

# Activity 3

## Linking Google Earth to models

(10 minutes)

The screenshot shows a presentation slide with a title bar at the top containing 'File Edit Programs Settings View Help' and a status bar with 'Now: Active' and 'hyperduino@gmail.com'. The slide content is divided into two main sections:

- Volcano Parts & Google Earth**: A list of items, each with a blue plus icon, a green right-pointing arrow icon, a gear icon, and a dropdown arrow icon. The items are:
  - main vent (T5, L5) | Safe YouTube: main vent | Start: 00:10, End: 00:12
  - secondary vent (T6, L6) | Safe YouTube: secondary vent | Start: 00:12, End: 00:14
  - crater (T7, L7) | Safe YouTube: crater | Start: 00:16.7, End: 00:17.5
  - Parts of a Volcano (T8) | Safe YouTube: Parts of a Volcano | Start: 00:00, End: 00:24
  - Plinian Eruption - Mt. Vesuvius (T9) | URL: <https://earth.google.com/web/@40.81609289,14.40772542,642.28607252...>
  - Click the + to add new media that is currently open in the web view window to the right.
- Google Earth View**: A satellite view of Mount Vesuvius with labels for 'Vesuvio' and 'Parco Nazionale del Vesuvio'. The address bar shows the URL: <https://earth.google.com/web/@40.81609289,14.40772542,642.28607252a,3549.55403566d,:>

(The Google Slides version of this is at: <http://bit.ly/2DgkgK1>)

# Link to a Google Earth Location

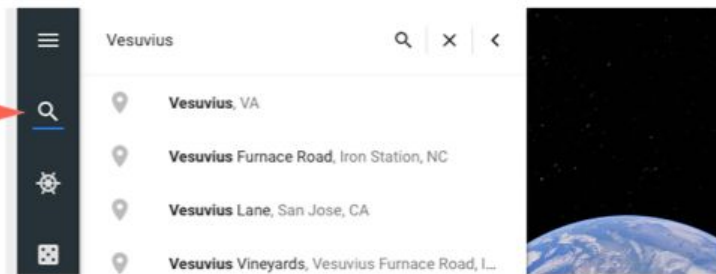


- 1 In the **web-view window** (at the right) of the MakerBit app, click on the globe icon (sample video) to open Google Earth.

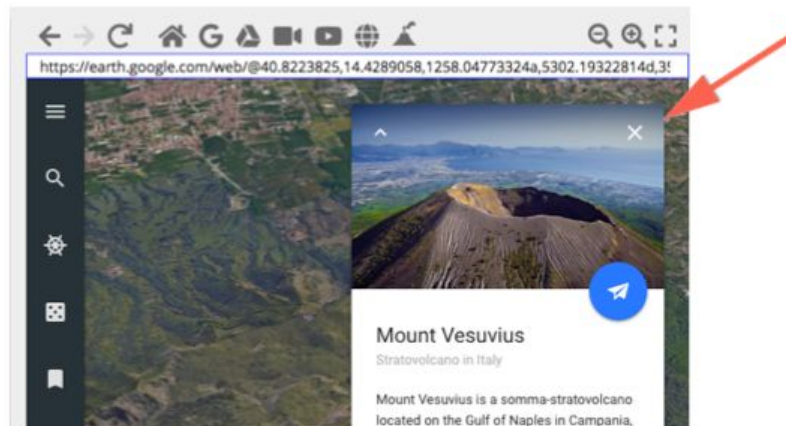


This may take some time depending on your Internet connection speed.

- 2 When Google Earth has fully loaded, click on the search icon, and type in "Vesuvius", and press Return.




- 3 Click on the "x" to hide the information card, and use shift while dragging the cursor to choose the view you like.

