1. National Geographic Mapmaker Interactive

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This set of tutorials introduces you to National Geographic’s Mapmaker Interactive (http://mapmaker.nationalgeographic.org/). Please note that we recommend using Chrome as your web browser when working in this on-line program, some features don’t work well in Firefox or in Internet Explorer.

1.1. Introduction

National Geographic Mapmaker Interactive is an online mapping program. (Our YouTube video introducing you to this program is found at: https://youtu.be/BWgUKRzWY4I.) Designed for educational purposes, this site is easy to use and maps can be customized to a specific region and for specific stories/themes. Students who are technologically savvy can master this mapping program in under ½ hour. For those students who are not technologically savvy, the Help videos can be played over and over again for clarification.

National Geographic Mapmaker Interactive is powered by ESRI, the world’s leading producer of GIS software. National Geographic Society has provided different Base Maps and several layers (themes) for uploading into the on-line GIS program for mapping projects.

The screenshot on the right shows the Base Maps available (the YouTube video on specifics of these different basemaps: https://youtu.be/kVHzdKjiS0k):

National Geographic Mapmaker Interactive has themes already available for you to use! Thus, you do not have to search for data. You can use one theme (actually these are called Layers) or multiple themes in one map. (Again, don’t worry about finding these right now, we are just showing you the possibilities for this program)

The following screenshot shows the categories for the layers available (as of the writing of this tutorial) for display in your map:
If you click on any one of these categories (in this case, we clicked on Food with 11 themes available), you find the list of themes to add to a base map:

Additionally, the program also provides metadata for each of the themes. For example, for the Potato Production theme, we clicked on the down arrow (red box – in the above screenshot) you receive the following metadata:
You can add more than one theme to a map, change how the themes are displayed, and add typographical data, video and image links to the map produced. All of these possibilities are covered in individual video tutorials within the National Geographic Mapmaker Program.

You do not need a subscription to National Geographic Magazine nor to the National Geographic Society to use this program.

The program works best in the Google Chrome web browser. You can also use the program on tablets.

1.2 Let’s Get Started

Go National Geographic Mapmaker Interactive at http://mapmaker.nationalgeographic.org/

When you first open the program you will get the Getting Started window:
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We do not recommend that you check the box – *Don’t show this message again*, because this is how the National Geographic Society communicates changes to the on-line program. We recommend that you read this each time you enter the on-line program.

In addition, you can click on the open circles at the bottom of the window (red rectangle in above screenshot) and page through additional information. For example, we clicked on the next open circle and received this information about Saving Maps.

You can page through each one. They do not give you specific details on how to accomplish each task, but just tells you features of the program. However National Geographic Mapmaker Interactive does have video tutorials with detailed instructions.

For now, click on Ok, Let me get started! The window closes and you see the following screen – a base map of the entire world. On the right side of the window is your Table of Contents. On the left side are some tools to use. We will explore these just a bit.
You can zoom into a specific region, if you want. To zoom in and out, you can use your mouse wheel – forward zooms in, backwards zooms out – or you can use the + (zoom in) and – (zoom out) signs in the upper left corner.

For now, we will leave the entire world visible as some themes are easier to see when zoomed out.

The next set of tools on the bar are drawing and text tools (green rectangle). How to use each individual tool is covered in the Mapmaker Interactive Video Tutorials and YouTube video that we created (https://youtu.be/-8yoje347k).

The next two tools are related to layers (black box). They are not activated on this screen because we have not added any layers.

### 1.3 Country Flags and Facts

The next tool (looks like a flag) is for Country Flags and Facts. (We also cover this in YouTube Video: https://youtu.be/_MkTfFkLo5A).

In the screen on the right, it is turned off. Just click ON and it will turn it on. Once on, you can change the fill and border colors. In the screenshot below, click on the checkered box to bring up the color window.
In the screenshot on the right, turn on the Country Flags & Facts and then click on the United States in the map document window.

Here, click on Learn More:

Here, click on the Quick Facts tab:

1.4 Using Latitude and Longitude Tools

The final tool on the right side of the screen is Show Latitude and Longitude Lines. (This topic is covered in YouTube video: [https://youtu.be/_MkTfFkLo5A](https://youtu.be/_MkTfFkLo5A).)

Again, these show OFF (blue rectangle). But if you turn it on, then the lines of latitude and longitude will display in your map. You can also change the line interval by using the sliding bar.

Additionally, you can turn ON latitude and longitude position for a specific location.
As per the screenshot below, turn on the *Latitude and Longitude* and change the *Line interval* to 30 (red box).

How will you remember all of this? Don’t worry, under *Help*, you have video tutorials for each of these tools.

**1.5 Using Layers**

So, how do you add layers? (This topic is also covered in YouTube Video: [https://youtu.be/Yx8zWXkg6V0](https://youtu.be/Yx8zWXkg6V0).)

