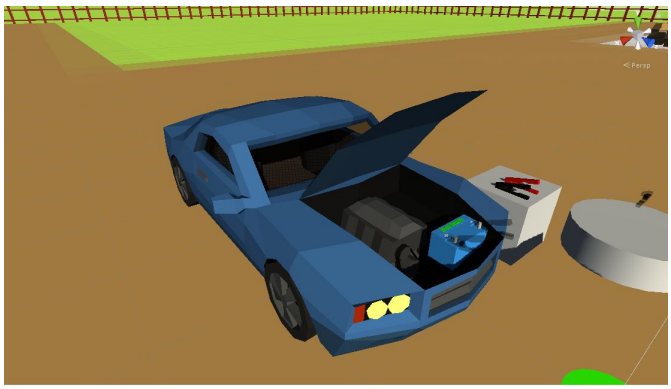
1.1 Intro & Installing VRTK



Steps:

Step 1: Introduction

Step 2: Why use VRTK? [10 mins]

Step 3: Install the VRTK plugin [5 mins]

Length:	40 minutes
Overview:	Install the plugin “VRTK” and play with the demo scenes to ensure all the right pieces are in place. Import some assets to use in the prototype
Project Outcome:	The Virtual Reality Toolkit (VRTK) plugin will be installed, allowing students to play with the demo scenes to test how different VR actions like picking up objects and drop zones feel when functioning correctly.
Learning Objectives:	The students will be able to: - Describe the purpose of VRTK - Explain how VRTK functions as a plugin within Unity
Prerequisite:	Unity 2018.3 or later is installed
ISTE Student Standards	3a “employ effective research strategies to locate information and other resources…”

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Step 1: Introduction

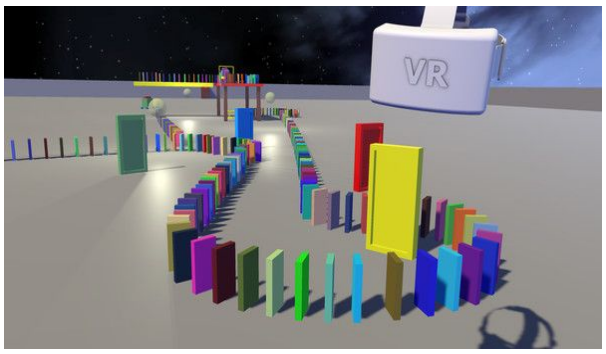
Explain	How VR is being used to train employees ● Examples of Walmart, United Kingdom - Fire investigation training, and many more
Discuss	After looking at the above examples, what is a situation that is either unsafe or too costly to train in real life that would be good for VR training?

Prerequisites to this Project: It is helpful if you have used Unity to complete other beginner tutorials (like the classic Roll-A-Ball tutorial, or other beginner level tutorials on the Unity Learn Site. This project will not cover the Unity interface and other beginner elements.

Step 2: Why use VRTK? [10 mins]

Demo	Using VRTK to pick up objects, open drawers, turn knobs, etc
Explain	How VRTK fits into Unity ● It is a **PLUGIN** (software that adds new functionality to another software) ● VRTK stands for Virtual Reality Toolkit ● Has built in features and actions that make getting started with VR much simpler than coding all those actions by hand
Discuss	Can you think of examples in VR games that use common gameplay elements like picking up objects, opening chests, throwing objects that VRTK could also do?

Examples of games made in Unity with the VRTK plugin:



Step 3: Install the VRTK plugin [5 mins]

Just after launching Unity, we need a new project to build our app in.

Because VRTK version 4 is bleeding edge technology, it isn't yet in the Asset Store, so we will retrieve it by using Git.

Watch the tutorial **OR** complete the steps below.

- **Explain** “Git” is a version control system that helps developers keep track of changes being made as they develop new software. Github is a popular website for tracking these changes and distributing the software like VRTK.

1. **Create a new Unity Project in 2018.3 or higher, using the standard "3D" preset.**
2. Ensure you have "Git For Windows" installed from https://gitforwindows.org/ or if you're on a Mac, use one of these: https://git-scm.com/download/gui/mac
3. Navigate to your Assets folder in your file browser (from Unity you can right click your Assets folder and choose "Show in Explorer"
4. On Windows, from inside your Assets folder, right click and choose "Git Bash Here".

5. Run the following commands (taken from https://github.com/ExtendRealityLtd/VRTK)
6. git clone --recurse-submodules https://github.com/ExtendRealityLtd/VRTK.git
7. cd VRTK
8. git submodule init && git submodule update
9. That's it! Return to Unity and let it load the VRTK assets, you'll now see a VRTK folder in the root Assets folder.

Lesson Recap

Key concepts:

- Installing a plugin to add features to Unity

Key skills:

- Downloading & installing the plugin and assets

Key terms:

- **Plugin:** software that adds functionality or features to other software