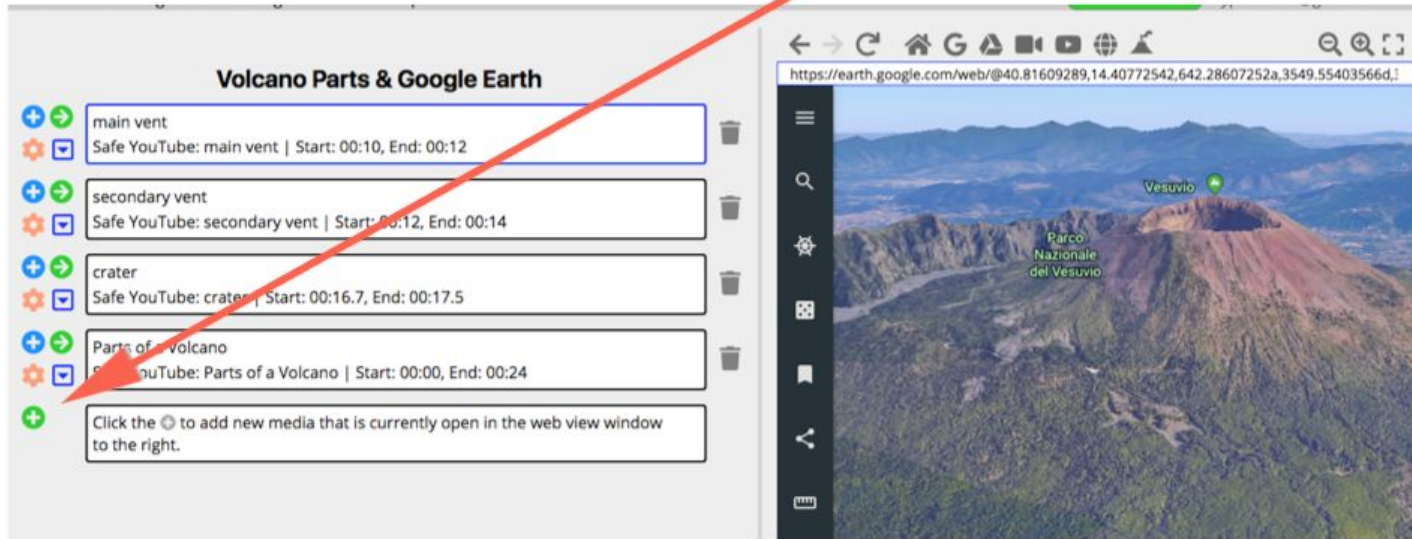


# Link to a Google Earth Location



4

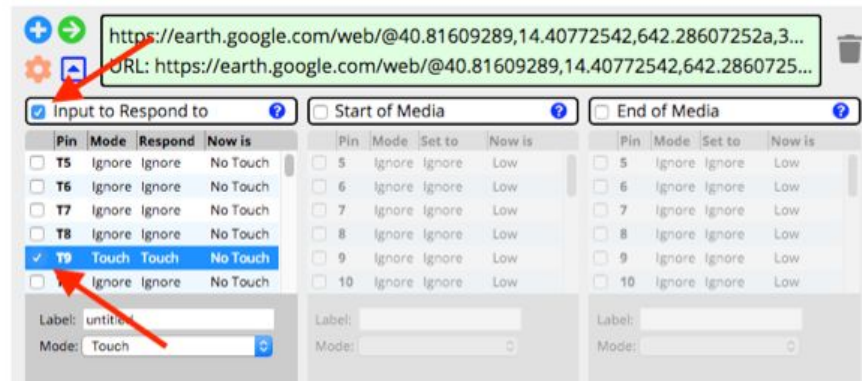
With the view that you like displayed, click on the green  icon on the media list side to add a new media list item.



5

Click on the blue triangle to view the settings for the media list item.

Click on checkboxes as shown here for "Input" and sensor "T9".



# Try It Out



- 6** Try it out! First touch one of your other touchpoints to change the screen display, and then touch the "Plinian" touchpoint. The display will change to Mount Vesuvius!

p.s. It's called a Plinian eruption because this type of eruption was described in a letter written by Pliny the Younger, after the death of his uncle Pliny the Elder during the eruption of Mount Vesuvius in 79 A.D.

