Unity® EdLab

PROGRAM GUIDE

GRADES 8–12

Immerse your students in real-time 3D development through project-based STEAM learning experiences
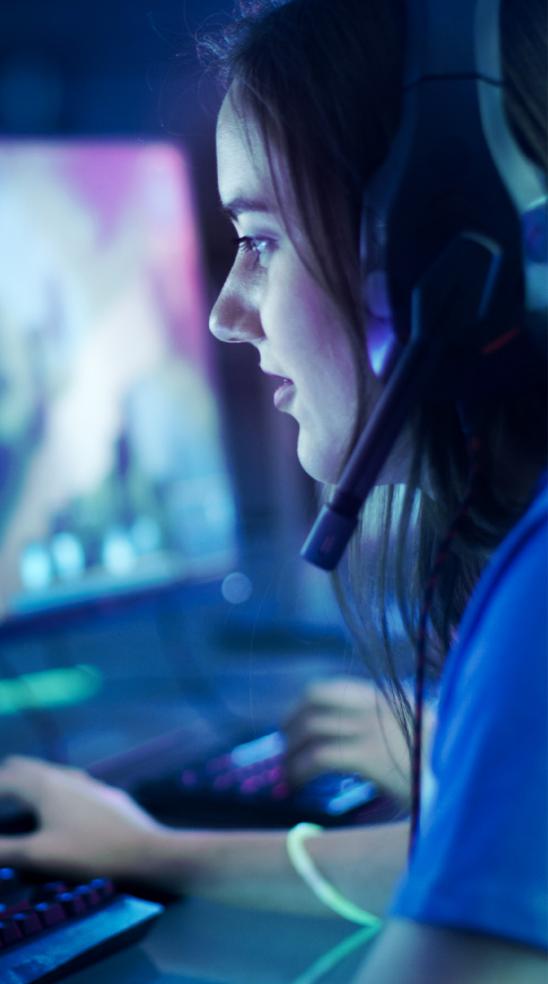
BUILDING THE NEXT GENERATION OF CREATORS AND CHANGEMAKERS

Unity is the world's leading platform for creating and operating real-time 3D (RT3D) content. Creators, ranging from game developers to artists, architects, automotive designers, filmmakers, and others, use Unity to bring their imaginations to life. We are committed to inspiring and equipping students of all backgrounds to create the future with the power of real-time 3D technology.

Unity EdLab is a classroom solution that empowers educators to create enriching learning experiences for RT3D development across STEAM subjects (Science, Tech, Engineering, Art, Math). Schools can partner with Unity to create opportunities for youth to unleash their creativity and learn the skills needed to thrive in high-demand tech careers.

FOR STUDENTS

Students are engaged in fun and interactive project-based learning of computer science principles and practices. From consumers to creators, students are immersed in game development projects, building skills in problem solving, creativity, metacognition, reasoning, mathematics, and more.

FOR EDUCATORS

No matter their technical skill set, educators can easily implement Unity EdLab in their classrooms to prepare digital-first students for emerging careers. Robust lesson plans, tutorials, and professional development resources equip educators with best practices and industry-leading knowledge to develop or enhance STEAM programs.
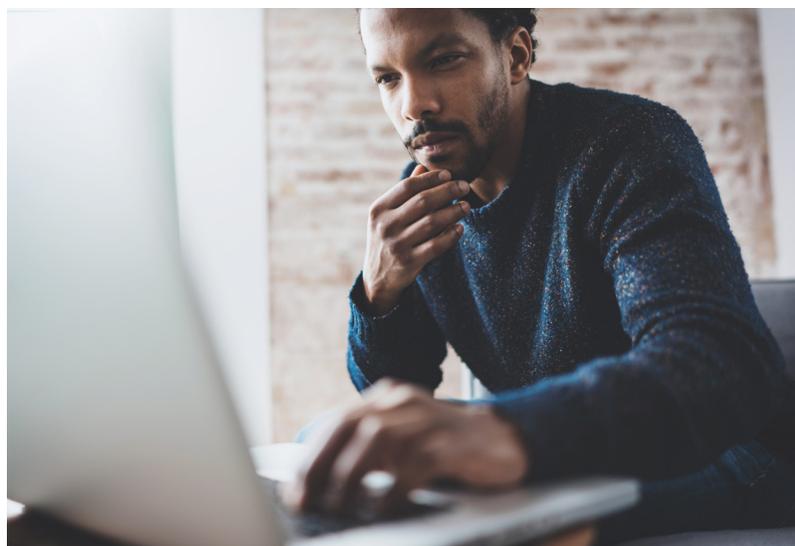
CHECK OUT THE POWER OF REAL-TIME 3D

Creators are building anything they can imagine in RT3D – from the next generation of office buildings to self-driving cars to the video games enjoyed by millions of people around the world.

