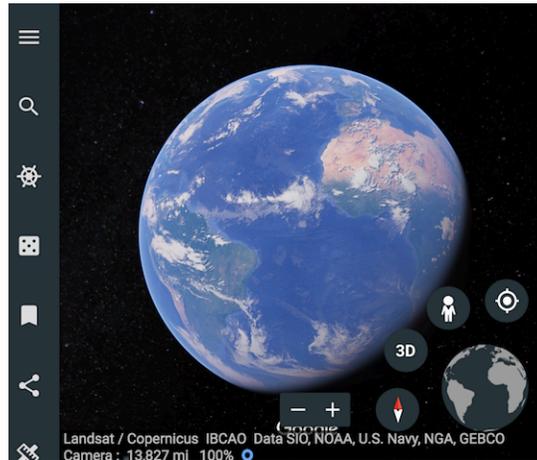


# The “New” Google Earth Handout Ideas For Using With Students

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The “new” Google Earth was developed for use with the Chrome Browser. It eliminates the need for installing the Google Earth software, which is necessary for the classic version of Google Earth. Now, schools with Chromebooks can have students access and use the “new” Google Earth because it is a web-based tool.

Schools do NOT need to have GSuite. Google Earth works independently from the GSuite tools. Currently, it only works in the Chrome Browser, but Google will be adding more browser capabilities as time goes on. There are also mobile versions of Google Earth that work on iPads and Androids.

Google Earth is an excellent tool to use with students. It not only augments what can be offered in the classroom, it allows students to explore the World in 3D imagery. This leads to a greater understanding of the topics students are studying. There’s something for everyone – geography, culture, history, social science, art, ecosystems, and more.

As you first use the “new” Google Earth with students, it may be a good idea to show them the differences between using a flat map to discover places vs. an actual globe. Google Earth’s geo tools help display the Earth’s features realistically. Students can use satellite imagery or zoom to street level to “visit” locations close up. As you use Google Earth, you will see that it’s not just for seeing what places look like. It’s also for studying how places, events, and cultures have shaped history.

## Finding Places in Google Earth:

- Start with searches using Google Maps, or another map you use with students
- Have them discover the difference between interactive “flat” maps and/or paper maps
- First, note the sizes of the continents; they will differ from the flat maps, even the on the Web
- Search for the term “map projections,” so they can see that features and distances of land masses differ when on a globe representation vs. a flat map
- Note the distortions of some of the larger land masses
- Try this lesson from [National Geographic](#)

## Voyager Tool:

- Have students view the pre-made tours in “Google Earth”
- The Voyager Tool has eight categories that are rich in content for students
- Categories include: editor’s picks, travel, nature, culture, sports, history, education, and layers
- All of the voyages are in brilliant color

- In the sidebar, click on the Voyager wheel
- Once a student chooses a topic/category, he/she will see slides with information, photos, and navigation tools
- Each card/slide has links to other locations within that topic (bottom right corner of slides)
- Many of the voyages include links to YouTube videos that explain more about what the students are viewing
- All of the videos are educational, and there are no ads

### **Explore Feature:**

- Assign some of the Voyager Features that include the “Explore” Feature
- This takes students on learning experiences that include videos, explanations, photos, and more
- Students can explore the results of social, environmental, cultural, economic, and historical research
- Depending on the topic, the Explore Feature will link students to information from NASA, USGS, National Geographic, and Discovery
- There are “Read More” links which will send students to websites for additional resources about the topic
- The Explore Feature is rich with content for students, which provides them with a better understanding of what they are viewing in Google Earth

### **3D vs. 2D:**

- Demonstrate the 2D and 3D tools in the bottom right corner
- Have students study/view different structures in 3D
- Show them how to rotate the view using the mouse, track pad, or key shortcuts (see other handout)
- Use the Ruler Tool to measure structures and landmarks; incorporate math lessons
- Work in groups for project-based learning
- Directions for using the Ruler Tool are below