- 7** Remember, you can rename media list items by clicking on the name in the media list. We have also found it can be helpful to include the touchpoint and LED numbers in the name for easy reference when looking at a media list.

The screenshot shows a web browser window with a menu bar (File, Edit, Programs, Settings, View, Help) and a status bar (Now: Active, hyperduino@gmail.com). The main content is split into two panels. The left panel, titled "Volcano Parts & Google Earth", contains a list of media items, each with a plus icon, a right arrow, a gear icon, and a checkbox. The items are:

- main vent (T5, L5) | Safe YouTube: main vent | Start: 00:10, End: 00:12
- secondary vent (T6, L6) | Safe YouTube: secondary vent | Start: 00:12, End: 00:14
- crater (T7, L7) | Safe YouTube: crater | Start: 00:16.7, End: 00:17.5
- Parts of a Volcano (T8) | Safe YouTube: Parts of a Volcano | Start: 00:00, End: 00:24
- Plinian Eruption - Mt. Vesuvius (T9) | URL: https://earth.google.com/web/@40.81609289,14.40772542,642.28607252...

The right panel shows a Google Earth view of Mount Vesuvius. The URL bar displays: <https://earth.google.com/web/@40.81609289,14.40772542,642.28607252a,3549.55403566d,:>. The map shows the volcano with labels for "Vesuvio" and "Parco Nazionale del Vesuvio".

# **Congratulations!**

**You have now used the "logic of programming" using "if-then" logic to link videos to physical models and turn LEDs on and off at the beginning and end of video segments.**

**This is all that's necessary to use the MakerBit system to create physical-digital interactive models, but it also creates the scaffolding for the next level: Coding in the Context of the Curriculum.**

**In this approach you could now introduce block programming, and use it to solve challenges within the thematic space of the primary curriculum topic.**

**You can learn more about the MakerBit and many different making and learning paths with the resources at [makerbit.com](http://makerbit.com)**

**[\(<http://makerbit.com/resources.html>\)](http://makerbit.com/resources.html)**

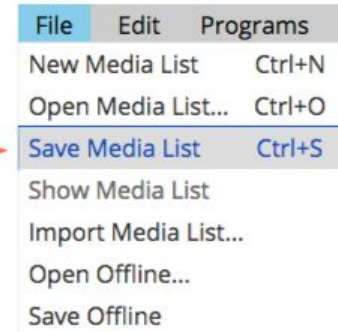
# To Reset the System



- 1 If your media list is still "Untitled", click on "Untitled" and name your media list.



- 2 Choose Save Media List in File

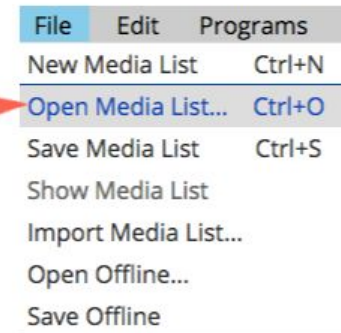


- 3 Quit the MakerBit Media Linker

- 4 Unplug/replug the USB cable and battery

- 5 Re-open the MakerBit Media Linker

- 6 Choose Open Media List in the File menu.



# Installing the MakerBit Program on the micro:bit

To install the MakerBit program on to the micro:bit, connect the micro:bit to your computer with a microUSB cable. Open the MakerBit Media Linker app, go to the **Programs** menu, and choose **MakerBit Program**.



This will download the makerbit.hex file to the Downloads folder of your computer. Locate the file in your Downloads folder, and drag it on to the micro:bit drive icon on your computer.

That's it! This does not usually need to be repeated in the future, and you're now ready for all the MakerBit activities!

If you do wish to read more about installing the MakerBit program on the BBC micro:bit, use this link: <http://bit.ly/2JLloUa>