Mine Solar Car Lab

Work together to build your own electric car!

9-12 years old   11-13 yrs old   Gaming   Science   Technology

Introduction

This document provides instructions for educators on the installation and operation of *Minecraft: Education Edition*, and the steps needed to run our scenario, *The Voltaic Propulsion Lab* in a classroom setting.

Installation

To run the scenario, you must first install *Minecraft: Education Edition*. This is an entirely separate version of the game from the one many students will already have installed on their personal machines, and must be accessed in the following way:

1. Visit the following website, https://education.minecraft.net, and click the 'Get Started' link on the top left corner.
2. This will open a page with a number of options. As a school or university educator, you will already have an Office365 account. This is what will be used to access *Minecraft: Education Edition.*
3. Click on the 'Windows and macOS' link under the 'Download a Free Trial' heading.
4. Follow the appropriate prompt to download the installer through the Windows 10 Store, or click the direct download link below for macOS or iPad.
5. This step will differ platform to platform. Download the installer, double click it, then follow the prompts to install *Minecraft: Education Edition* on your device.

These steps must be repeated for each device that will be used to run the scenario.

Running the Program

Once *Minecraft: Education Edition* is successfully installed, open it and complete the following steps:

1. A popup window will immediately appear, directing you to sign in.
2. In the text entry field, enter the email address linked to your workplace (for example, john.smith@universityname.edu.au).
3. A new window will now appear that matches the appearance of your workplace's network login. Re-enter your email address, and the password associated with your workplace's online account.
4. If your details have been entered correctly a brief loading screen will be displayed, after which point the main menu will appear.

Once you have logged in to the game, instruct your students to also follow these instructions.

Running the Scenario

The Voltaic Propulsion Lab is a collaborative scenario designed to be experienced as a group task for multiple students, all working together in the same Minecraft world over a local area connection. As the educator, you will act as the host, and each student will then connect to your Minecraft 'World'. Minimise the game but do not exit it, and navigate in Windows Explorer to the folder where this guide is saved. Locate a file called 'The Voltaic Propulsion Lab.mcworld', and double click on it. A popup will appear within Minecraft indicating that the scenario is being imported. Once the import has finished, complete the following steps:

1. Click the 'Play' button. This will open up the 'World Select' screen.

2. Look for *The Voltaic Propulsion Lab* under 'Worlds', then click the pen-shaped button directly to the right of it. This will open the game settings menu.

3. Navigate to the 'Multiplayer' tab on the left hand side, and ensure that the two pictured sliders are both set to 'on'. This will tell Minecraft to automatically allow anyone on the same network to play in your scenario.

4. Click the 'Play' button. This will load the scenario.
5. Wait for the game to load. Please note this can take some time the first time a scenario is accessed.
6. You will see yourself standing in the Minecraft world, directly in front of a female character with the word 'Welcome' floating above her head. On the left side of the screen will be a list of keyboard controls for playing the game.
7. Press the 'Escape' key. This will bring up the game's menu.
8. On the right-hand side of the screen will be a grey panel with local area connection information. It will list the name of the scenario, directly below text stating your machine's IP Address.
9. Instruct your students to open Minecraft and log into their own respective Microsoft Office365 accounts.

Instruct each of your students to complete the following steps:

1. Click the 'Play' button on their respective copies of Minecraft
2. Click on the 'Friends' tab near the top of the window
3. Below the 'Add Friend' button, they will see a section titled 'LAN Games'
4. Your own computer's IP address, along with the name of the scenario will be listed
5. Click on the entry, and the students will be loaded into the same Minecraft world as you, over the local area connection.

6. Once every student has loaded in to the scenario, you are ready to begin the lesson. Refer to the 'Lesson Plan' document, or the online copy available at https://education.minecraft.net/lessons/mine-solar-car-lab/ to begin!

We hope that you will enjoy running *The Voltaic Propulsion Lab* with your students.