### **Education Category:**

- The Education Section is filled with topics of interest for the classroom. There are interactive guided tours for students to follow. The tours help students explore the World and learn about its people, cultures, history, geography, etc. It includes stories to bring to life the plight and adventures of peoples around the World.
- The Education category is designed to act as tutorials – for use in classrooms, with lessons and topics. Teachers can use this category to for supplemental activities and project-based learning.
- Topics include:
  - Human Migration
  - Myths and Legends From Around The World
  - Fairy Tales From Around The World
  - Folktales from Around the World
  - Exploring Earth’s Ecosystems
  - Our Lakes – Our Lives
  - Math and Architecture: Circular Structures
  - The Day The Dinosaurs Died
  - A Better World With Jane Goodall
  - Planetary Exploration On The Earth
  - Explorers: Age Of Encounter
  - How Wind Becomes Electricity
  - Helping People and Animals Coexist
  - Science In The Natural World
  - Exploring The Last Pristine Seas
  - Scientists At Work

## **How Does Google Choose What To Include In the Education Category?**

- Google states it has teamed up with leading storytellers, scientists, and non-profits to bring information and places into Voyager
- In the Education category, stories have been created by organizations that have had a long history with Google and classic Google Earth
- The goal is to create interactive educational resources for people to use and learn from
- You will also find that Google is building a repository of supplemental activities and lessons with National Geographic, Discovery, and NASA

## **Astronauts' Pictures From Space:**

- Don't miss all the topics that show features of the Earth from space
- Google Earth is loaded with astronauts' pictures from space
- Students can study waterways, mountains, coast lines, results of natural disasters, and more
- These images from space can even point out where animals (in the wild) live and migrate
- The images can show fires, lava flows, results of hurricanes, and more
- Google Earth takes students beyond the textbooks and flat images in photos
- There's even a section on Earth's lights at night – a great way to show population density and urbanization

## **Scientists At Work:**

- Students can take advantage of work done by scientists around the World
- They will learn about climate change, genetics, coral reefs, disease outbreaks, fossils, and more
- This feature also contains videos, images, and links to web resources
- It also has live web cams for observing problems scientists are studying

## **History:**

- Students can walk in the footsteps of famous people in history
- Topics include:
  - Lewis and Clark
  - Women's suffrage
  - Underground Railroad
  - The French Revolution
  - Early Explorers
  - Lost Civilizations
  - King Arthur
  - Hemingway's Hangouts
  - Vikings
  - Famous Writers
  - Ancient Athens
  - Footsteps of the Pilgrims
  - Medieval Europe
  - Castles and Palaces
  - The Royal Air Force
  - More . . .

## **Culture:**

- Students will be exposed to different cultures around the World
- Topics include:
  - Heritage of different countries
  - Communities around the World

- Children's Literature Series
- Locations in the Mediterranean
- Women Voyagers Who Have Broken Boundaries
- People of the Amazon and other countries
- Restaurant Movie Moments
- England's Enormous Chalk Figures
- Mexican Art
- European Art
- Land Art From Above
- Google Arts and Culture
- Wineries in Brazil
- Global Opera Houses
- Wonders of the Ancient and Modern World
- Architecture
- Celebrating Sherlock Holmes
- Amazing Libraries
- Music
- More . . .

