre-built world to practice movement and camera controls.	❖ Practical Build Task: Create a functional classroom or community center using basic building

	of educational tools such as NPCs, chalkboards, and the camera portfolio for classroom engagement. ❖ Enable teachers to manage multiplayer sessions and classroom mode effectively. ❖ Lay the foundation for creative problem-solving through basic building exercises.	❖ Building Essentials ❖ Placing and breaking blocks ❖ Educational Tools in Minecraft ❖ NPCs (Non-Player Characters) for instructions ❖ Chalkboards and signs for communication ❖ Classroom Mode for Teachers ❖ Managing multiplayer sessions ❖ Permissions and world settings	❖ Building Basics: Construct a simple classroom or community center using basic blocks. ❖ Tool Exploration: Use NPCs, chalkboards, and camera portfolios to create an interactive learning space. ❖ Classroom Mode Simulation: Teachers practice managing multiplayer sessions and controlling permissions.	tools. ❖ Portfolio Submission: Upload screenshots of builds and use of NPCs, chalkboards, and camera tools. ❖ Observation Checklist: Trainer evaluates navigation skills and ability to manage classroom mode.
Module 3: Game-Based Learning & Pedagogy	❖ Explain the principles of game-based learning and its impact on student engagement and achievement. ❖ Train educators to align Minecraft activities with curriculum standards and learning objectives. ❖ Develop skills in lesson planning, classroom integration, and assessment using Minecraft Education. ❖ Encourage reflective	❖ Principles of Game-Based Learning ❖ Benefits for engagement and retention ❖ Role in developing 21st-century skills ❖ Curriculum Integration ❖ Mapping Minecraft activities to subject standards ❖ Designing cross-curricular projects ❖ Lesson Planning with Minecraft	❖ Lesson Adaptation Workshop: Convert a traditional lesson (e.g., math or history) into a Minecraft-based activity. ❖ Peer Review: Share lesson plans with peers for feedback and improvement. ❖ Scenario Simulation: Teachers role-play as students to experience game-based learning from a learner's perspective.	❖ Lesson Plan Submission: Design a Minecraft-based lesson aligned with curriculum standards. ❖ Peer Review: Provide constructive feedback on another participant's lesson plan. ❖ Reflection Journal: Write a short reflection on how game-based learning can improve engagement.

	teaching practices to maximize the benefits of immersive learning.	❖ Structuring objectives, activities, and assessments ❖ Assessment Strategies ❖ Using portfolios, screenshots, and rubrics ❖ Peer and self-assessment techniques	❖ Assessment Design: Create rubrics for evaluating Minecraft-based projects.	
Module 4: Creativity, Sustainability & SDGs	❖ Introduce participants to sustainability concepts and the UN Sustainable Development Goals (SDGs). ❖ Foster creativity by designing virtual environments that address real-world challenges such as climate change, renewable energy, and urban planning. ❖ Promote collaborative learning through group projects focused on sustainability themes. ❖ Encourage critical thinking by connecting virtual builds to real-life social and	❖ Introduction to Sustainability and SDGs ❖ Understanding the 17 Sustainable Development Goals ❖ Linking SDGs to classroom projects ❖ Building Sustainable Environments ❖ Renewable energy systems (solar, wind, hydro) ❖ Waste management and recycling concepts ❖ Cultural and Historical Builds ❖ Preserving heritage through virtual models ❖ Collaborative Project	❖ Sustainable City Build: Teams design a city that incorporates renewable energy, green spaces, and waste management. ❖ SDG Mapping: Assign each group an SDG and have them create a Minecraft build that represents its goals. ❖ Cultural Heritage Project: Recreate a historical monument or cultural site in Minecraft. ❖ Virtual Gallery Walk: Showcase builds in a shared world and conduct peer evaluations.	❖ Group Project Evaluation: Build a sustainable city or SDG-themed environment. ❖ Rubric-Based Scoring: Creativity, functionality, SDG alignment, and teamwork. ❖ Virtual Gallery Presentation: Present the project to peers and answer Q&A.

