

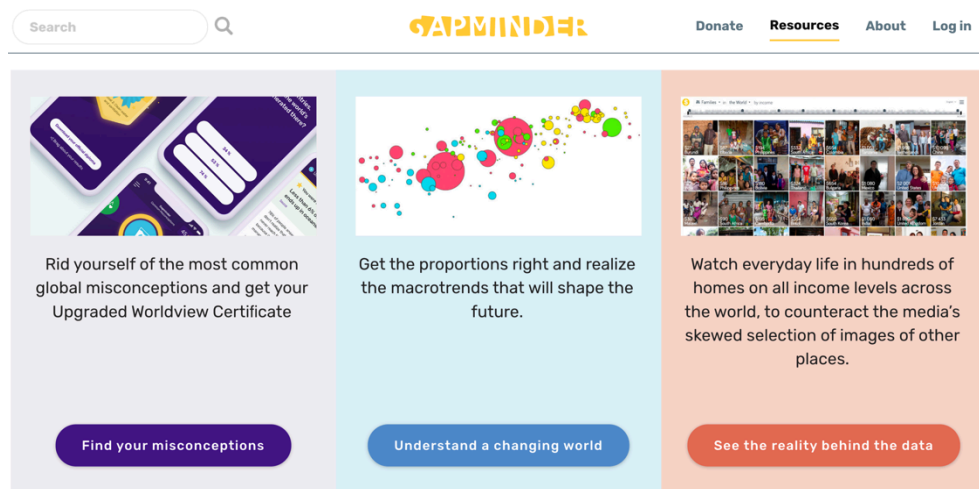
Exploring Trends and Telling Stories with Gapminder

In this activity, students use the Gapminder graph tool to explore trends related to population, energy use, CO₂ emissions, and any other topic of their choice. From these trends, students develop questions to guide inquiry into compelling global issues. This activity can be particularly useful in a middle school or high school world history or geography course.

1. Open the Gapminder website at <https://www.gapminder.org/>. In the menu bar, click on “Resources.”



2. When you get to the resources page, click on the box in the center of the page that reads, “Understand a changing world.” This will take you to the data visualization we’re going to use.



3. You should see a bubble graph, which is the signature type of data visualization on Gapminder. This type of graph is good for showing comparisons, data over time, distributions, patterns, proportions, and relationships. Take some time to explore all the visual features:
 - a. Bubbles representing different countries
 - b. Different sizes representing total population
 - c. Different colors representing world regions (which you can view by clicking on “color” on the right side of the screen)
 - d. In this default version, the x-axis is GDP per capita, adjusted for inflation
 - e. The timeline at the bottom can be animated to show changes over time, and you can pause it when you want to think about what’s happening at any point. You can also slow down or speed up the animation to the right of the timeline.

4. Notice that you can change the variables on both axes. Next to the labels, you should see an arrow icon. Click the arrow and a drop-down menu will appear. You can select from any of the variables listed to change the graph.

GDP per capita ▼

5. Gapminder also allows you to share and present a graph you create. This is what we're going to do next. Change your variables on the axes to the following combinations related to population:
 - a. Life expectancy vs. Average daily income per person
 - b. Child mortality vs. Average daily income per person
 - c. Babies per woman vs. Income per person

With each new graph, play the animation and think about/discuss the following questions:

- What trends do you notice?
 - What questions do you have for further exploration?
 - Are there other variables you want to explore based on what you see?
 - Are there particular years/time periods that are especially interesting?
6. Now decide on two to three graphs that you think tell a compelling story. Select a year for which you would like to display the data. I'm going to choose 2022 for my graphs. You can also toggle countries on or off using the menu to the right.
 7. For each graph you want to share, click the hyperlink icon circled below. Copy and paste the link so share. I've shared my link here:

[https://www.gapminder.org/tools/#\\$model\\$markers\\$bubble\\$encoding\\$y\\$data\\$concept=children_per_woman_total_fertility&space@=geo&=time::&scale\\$domain:null&zoomed:null&type:null::&x\\$data\\$concept=mincpap_cppp&space@=geo&=time::&scale\\$domain:null&zoomed:null&type:null::&frame\\$value=2022:::;&chart-type=bubbles&url=v2](https://www.gapminder.org/tools/#$model$markers$bubble$encodingydata$concept=children_per_woman_total_fertility&space@=geo&=time::&scale$domain:null&zoomed:null&type:null::&x$data$concept=mincpap_cppp&space@=geo&=time::&scale$domain:null&zoomed:null&type:null::&frame$value=2022:::;&chart-type=bubbles&url=v2)

Share      

8. You can also embed the graph into a website or blog. Below, for example, is an image of the graph embedded on a Google site.