Let’s experiment and add the *Potato Production* Layer.

Click on *Add Layer* (red box in the screenshot below) on the right side of the map.
You get this window. Click on the *Food (11)* category and you see the following themes:

Find *Potato Production* and click on the + sign (blue box in the screenshot below).
It does not look like anything happened, but look the + sign, it is now a – sign (inside a fuchsia circle). Let’s close the window using the X in the upper right corner (yellow circle).

Now look at your map. If you don’t see the colored theme, as shown in the screenshot below, you might be zoomed in too far. The theme is by country, so you have to be zoomed out far enough to see at least two countries (in whole or in part).
On the right in the Table of Contents, it shows a layer for Potato Production and at the bottom of the layer box is a Transparency bar. You can slide this setting back and forth to increase transparency, which you may want to do if you add a second theme or to see the country names.

For now, click on the Legend tab (black box next to the word Layer). It provides the legend and the categories for each production level.

If you don’t remember what the metadata said about the production level, you can click on the question mark at the end of the blue bar and it will display the metadata at the top of the map.
This is a lot to remember, but, again, National Geographic Mapmaker Interactive has short (1 – 3 minutes) video tutorials to show you how to work with the program.

Let’s look at those now. Some of you are likely ready to move on.

### 1.6 Using Help and the Video Tutorials

Click on Help in the toolbar. (The YouTube video for this topic: [https://youtu.be/1Z-C__4Tr4s](https://youtu.be/1Z-C__4Tr4s).)
This takes you to the Help window, as seen below. On the left is the list of Help topics. Each one of these topics is a video tutorial. In the screen below, Tutorial 1: Map Basics is already loaded. You just click on the play button (red oval) and this tutorial provides basic operations like zooming in and out or searching for a specific location. Go ahead and play this video now.

This particular video is only a little over one minute long. But at the end of the video, it automatically loads Tutorial 2: Working with Map Layers (about 1 ½ minutes long). You can let the videos run, one by one, automatically, to familiarize yourself with the entire program. Or you can click on the appropriate video link on the left if you want to just view one video at a time, or refresh your memory after watching all the videos.

1.7 Saving Your Map

We will cover one final issue - Saving your map. In the upper right hand corner, click on Save (red box in the screenshot below). (The YouTube video: https://youtu.be/uxM7x7PU2Oo.)
You will see the following icon in a pop down menu:

Click on the floppy disc with the down arrow.

The following window opens. You will not be saving the map to your computer -- it saves online with the National Geographic. Once you click on Save, you will get a link (a url) to your map. Please note in the message at the top of the screen, your map is only saved for up to six months. You need to save this url, so you can access your map at another time.
We will not cover each of the individual videos in this tutorial. This tutorial is to help get you started.

**Additional Information**

Additionally, we have created YouTube videos to help with the items discussed above and additional tools within National Geographic Mapmaker Interactive (the links to these videos are below). As a reminder, the National Geographic Mapmaker Interactive Help videos also provide knowledge on using National Geographic Mapmaker Interactive.

One of the authors of this tutorial has used National Geographic Mapmaker Interactive on a regular basis in two university-level geography courses. In one course, the students are required to make a story map using the themes of their choice. In the other course, the students use two themes to create a comparative map quiz. In all semesters, the students have found using this on-line GIS program easy to use and beneficial to reading and interpreting maps.

For more information on National Geographic Mapmaker Interactive, go to the National Geographic Society’s Education blogs, for example:

https://blog.education.nationalgeographic.com/2013/03/01/create-and-share-with-mapmaker-interactive/

https://blog.education.nationalgeographic.com/2015/04/01/harness-the-power-of-mapmaker-interactive/

https://blog.education.nationalgeographic.com/2014/04/21/mapping-monday-mapmaker-interactive-tutorials/

Or their online tutorial:

http://ngep.fieldscope.org/
Exploring Our Planet with Open-Source Software

Or on History Tech:


The YouTube Videos that accompany this chapter are found at:

1. Introduction to National Geographic Mapmaker Interactive
   https://youtu.be/BWgUKRzWY4I
2. Using Basemaps in National Geographic Mapmaker Interactive
   https://youtu.be/kVHzdKjiS0k
3. Using Help, Bookmarks and Reset Map in National Geographic Mapmaker Interactive
   https://youtu.be/1Z-C__4Tr4s
4. Drawing Tools in National Geographic Mapmaker Interactive
   https://youtu.be/-8yo-je347k
5. Saving, Sharing, Printing in National Geographic Mapmaker Interactive
   https://youtu.be/uxM7x7PU2Oo
6. Layers in National Geographic Mapmaker Interactive
   https://youtu.be/Yx8zWXkg6V0
7. Country Flags and Latitude and Longitude in National Geographic Mapmaker Interactive
   https://youtu.be/_MkTfFkLo5A