	environmental issues.	Design ❖ Team roles and responsibilities ❖ Virtual gallery presentations		
Module 5: Coding & Computational Thinking	❖ Introduce computational thinking concepts and their application in Minecraft Education. ❖ Teach participants to use Code Builder for block-based coding and transition to Python and JavaScript for advanced tasks. ❖ Enable learners to automate processes, create interactive experiences, and develop mini-games within Minecraft. ❖ Build problem-solving and logical reasoning skills through coding challenges and projects.	❖ Introduction to Computational Thinking ❖ Decomposition, pattern recognition, abstraction, algorithms ❖ Code Builder Basics ❖ Block-based coding fundamentals ❖ Transition to Text-Based Coding ❖ Python and JavaScript basics in Minecraft ❖ Automation and Game Design ❖ Automating farming and building tasks ❖ Creating interactive mini-games ❖ Debugging and Problem-Solving ❖ Identifying and fixing coding errors	❖ Code Builder Basics: Write your first block-based code to automate simple tasks like planting crops. ❖ Mini-Game Development: Create a simple game (e.g., treasure hunt) using coding commands. ❖ Python Challenge: Automate building a structure using Python scripts. ❖ Debugging Workshop: Identify and fix errors in pre-written Minecraft code snippets.	❖ Coding Challenge: Automate a farming or building task using block-based coding. ❖ Mini-Game Development: Create a simple interactive game using Python or JavaScript. ❖ Debugging Exercise: Identify and fix errors in a given code snippet.
Module 6: Capstone Project & Leadership	❖ Guide participants in applying all acquired	❖ Capstone Project Guidelines	❖ Capstone Planning Session: Brainstorm	❖ Capstone Project: Build a Sustainable Smart

	skills to a comprehensive capstone project that integrates sustainability, creativity, and coding. ❖ Develop presentation and communication skills through project demonstrations. ❖ Prepare students and teachers for leadership roles as Minecraft Education ambassadors in their communities. ❖ Explore future trends in education technology, including AI, AR/VR, and gamification.	❖ Project planning and execution steps ❖ Integrating sustainability, creativity, and coding ❖ Presentation and Communication Skills ❖ Preparing for virtual or in-person showcases ❖ Minecraft Student Ambassador Program ❖ Roles and responsibilities of ambassadors ❖ Future Trends in Education Technology ❖ AI, AR/VR, and gamification in learning	and outline a project that integrates sustainability, creativity, and coding. ❖ Project Development: Build a Sustainable Smart City with transportation, energy, and housing systems. ❖ Presentation Day: Teams present their projects to peers, teachers, and community leaders. ❖ Leadership Workshop: Train participants to become Minecraft Education Ambassadors in their schools or communities.	City integrating sustainability, creativity, and coding. ❖ Presentation & Defense: Present the project to a panel and explain design choices. ❖ Leadership Activity: Submit a plan for implementing Minecraft Education in your school or community.

☐Assessment & Certification

- ☐ **Formative Assessments:** Quizzes, practical tasks, lesson plans.
- ☐ **Summative Assessment:** Capstone project and presentation.
- ☐ **Certification:** Awarded upon successful completion of all modules.

☐Program Timeline and Delivery Format

Week	Lecture	Practical	Examination
Week 1	❑ Program Orientation and Responsible Digital Citizenship ❑ Introduction to Minecraft Education Tools and Navigation ❑ Game-Based Learning and Classroom Integration Strategies	Introductory quiz on digital safety and Minecraft basics	None
Week 2	❑ Exploring SDGs through Minecraft Projects ❑ Creative Design and Sustainable World Building ❑ Exploring SDGs through Minecraft Projects	Build a simple structure using basic tools	Short quiz on Minecraft interface
Week 3		Design a lesson plan using Minecraft	Lesson plan submission
Week 4	❑ Introduction to Coding with Code Builder ❑ Intermediate Coding and Redstone Mechanics	Create a Minecraft world representing one SDG	Project evaluation
Week 5		Build a sustainable village with renewable energy sources	Design review
Week 6		Write basic code to automate a Minecraft task	Code functionality test
Week 7	❑ Collaborative Challenges and Peer Review ❑ Capstone Project Planning and Development	Build a working Redstone circuit with switches	Redstone circuit demonstration
Week 8		Collaborate on a community build and peer review	Peer feedback report
Week 9		Submit a plan for the final capstone project	Project proposal review
Week 10		Complete and present the capstone project	Project presentation
Week 11		Compile a digital portfolio and write a reflection	Portfolio assessment

Week 12	❑ Capstone Project Completion and Presentation ❑ Reflection, Feedback, and Portfolio Compilation ❑ Final Assessment and Certification Review	Final review and feedback session	Final evaluation and certification

Note: The schedule outlined in this document is subject to change based on unforeseen circumstances or operational requirements. Any adjustments will be communicated promptly to ensure minimal disruption to the learning experience.

Contact Information

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