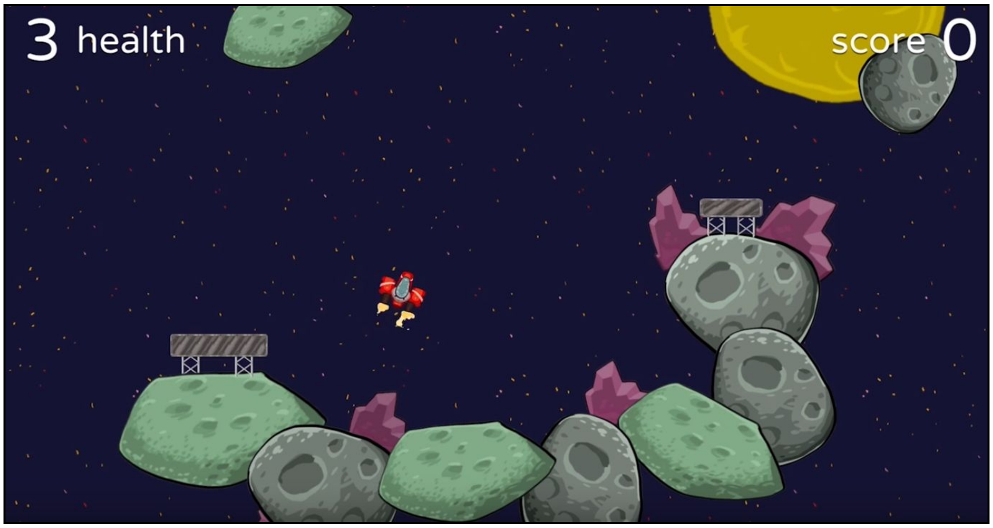
Curriculum Guide:

Getting Started with Unity Playground

Playground's visual scripts and simplification of the Unity interface make it a perfect way for beginners to get started with Unity development. No computer programming required!

Unity Playground Project



30+ visual scripts related to movement, attributes, gameplay, conditions, and actions that can be combined to create games

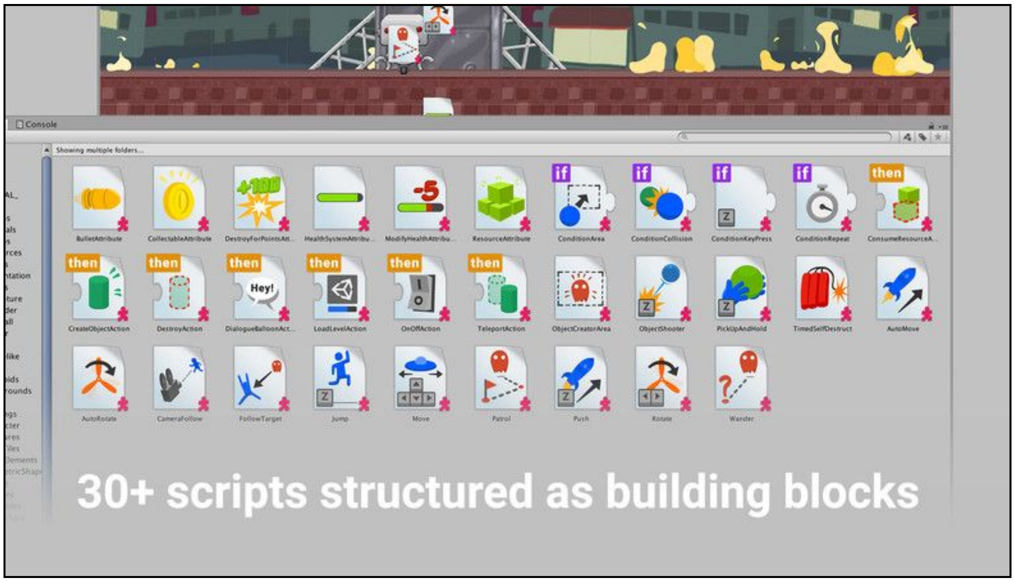


Table of Contents:

Overview

Difficulty Rating

★☆☆☆☆ (Beginner. No/limited familiarity with Unity)

Overview

Getting Started with Unity Playground is a perfect project for students who have no/limited familiarity with Unity. This curriculum guide consists of eight lesson plans that correspond to 45-60 minute class periods. The first seven lessons correspond directly to the seven tutorials on Unity Learn.

