

Activity 3

Linking Google Earth to models

(10 minutes)

The screenshot shows a presentation software interface with a menu bar at the top (File, Edit, Programs, Settings, View, Help) and a status bar (Now: Active, hyperduino@gmail.com). The main content area is split into two panels. The left panel, titled "Volcano Parts & Google Earth", contains a list of media items:

- Main Vent (T2, L2) | Safe YouTube: Parts of a Volcano | Start: 00:10, End: 00:12
- Secondary vent (T3, L3) | Safe YouTube: Parts of a Volcano | Start: 00:12, End: 00:14
- Crater (T4, L4) | Safe YouTube: Parts of a Volcano | Start: 00:16.8, End: 00:17.5
- Parts of a Volcano | Safe YouTube: Parts of a Volcano | Start: 00:00, End: 00:24
- Plinian Eruption - Vesuvius (T6) | 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.

The right panel displays a Google Earth web view of Mount Vesuvius. The URL bar shows: https://earth.google.com/web/@40.81609289,14.40772542,642.28607252a,3549.55403566d,3. The map shows the volcano with labels for "Vesuvio" and "Parco Nazionale del Vesuvio". The interface includes navigation controls like a search bar, a vertical toolbar, and a bottom control bar with a 2D/3D toggle and a globe icon.

(The Google Slides version of this is at: <http://bit.ly/2U5PhW8>)

Link to a Google Earth Location

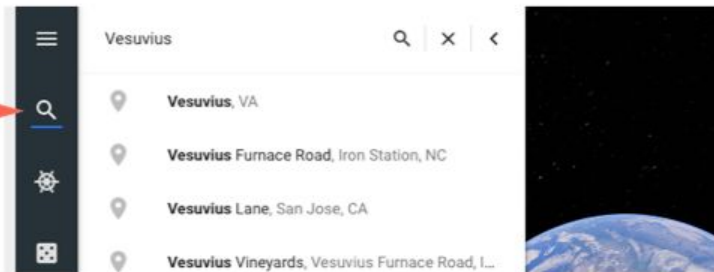


- 1 In the **web-view window** (at the right) of the MakerBit app, click on the globe icon (sample video) to open Google Earth.

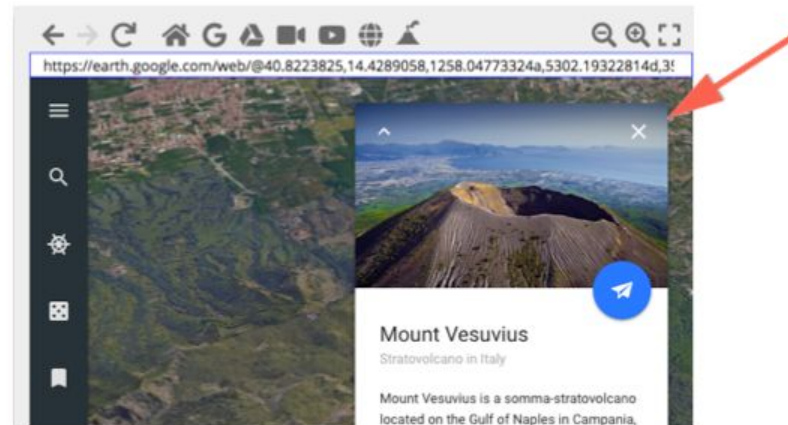


This may take some time depending on your Internet connection speed.

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



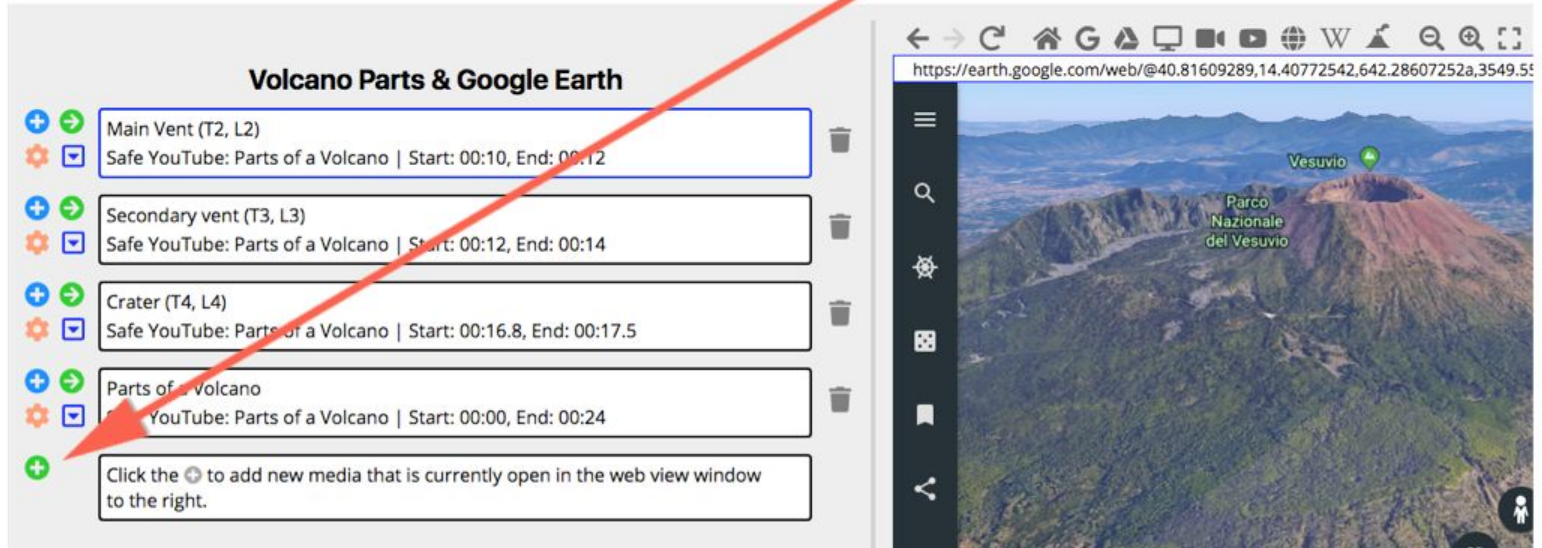
- 3 Click on the "x" to hide the information card, and use shift while dragging the cursor to choose the view you like.