→ **WATCH VIDEO**

CLOSING THE TECHNOLOGY EDUCATION EQUITY GAP

The convergence of immersive technologies has disrupted industries including film, architecture, engineering, construction, entertainment, commerce, arts, and design. Roles that utilize real-time technology such as mixed reality, augmented reality, and virtual reality are growing exponentially. It's essential to ensure that the students of today become the creators – not just the consumers – of tomorrow.

However, data shows that English language learners, students with disabilities, and economically disadvantaged students are underrepresented in high school computer science relative to their state populations (Computer Science Teacher Association 2021).

Unity EdLab provides:

- **Equitable high-quality education for all types of learners.** Regardless of technical ability, Unity EdLab equips students with engaging, highly scaffolded learning experiences that work in school or remote learning environments.

- **Affordable and accessible technology.** Unity EdLab includes a cloud-based 3D development platform built to work on low-performance computers without the need for installation. So whatever your hardware budget, you can accelerate your STEAM programs with Unity.

- **A path to a wealth of technical and creative careers.** "Unity is one of the most in-demand tech skills and has one of the highest forecasted growth rates, at over 39% over the next two years" (Burning Glass Technologies). Unity EdLab prepares students for entry-level Unity certifications and countless career opportunities.

HOW IT WORKS

Regardless of prior experience, educators can easily implement Unity EdLab in the classroom to prepare digital-first youth for emerging careers.

Access the Unity EdLab Educator Portal to view lesson plans, tutorials, scope and sequences, and more.

1

Use the Unity EdLab Roster classroom management tool to assign student access to the Unity EdLab Editor.

2

Engage students in the cloud-based Unity EdLab Editor through exciting projects and assignments.

3
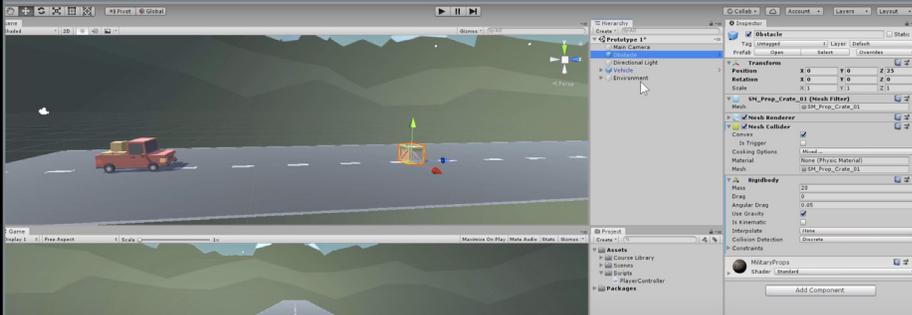
EDUCATOR RESOURCES FOR CLASSROOM SUCCESS

The Unity EdLab Educator Portal is a centralized location that provides high-quality instructional resources, offering an out-of-the-box classroom solution for game design and development curricula.

Getting started with EdLab

Before launching your Unity learning program, get familiar with EdLab by following these easy step-by-step guides and exploring the EdLab Editor.

Open Unity EdLab Editor

EDUCATOR RESOURCES

Assigning Unity EdLab Editor seats

Learn how to assign seats to students and staff so they can start learning and creating.

Getting started with the EdLab Editor

Learn your way around the Editor and support your students with onboarding.

→ **Computer Science Principles and Game Design Development lesson plans** highlight the fundamentals of programming in the context of creating game projects.

→ **Concept primer tutorials** provide an overview of core programming concepts related to using the Unity platform and creating with code.

→ **Direct access to the Unity EdLab Editor** lets students and educators start building game development projects and experiences.

→ **Student engagement resources** including graphic organizers and project prompts encourage independent learning and confidence-building.

→ **Access to real-time asset collections** enhance students' immersive projects with visual effects, audio, animation, and more.