Throughout the course of the project, students create a spaceship game using directions and assets provided. The last tutorial closes with an open-ended assignment: students have to complete their first Unity game by adding original ideas and Playground visual scripts to the Unity project.

Why Playground?

Playground is a great way to start learning Unity because students don't need to know how to code (Playground comes with pre-coded visual scripts) and it simplifies the Unity interface. Of course, later on, when students are ready for C# coding and more complex programming, they can easily switch over to the full Unity interface.

Objectives

By the end of the project students will be able to:

- Navigate the Unity interface
- Use Playground scripts to make games and experiences
- Understand key concepts related to Unity development such as Hierarchy, Project, Rigidbody 2D, Trigger, and Physics

Need Help?

Ask questions on Unity Forum

Curriculum Standards

Common Core Alignment

Science & Technical
CCSS.ELA-LITERACY.RST.9-10.4
Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to *grades 9-10 texts and topics*.

CCSS.ELA-LITERACY.RST.11-12.4
Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to *grades 11-12 texts and topics*.

ELA-Literacy
CCSS.ELA-LITERACY.SL.9-10.5
Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.

CCSS.ELA-LITERACY.SL.11-12.1.B
Work with peers to promote civil, democratic discussions and decision-making, set clear goals and deadlines, and establish individual roles as needed.

Next Generation Science Standards (NGSS)

HS.Energy

3-PS2-1 Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.

PS2.A: Forces and Motion Each force acts on one particular object and has both strength and a direction. An object at rest typically has multiple forces acting on it, but they add to give zero net force on the object. Forces that do not sum to zero can cause changes in the object’s speed or direction of motion. (Boundary: Qualitative and conceptual, but not quantitative addition of forces are used at this level.)

PS2.B: Types of Interactions Objects in contact exert forces on each other.

International Society for Technology in Education (ISTE)

1. Empowered Learner

1.a. Articulate and set personal learning goals, develop strategies for leveraging technology to achieve them and reflect on the learning process itself to improve learning outcomes.

1.c. Use technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways.

1.d. Understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging technologies.

3. Knowledge Constructor

3.c. Curate information from digital resources using a variety of tools and methods to create collections of artifacts that demonstrate meaningful connections or conclusions.

3.d. Build knowledge by actively exploring real-world issues and problems, developing ideas and theories and pursuing answers and solutions.

4. Innovative Designer

4.a. Know and use a deliberate design process for generating ideas, testing theories, creating innovative artifacts or solving authentic problems.

4.c. Develop, test and refine prototypes as part of a cyclical design process.

4.d. Exhibit a tolerance for ambiguity, perseverance and the capacity to work with open-ended problems.

5. Computational Thinker

5.c. Break problems into component parts, extract key information, and develop descriptive models to understand complex systems or facilitate problem-solving.

5.d. Understand how automation works and use algorithmic thinking to develop a sequence of steps to create and test automated solutions.

6. Creative Communicator

6.b. Create original works or responsibly repurpose or remix digital resources into new creations.

Lesson Plan Overview

We have created an eight-part lesson plan based on the Getting Started with Unity Playground project. The first seven lessons correspond to the seven tutorials on Unity Learn. We created each lesson plan for a 45-60 minute class period. Feel free to use our lesson plan as a reference and modify it to your classroom needs.

Resource Bank

- Getting Started with **Unity Playground Curriculum Guide**
- Unity Playground_ Script Cheatsheet.pdf
- Step-by-Step Guide + Videos on Unity Learn
- Unity Playground_Script Reference Guide.pdf

Teaching Tips

This is a beginner-level project for students who have no/limited experience with Unity. Students will not be programming with C#. Instead, they will be using the Unity Playground scripts, which is a free Unity visual script and asset package. If you have not used Unity before, consider doing the Playground tutorials yourself before teaching it, or consider team teaching it with a colleague who can help students when they run into technical difficulties. If this is not possible, you can always contact support

Facilitation Ideas

- **Standard lesson:** Follow the lesson plans provided here; you as the facilitator prepare ahead by going through the tutorial yourself and then facilitate the lesson by guiding students on the step-by-step process. Follow the agenda suggested in this curriculum guide.
- **Flipped classroom:** Ask students to watch and go through the tutorials themselves or in small groups before coming to class. . Use class time to try the tutorial together as a class or get students to take turns facilitating!
- **Learn together:** If you are unfamiliar with Playground, let students know that you will be learning all together. Use the video and text tutorials from Unity Learn to guide you. Let students who take to the project more quickly help others.