Link to a Google Earth Location

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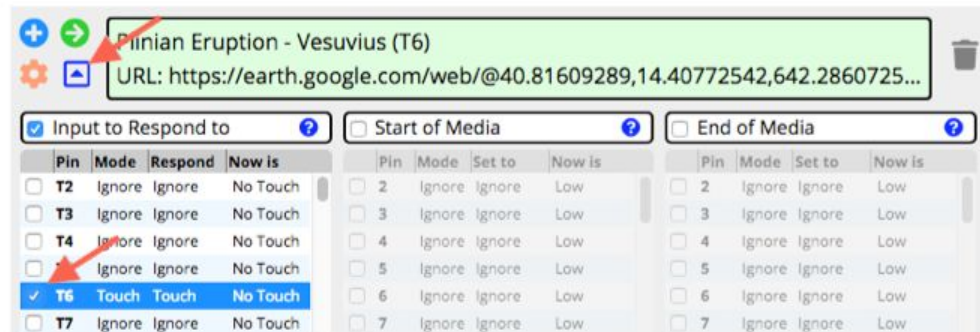
With the view that you like displayed, click on the green  icon on the media list side to add a new media list item.



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

Click on checkboxes as shown here for "Input" and sensor "T6".





Try It Out

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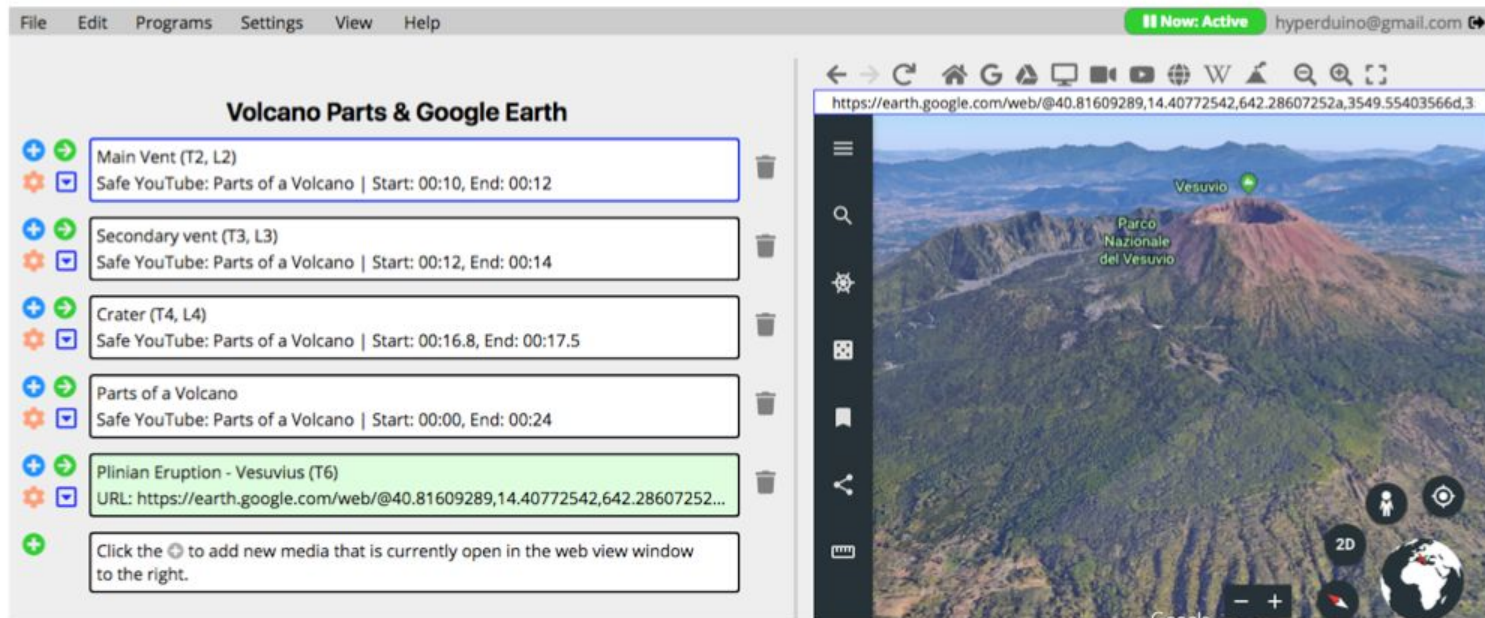
Try it out! First touch one of your other touchpoints to change the screen display, and then touch the "Plinian" touchpoint. The display will change to Mount Vesuvius!

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.

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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.



Congratulations!

You have now learned how to link videos and Google Earth 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 HyperDuino system to create physical-digital interactive models, and it also creates the scaffolding for the next level: Coding in the context of the curriculum.

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

You can learn more about the HyperDuino and many different making and learning paths with the projects in this Google doc, "Going Further with the HyperDuino":

<http://bit.ly/2qgDVRZ>

Special tip: Open House Mode: To put the main video (Touch 3) in a continuous loop mode, click on the orange gear (settings) icon, and check "loop". Now when the video plays, it will automatically loop. If one of the other sensors is touched, the video can be put back to looping with the "Touch here to start" sensor.