PREVIEW PROGRAM DEMO

→ **WATCH VIDEO**

Unity·

Unity EdLab

Introduction

UNITY.COM/PRODUCTS/UNITY-EDLAB

THE LEADING PLATFORM FOR CREATING REAL-TIME 3D EXPERIENCES

Unity EdLab prepares students to revolutionize the 21st century workforce through training on the cloud-based Unity EdLab Editor. Through their learning, students will develop the foundational skills needed to program an array of interactive projects and applications for:

Mobile operating systems like iOS and Android

Platforms like Windows and Mac

Consoles like PlayStation and Xbox

VR/AR devices like Oculus and Google Cardboard

Multiple industries are moving towards RT3D as their delivery method of choice for production, prototyping, and delivery. Whether in architecture, automotive, manufacturing, film, or gaming, RT3D is making massive impacts on these workflows. The skills needed to enter the world of RT3D include but are not limited to:

→   Creating 3D worlds

→   Lighting objects and environments to simulate real-world experiences

→   Creating virtual workspaces and collaborative environments

→   Software development and coding skills

→   Project management and tracking
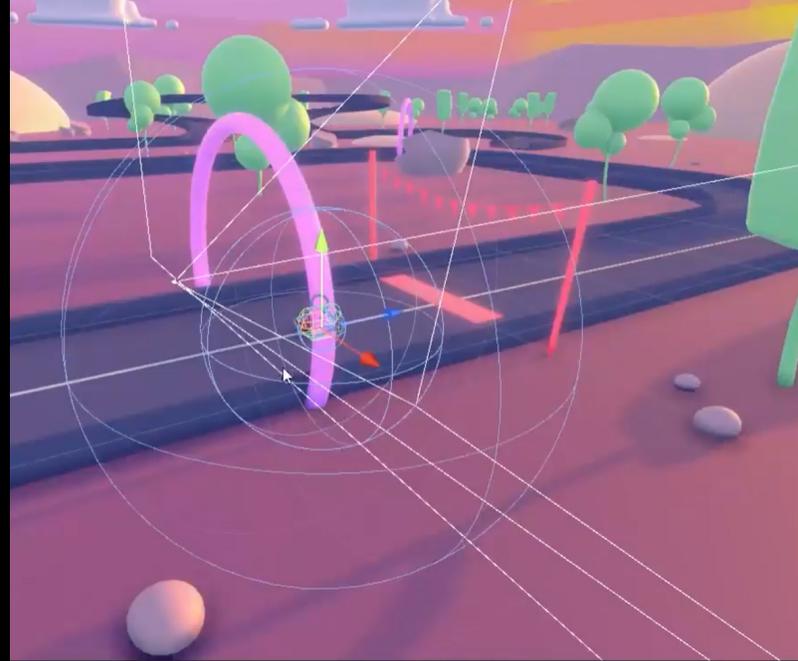
LEARNING TO CODE IS INTEGRAL FOR STUDENTS WHO WANT TO MOVE FORWARD AND BEGIN CREATING THE WORLD OF THE FUTURE.

Coding in Unity is the same as writing C# for other engines, and the principles remain the same.

What's special about working in Unity is that output is immediate and applied in exciting contexts that students can easily relate to. While they're learning important skills to prepare them for careers down the road, they'll have fun making games and interactive experiences that they can share right away.
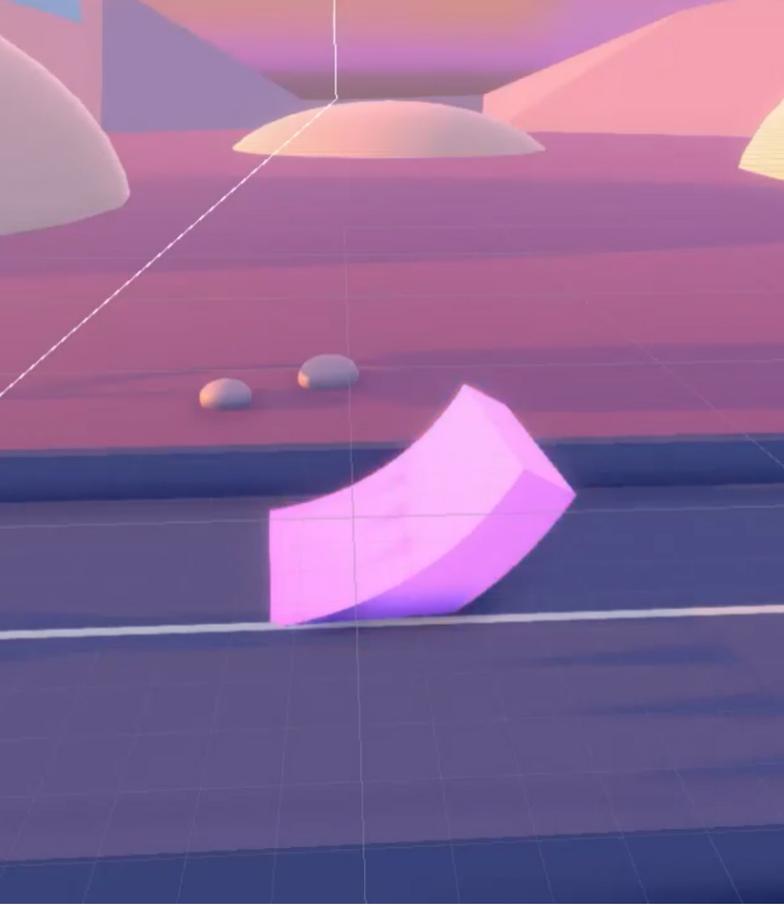
A FLEXIBLE INSTRUCTIONAL APPROACH