Lessons at a Glance

	Lesson 1	Lesson 2	Lesson 3	Lesson 4
Title	Unity Core Concepts	Getting Familiar with Playground Scripts	▶ Setting Up the Project	▶ Adjusting the Camera and Adding Obstacles
Key Learning Outcome	Navigate the Unity Interface	Understand the mechanics of Playground scripts	Create a new Unity project with the Playground add-on	Make the camera follow the player and add scripts to make the game more challenging

	Lesson 5	Lesson 6	Lesson 7	Lesson 8
Title	▶ Introducing Health	▶ Creating Objects	▶ Finishing the Game and Next Steps	Project Presentations *(not connected to a tutorial on Unity Learn)*
Key Learning Outcome	Introduce health and winning conditions to the game	Create lasers and enable the player to destroy asteroids	Turn the game into a rescue mission	Take what you've learned about Playground to make your own unique game

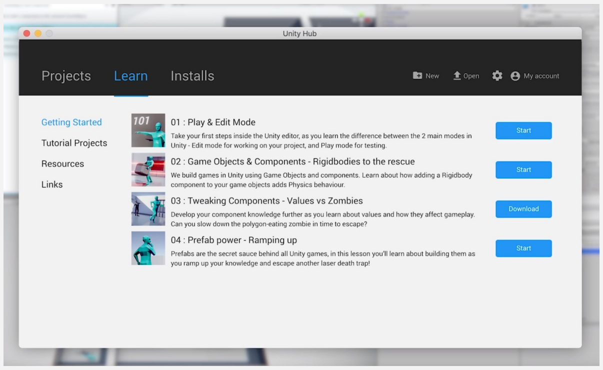
Lesson 1: Learn the Unity Core Concepts

Lesson 1 at a Glance

Overview:

Students learn about the Unity core concepts and get comfortable using the basic features of the Unity interface. Students also learn about the different components of creating a project in Unity, including game objects, components, and prefabs.

View the *Learn the Unity Core Concepts tutorial* on Unity Learn.



01 : Play & Edit Mode

Take your first steps inside the Unity editor, as you learn the difference between the 2 main modes in Unity - Edit mode for working on your project, and Play mode for testing.

02 : Game Objects & Components - Rigidbodies to the rescue

We build games in Unity using Game Objects and components. Learn about how adding a Rigidbody component to your game objects adds Physics behaviour.

03 : Tweaking Components - Values vs Zombies

Develop your component knowledge further as you learn about values and how they affect gameplay. Can you slow down the polygon-eating zombie in time to escape?

04 : Prefab power - Ramping up

Prefabs are the secret sauce behind all Unity games, in this lesson you'll learn about building them as you ramp up your knowledge and escape another laser death trap!

The four Unity Interactive Tutorials that appear in the Unity launch window

Lesson Outcome

By the end of this lesson, students will be able to

- Navigate the play and edit modes
- Understand game objects and components
- Modify components
- Make prefabs

Key concepts

Unity core concepts such as: game objects, prefabs, hierarchy, parenting, and inspector window

Before Class

Teachers

- Download Unity Hub on your computer and go through the *Unity Core Concepts* tutorial on the Learn Platform

Students

- If students bringing their own devices, ask them to download Unity on their computers before coming to class

Lesson 1 Class Schedule

	Agenda	Duration	Description
1	Introduction	5 min	Introduce students to the *Getting Started with Unity Playground* project. Give them an overview of what to expect in the eight lessons (class periods) and talk about what will be covered today. Use this curriculum guide and other connected resources to prep for the introduction.
2	Unity Hub Download Check	2 min	Make sure students are seated in front of a computer that has Unity Hub installed on it.
3	Go through the tutorial on the Learn Platform	40 min	Go to the *Unity Core Concepts* tutorial and go through the steps. Make sure to pause in between the steps and go over the content together a class. There are four steps in the *Unity Core Concepts* tutorial 1. Learn the Play and Edit Modes 2. Game Objects & Components 3. Tweaking Components 4. Prefab Power - Ramping up
4	Wrap-Up	5 min	Review what was covered in class. If there wasn't enough time to get through all the steps, assign the rest for homework.

Extension Ideas

- If some students seem to need extra practice, ask them to refer to the Unity Interactive Tutorials.