### **Street View:**

- Google has driven camera-equipped cars of thousands of miles throughout 70 countries
- They have also used cameras with bikers, hikers, and some animals to get closer, realistic imagery of places
- Have students discover and explore:
  - natural wonders
  - cultural sites
  - famous landmarks
  - physical features of coast lines, mountains, volcanoes, craters, etc
  - wildlife and their habitats
  - cities
  - more . . .
- Have them zoom down to street view for closer looks
- There is a +/- tool in the bottom, right of the Google Earth window
- Or, they can zoom with a mouse wheel or trackpad
- For closer looks, have students go to street level using Pegman
- This is also called the Photo Sphere
- Pegman is in the bottom, right corner of the window
- Click, hold, and drag Pegman
- If Street View is available, students will see blue circles and lines on the map
- Drop Pegman on one of those blue circles or lines
- Users will then go to street level

### **Moving Around Street View:**

- To move around Street View, click and drag the screen
- This allows for seeing more of the area
- There are white arrows when inside Street View
- The arrows are used to navigate and move in different directions when in Street View

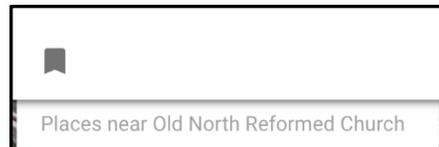
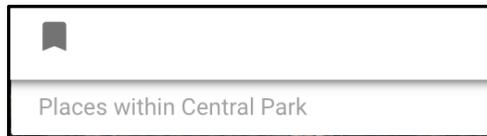
### **I'm Feeling Lucky:**

- Don't miss this feature; it can be used for lessons
- It's a great way for students to discover places they've never seen nor heard of
- Google Earth will take students to places randomly
- Just click the single dice icon in the sidebar

- Each time students click the die, they will go to a different place
- Each place has “Knowledge Cards” to help them learn more about the places they are viewing
- Have them dive deeper into the “Knowledge Cards” and list important information they discover about importance, culture, nature, etc.
- Have them use the Bookmark Tool to keep a list of places they feel are worth saving
- Use in conjunction with Google Docs; have students do reports on places of interest or importance they find
- Use in conjunction with Google Forms; ask pertinent questions to get them thinking about the places they are discovering

### **Using Knowledge Cards:**

- Point out that some “Knowledge Cards” will tell students more about the places they are viewing
- While others suggest nearby places
- Be sure they can distinguish the difference
- The **bottom** of the “Knowledge Cards” can be different for each place they visit
- You will see one of two phrases:
  - Places within . . .
  - Places near . . .



- Use the “places within” to see different locations within the place searched for
- This helps students find locations/sites within their search areas
- Use the “places near” to find other places of interest near the location searched for
- Example of “places near”: when viewing the U.S. Capital Building, Google Earth may suggest the Smithsonian or the Washington Monument or the White House. This helps users find places they may not know about.

### **iPad Version – Resources:**

- National Geographic has developed interactive content and photos
- [Look in the iPad version](#)

### **Saving Viewed Places - Bookmarking:**

- If a place has a Knowledge Card, just click the bookmark icon in the bottom left corner
- Click, “Add; then Click, “Done”
- The place is saved in “My Places”
- Saved places can be viewed by clicking, “My Places” in the left sidebar of Google Earth
- There’s a green icon in the sidebar
- Expand the icon to see all the saved places
- Students can click on each place they wish to view again
- They can save these as tours for future reference

### **Editing Or Deleting Bookmarked Places:**

- Click, “My Places” in the left sidebar of Google Earth
- Look for a green icon
- Click, “Edit”
- Click the label icon to rename

- Click the trash can to delete

### **Measure Distances Between Places:**

- You can measure distances by clicking the measurement tool  in the left sidebar of Google Earth
- Click the icon of a small ruler
- Google Earth will change to a different view – looking down on the Earth
- Click on the Earth to set the first point
- Then , click on another part of the Earth for another point
- You can click more than one point
- To end, double click the last point
- You will see the length of the line/s
- You can set the measurements to the units you desire to use
- Click, “Settings” in the left sidebar; choose the units you want
- Click, “Save”

### **Editing or Removing Measurement Lines:**

- You can click and drag points to edit lines
- This moves the points in the line and changes the length of the line
- Click the new arrow on the right to start again
- To delete any measurement, click the X on the map
- This closes the measurement

### **More Information And Resources:**

- <http://www.carollarow.com>