Unity EdLab includes flexible instruction for **Computer Science Principles and Game Design Development** that can be implemented for in-school, virtual, or after-school programs. Students will learn the fundamentals of programming in the context of creating their own immersive projects.

Lessons can be tailored to meet your students' needs with recommended scope and sequence guides for year-long, semester-long, quarter-long, or bootcamp-style implementation models.

COMPUTER SCIENCE PRINCIPLES CURRICULUM

Introduce computer science principles to your students and help them design and develop programs in Unity and C# that address real-world problems. They'll build skills in computational solution design, algorithms, abstraction, code analysis, and more.

	Computer Science Principles lessons overview
Unit 1	Computers and Innovation
Unit 2	Programming
Unit 3	Modeling Algorithms
Unit 4	Data and Media
Unit 5	Internet and Security
Unit 6	Impacts of Computing

GAME DESIGN DEVELOPMENT CURRICULUM

Teach game development as a stand-alone program for students who have a computer science foundation. This curriculum focuses on building proficiency in preplanning, design, development, and optimization of interactive applications and video games. By the end of the course, students will have a robust game design portfolio and be prepared for entry-level game programming positions.

	Game Design Development lessons overview
Unit 1	Player Movement (Driving Simulator Prototype)
Unit 2	Basic Gameplay (Feed the Animals Prototype)
Unit 3	Animation, Sound, and Effects (Run and Jump Prototype)
Unit 4	Gameplay Mechanics (Sumo Battle Prototype)
Unit 5	User Interface (Quick Click Prototype)

Each Unit includes interactive lessons, hands-on computer lab time, assessments, and support to tailor and scaffold instruction to meet the needs of various learners.

PREVIEW A SAMPLE LESSON

→ DOWNLOAD

YOUR PARTNER IN PROFESSIONAL LEARNING

Unity EdLab includes embedded and ongoing professional development support to empower educators to continuously improve their teaching of real-time 3D development in the classroom.

→ **Training checklists and worksheets** for educators and students including goal setting sheets, project planning templates, portfolio preparation for students, and more.

→ **Unity customer service representatives** available to help troubleshoot technical issues at any stage of project development.

→ **Professional development sessions and videos** facilitated by Unity educators and industry-leading experts.

→ **Unity Teach online community** where Unity educators can share best practices and resources.

HEAR FROM ESTABLISHED CREATORS

Through Unity EdLab, educators can spark student curiosity in real-time 3D careers and share valuable insights from established Unity creators.

→ **WATCH VIDEO**

BUILT TO ADDRESS KEY LEARNING STANDARDS AND FRAMEWORKS

Unity EdLab targets key learning objectives and outcomes highlighted in STEAM, college, and career standards including:

→ **International Society for Technology in Education (ISTE)** – Educators and administrators are prepared to create high-impact, equitable learning experiences for all learners and use Unity technology to learn, teach, lead, and coach.

→ **AP Computer Science Principle**s – Students learn computational thinking skills to tackle real-world problems and use computers as tools to create change. Unity EdLab focuses on the framework of creative development, data, algorithms and programming, computer systems, and impacts of computing.

Unity EdLab

To learn more about Unity EdLab, contact your local Unity Education representative.