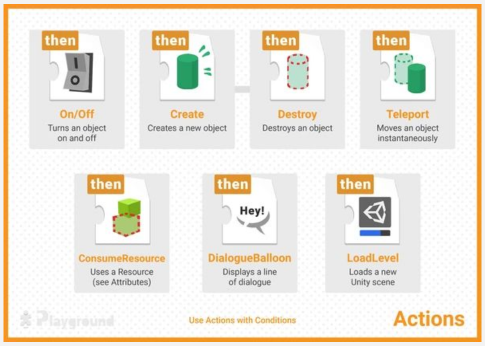
Lesson 2: Getting Familiar with the Playground Scripts

Lesson 2 at a Glance

Overview:

Students will review and think about what kind of Playground scripts that students they can use to develop their first game in Unity!

View the Getting Familiar with the Playground Scripts tutorial on the Unity Learn website.



The Unity Playground Reference Guide and Script Cheatsheet provide details on the visual scripts available.

Lesson Outcome

By the end of this lesson, students will be able to

- Understand the different Unity Playground scripts such as Movement Scripts, Attributes Scripts, Gameplay Scripts, Conditions Scripts, and Actions Scripts

Key concepts

Playground Script types: Movement Scripts, Attributes Scripts, Gameplay Scripts, Conditions Scripts, and Actions Scripts

Before Class

Teachers

- Download Unity Playground_ Script Cheatsheet.pdf and Unity Playground_Script Reference Guide.pdf

Students

- Send students a reminder to finish homework from Lesson 1

Lesson 2 Class Schedule

	Agenda	Duration	Description
1	Review	15 min	Take some time to review concepts from Lesson 1. Quiz students on key concepts such as: game objects, prefabs, hierarchy, parenting, and inspector window
2	Go through the tutorial on the Learn Platform	20 min	Go to the *Getting Familiar with Unity Playground Script tutorial* and go through the steps there. Make sure to pause in between the steps and go over the content together as a class. Encourage students to start thinking creatively about how these scripts could be used to create a game. There are four steps in the *Getting Familiar with Unity Playground Script tutorial*: 1. Get to know the Movement Scripts 2. Get to know the Attributes Scripts 3. Get to know the Gameplay Scripts 4. Get to know the Conditions Scripts
3	Interactive Activity	20 min	Use an interactive activity to get students to think more deeply about the Playground scripts. Use the idea below or come up with your own.

Interactive Activity Ideas

- Unplugged visual scripting: print out the Unity Playground_ Script Cheatsheet.pdf .Challenge students to choose 4-5 Playground scripts that they will use to create the preliminary ideas for their own game. Encourage them to explore the diverse options by requiring them to use scripts from at least two different categories.

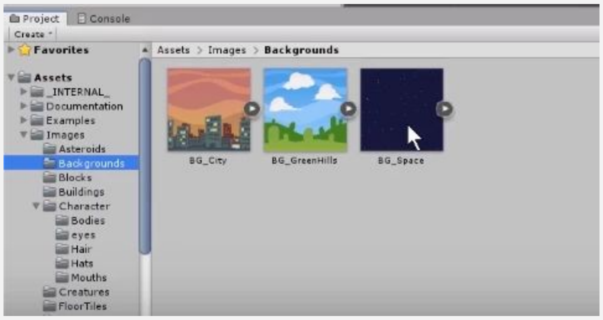
Lesson 3: Setting Up the Project

Lesson 3 at a Glance

Overview:

Students learn about Unity core concepts and become comfortable using basic features of the Unity interface. Students also learn about the different components of creating a project in Unity, including game objects, components, and prefabs.

View the *Setting Up the Project* tutorial on the Unity Learn website.



In this tutorial, we're going to make a spaceship move in space!

Lesson Outcome

By the end of this lesson, students will be able to

- Add GameObjects to the Hierarchy
- Add Components to the Inspector
- Transform GameObjects
- Make changes to GameObjects

Key concepts

Rigidbody 2D, Play mode, Push script, Rotate script, Particles, Parenting GameObjects

Before the Lesson

Teachers

- Go through the *Setting Up the Project* tutorial on the Learn website ahead of class

Students

- Encourage students to review the Playground scripts as they will start developing with the scripts in Lesson 3

Lesson 3 Class Schedule

	Agenda	Duration	Description
1	Review	10 min	Take some time to review concepts from Lesson 2. Quiz students on key concepts such as: Movement scripts, Attributes Scripts, Gameplay Scripts, Conditions Scripts, and Actions Scripts
2	Playground Package Download Check	5 min	Make sure that the Unity Playground package has been downloaded from the Unity Asset Store.
3	Go through the tutorial on the Learn Platform ▶	40 min	Go to *Setting Up the Project* tutorial and complete the steps. Make sure to pause between the steps and go over the content together a class. There are four steps in the *Setting Up the Project* tutorial: 1. Create a Background 2. Create and Add Interactivity to the Player 3. Add the Rotate script to the Player 4. Add a Flame to the Spaceship
4	Wrap-Up	5 min	Review the main steps and concepts covered in class. If there wasn't enough time to get through all the steps, assign the rest for homework or extend the lesson to another class period.

Challenge Ideas

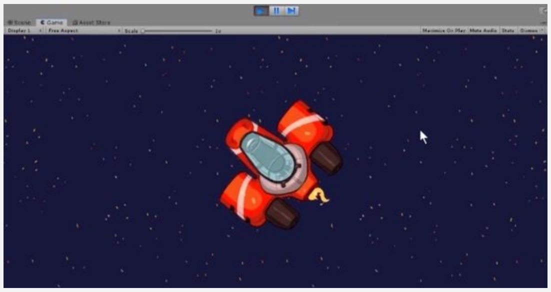
- Get students to change the spaceship from SpaceshipRed to SpaceshipBlue
- Get students to add other Particles to the spaceship, by going to Project > Prefabs > Particles > select a particle

Lesson 4: Adjusting the Camera and Adding Obstacles

Lesson 4 at a Glance

Overview:

Students will make the camera follow the player's movements and add obstacles that the player can interact with in the game



3, 2, 1, action! In this tutorial, you will make the camera follow the player and allow the spaceship and the asteroid to push each other

View the *Adjusting the Camera and Adding Obstacles* tutorial on the Unity Learn website.

Lesson Outcome By the end of this lesson, students will be able to
- Make camera follow the player
- Add obstacles to a game
- Make player interact with obstacles

Key concepts Camera Follow Scripts, Polygon Collider 2D

Before Class Teachers
- Go through the *Adjusting the Camera and Adding Obstacles* tutorial on the Learn website ahead of class

Students
- Make sure that students have followed through and completed all steps from Lesson 3

Lesson 4 Class Schedule

	Agenda	Duration	Description
1	Review	10 min	Take some time to make sure everyone completed the development steps from Lesson 3. Take time to address any unanswered questions and solve development issues.
2	Go through the tutorial on the Learn Platform ▶	30 min	Go to *Adjusting the Camera and Adding Obstacles* tutorial and go through the steps there. Make sure to pause in between the steps and go over the content together a class. There are two steps in *Adjusting the Camera and Adding Obstacles* tutorial: 1. Adjust the Camera 2. Add Obstacles
3	Wrap-Up	5 min	Review the main steps that were covered in class. If there wasn't enough time to get through all the steps, assign the rest for homework or extend the lesson to an additional class period.

Challenge Ideas

- Challenge students to add more than one obstacle in the game by adding more asteroids (they can be found in Project > Images > Asteroids)

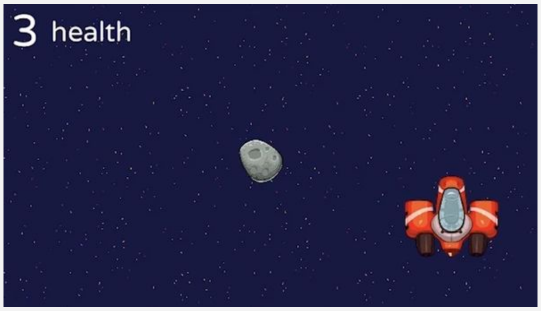
Lesson 5: Introducing Health

Lesson 5 at a Glance

Overview:

Students will add health and define the winning conditions for the game

View the *Introducing Health* tutorial on the Unity Learn website.



Introducing the health and winning conditions now makes the game playable

Lesson Outcome

By the end of this lesson, students will be able to

- Add script to keep track of the health of a player
- Make obstacles subtract a player’s health
- Display the health of a player
- Add User Interface design to the game
- Tag GameObjects
- Define the winning conditions

Key concepts

Health System Attribute script, Modify Health Attribute script

Before Class

Teachers

- Go through the *Introducing Health tutorial* on Unity Learn ahead of class

Students

- Make sure that students have followed through and completed all steps from Lesson 4

Lesson 5 Class Schedule

	Agenda	Duration	Description
1	Review	10 min	Take some time to make sure that everyone completed the development steps from Lesson 4. Take time to answer questions and solve development issues.
2	Go through the tutorial on the Learn Platform ▶	30 min	Go to *Introducing Health* tutorial and go through the steps there. Make sure to pause between the steps and go over the content together as a class. There are two steps in *Introducing Health* tutorial: 1. Introduce Health 2. Define the Winning Conditions
3	Wrap-Up	5 min	Review main steps that were covered in class. If there wasn't enough time to get through all the steps, assign the rest for homework or extend the lesson to another class period.

Challenge Ideas

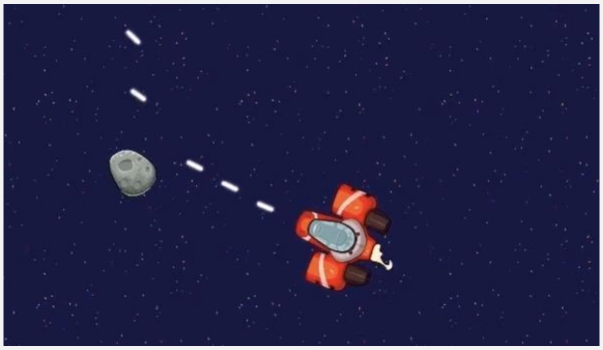
- Challenge students to introduce a GameObject that allows the player to recover points. Hint: In the inspector window, take a close look at the values of the Modify Health Attribute Script.

Lesson 6: Creating Objects

Lesson 6 at a Glance

Overview: Students will create a new GameObject that allows the player to destroy obstacles

View the *Creating Objects tutorial* on the Unity Learn website.



Creating lasers and enabling the player to destroy asteroids

Lesson Outcome	By the end of this lesson, students will be able to - Add a (trigger) Capsule Collider 2D to keep track of when objects touch or intersect - Add a Bullet attribute script to keep track of points - Create a prefab - Create an empty GameObject - Add the Object Shooter script - Insert a Prefab as a Prefab to Spawn for the Object Shooter script
Key concepts	Capsule Collider 2D, Trigger Colliders, Bullet Attribute Script, Prefab, Object Shooter Script
Before Class	Teachers - Go through *Creating Objects tutorial* on Unity Learn ahead of class Students - Make sure that students have followed through and completed all steps from Lesson 5

Lesson 6 Class Schedule

	Agenda	Duration	Description
1	Review	10 min	Take some time to make sure that everyone completed the development steps from Lesson 5. Take time to answer questions and solve development issues. Consider partnering students so that they can help each other solve development issues.
2	Go through the tutorial on the Learn Platform ▶	30 min	Go to *Creating Objects* tutorial and go through the steps. Make sure to pause between the steps and go over the content together a class. There are two steps in the *Creating Objects* tutorial: 1. Create a Laser Prefab 2. Create a Laser Shooter
3	Wrap-Up	5 min	Review the main points covered in class. If there wasn't enough time to get through all the steps, assign the rest for homework or consider extending the lesson to another class period.

Review Concepts with Students:

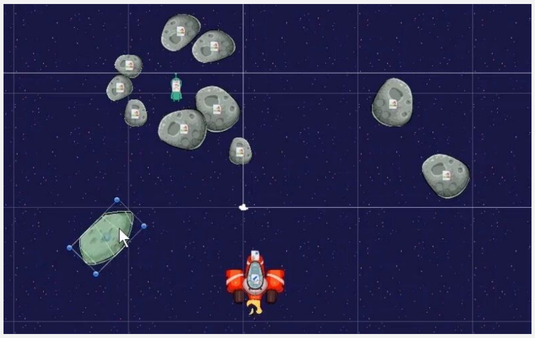
- Try this: get students to think about the visual scripting process: what would happen if the laser was not turned into a Prefab? Would the lasers still work in the same way? Why or not?
- Ask students to reflect: What would happen if the player could gain points for destroying asteroids? How would it change the way the game ends?

Lesson 7: Finishing the Game and Next Steps

Lesson 7 at a Glance

Overview: Students will add health and define the winning conditions for the game

View the *Finishing the Game and Next Steps tutorial* on the Unity Learn website.



Turning the game into a rescue mission

Lesson Outcome	By the end of this lesson, students will be able to - Add script to keep track of the health of a player - Make obstacles subtract a player's health - Display the health of a player - Add User Interface design to the game - Tag GameObjects - Define the winning conditions
Key concepts	Game level design, Unity Playground scripts
Before Class	Teachers - Go through *Finishing the Game and Next Steps tutorial* on Unity Learn ahead of class - Print out the *Playground Project Design Document* at the end of Lesson 7 for all students Students - Make sure that students have followed through and completed all steps from Lesson 6

Lesson 7 Class Schedule

	Agenda	Duration	Description
1	Review	10 min	Take some time to make sure that everyone completed the development steps from Lesson 6. Take time to answer questions and solve development issues. Partner students so that they can help each other check development work and solve any issues.
2	Go through the tutorial on the Learn Platform ▶	20 min	Go to *Finishing the Game and Next Steps* tutorial and go through the steps there. Make sure to pause between the steps and go over the content together a class. There are two steps in *Finishing the Game and Next Steps* tutorial: 1. Add aliens that need to be rescued 2. Design the levels of the game
3	Individual Projects	30 min	Challenge students to build on the game they started or to create something from scratch. Hand out the "Playground Project Design Document" (available at the end of the Lesson 7 Lesson Plan) to students and get them to start thinking about what kind of game they will create. Give them time in class and assign them this project as homework for next class. If possible, make this a group project so that students can help each other as they create their first game on Unity.

Challenge Ideas:

- Get students to create their own game with the Playground script
- If students want to change up the project assets (background images and characters), they can check out: free game assets by Kenney: https://kenney.nl/

Playground Project Design Document

mm/dd/yyyy
Student Name(s)
Class

Project Concept

Use this template to plan, design, and create your game

1 Story

This is a

number of player(s)	type of game	game

that takes place in

setting of the game

During the game,

characters of the game

description of the game

2 Scripts

In my game, I will use the following Playground scripts:

✓ *(yes)* ◆ *(maybe)* ? *(what is this?)*

Movement
- Move
- Rotate
- Jump
- Automove
- AutoRotate
- Push
- FollowTarget
- Patrol
- CameraFollow
- Wander

Attributes
- Bullet
- DestroyForPoints
- Resource
- Collectable
- HealthSystem
- ModifyHealth

Gameplay
- ObjectCreatorArea
- ObjectShooter

Conditions
- ConditionArea
- ConditionCollision

- TimedSelfDestruct
- PickUpAndHold
- ConditionKeyPress
- ConditionRepeat

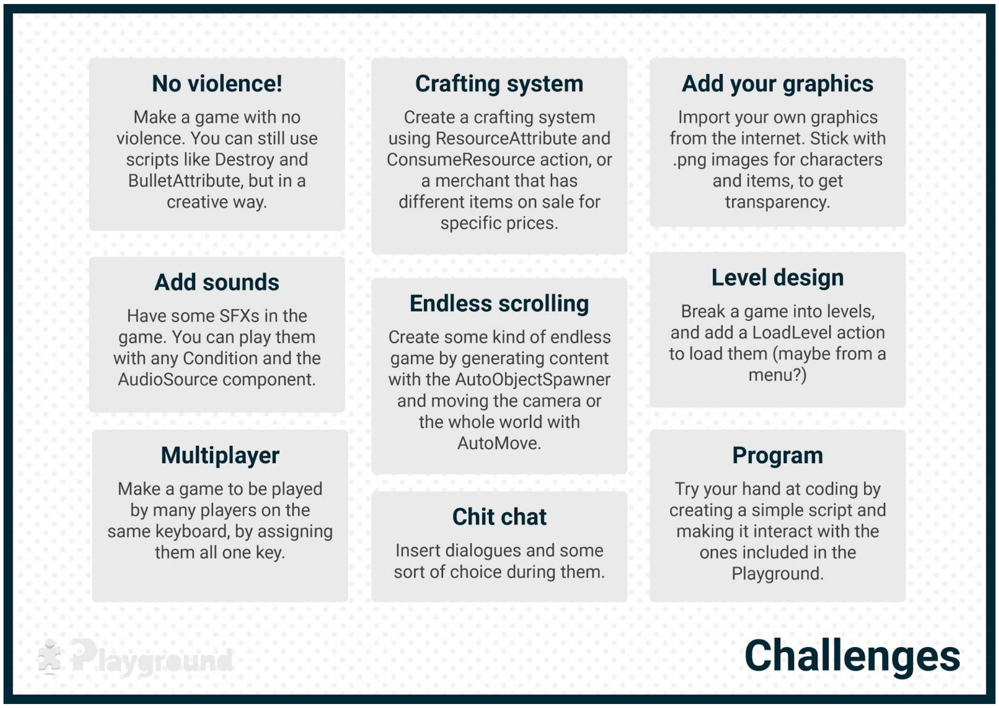
Actions

- On/Off
- Create
- Destroy
- Teleport
- ConsumeResource
- DialogueBalloon
- LoadLevel

3 Challenge

I will challenge myself to make my game more original by:

Description of how your game will differ from the spaceship game we started making in the tutorials (here's some ideas below)



No violence!

Make a game with no violence. You can still use scripts like Destroy and BulletAttribute, but in a creative way.

Add sounds

Have some SFXs in the game. You can play them with any Condition and the AudioSource component.

Multiplayer

Make a game to be played by many players on the same keyboard, by assigning them all one key.

Crafting system

Create a crafting system using ResourceAttribute and ConsumeResource action, or a merchant that has different items on sale for specific prices.

Endless scrolling

Create some kind of endless game by generating content with the AutoObjectSpawner and moving the camera or the whole world with AutoMove.

Chit chat

Insert dialogues and some sort of choice during them.

Add your graphics

Import your own graphics from the internet. Stick with .png images for characters and items, to get transparency.

Level design

Break a game into levels, and add a LoadLevel action to load them (maybe from a menu?)

Program

Try your hand at coding by creating a simple script and making it interact with the ones included in the Playground.

Playground

Challenges

Lesson 8: Playground Project Presentations

Lesson 8 at a Glance

Overview: Students will present and exhibit their Playground projects and provide feedback to other students

Note: This lesson is not connected to a tutorial on Unity Learn

In this lesson, everything comes together and students get a chance to present their work and provide constructive feedback to one another

Lesson Outcome	In this lesson, students will - Use their communication skills to present their Unity Playground project - Provide constructive feedback to other students
Key concepts	Communication skills, game design, Playground scripts
Before Class	Teachers - Print out the “Unity Playground Project Rubric” at the end of Lesson 8 for all students Students - Get students to finish their work in time for this class

Lesson 8 Class Schedule

	Agenda	Duration	Description
1	Introductions	5 min	Decide the order by which students will present their projects
2	Presentations and Q&A	30 min	Have students come up to the front of the class to present their projects. If possible, allow students to open up their Unity project and explain their project while playing it in game mode. Make time for 2-3 questions after each presentation.
3	Exhibition/ Feedback	25 min	Hand out the *Unity Playground Project Rubric* (available at the end of Lesson 8) to students. Have students try out their peers' games and provide feedback to one creators.

Extension Ideas:

- Instead of printing out the *Unity Playground Project Rubric* at the end of Lesson 8, create your own class rubric with your students and get them to reflect on and define the components of a great game

Unity Playground Project Rubric

Use this sheet to provide feedback on your classmate’s game. Use one sheet per game

Game Name:

Game Tester Name(s):

Game Developer Name(s):

Game Preferences:

Do you play games? If so, what kind of games do you like to play? If not, why do you not like games?

Technicality

Does the game play smoothly without technical problems?

☆☆☆☆☆

Storyline

Does the game have an engaging underlying story?

☆☆☆☆☆

Fun

Is the game fun to play? Do you want to play again?

☆☆☆☆☆

Originality

How unique is the game compared to the original space ship game?

☆☆☆☆☆

The best part of the game:

This game could be improved by:

-
-
-

End Credits

This curriculum guide was created by Ottiya for Unity Technologies.

Ottiya is a creative learning content studio and platform focusing on 21st century skills and competencies. Ottiya creates resources, publications, and AR & VR multimedia and experiences for K-12 students, educators, and parents. Some of the topics that Ottiya focuses on includes play, creativity, empathy, STEM, design thinking, and community. The company collaborates and co-creates content with youth, educators, and creatives from all over the world. For more information, visit www.ottiya.com

Unity is a professional technology used to create 2D, 3D, AR & VR media. It is the engine used to build most digital games and more -- In addition to game development, Unity is used across industries, like architecture, engineering, construction, auto design, film & animation, learning & training, interactive art & media. It can be used to make interactive digital experiences for mobile, desktop, tablets, and headsets, and it can be deployed across 25+ platforms.

Unity is a great technology to learn. People who know how to create with Unity are at an advantage in the job market, and the job market for this skillset is growing. When students learn Unity, they develop important STEAM skills and become creators -- not just consumers -- of interactive, immersive digital media.