Project Element 1: Topic and Data Source (URL)

Instructions

Make sure you have reviewed all of the details on the Project Overview page, including the links to data sources and the list of previous topics.

Choose a topic and find a data source online. Be careful when researching online sources because not all are trustworthy. In general, government, academic, and professional web sites are the most reliable.

Your data must include at least 50 points, and later you will input the data to a spreadsheet.

For this assignment, complete the following steps:

1. Submit a URL that leads directly to a web page with the numbers you intend to use.
2. Explain exactly what you will plot in your graph: what variable plots on the X-axis and what variable plots on the Y-axis.
3. Save your file, and either upload it to the class website or print and hand in hard copy.

Please note: One type of graph is forbidden. You may not plot earthquake magnitude vs. year. There is no relationship between these two quantities, so you cannot draw any conclusions from graphing them.

Contact one of the instructors if you have questions.

Due Date: Week 7 of a 15-week semester or Week 3 of an 8-week online course

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Project Element 2: Excel Spreadsheet with Table and Chart

Instructions

Make sure you have reviewed all of the details on the Project Overview page.

Input the data from your source (URL from Project Element 1: Topic and Data) into an Excel spreadsheet. There are several ways to do this:

Tab-Separated Data

Select (highlight) all numbers, and copy. Then paste into cell A1 of a new Excel spreadsheet. Sometimes, when you do this, the data is automatically arranged in separate columns. Other times, all data may be pasted into column A. If this happens, you will need to highlight column A, click on the Data tab in the ribbon, then select Text to Columns. Contact one of the instructors if you have questions.

agency_cd	site_no	datetime		tz_cd	04_00060		04_00060_cd	17_00065
5s	15s	20d	6s 14n	10s	14n	10s		
USGS	05576000	2012-12-24 00:00		CST	2.6	P	4.81	P
USGS	05576000	2012-12-24 00:15		CST	2.6	P	4.81	P
USGS	05576000	2012-12-24 00:30		CST	2.6	P	4.81	P
USGS	05576000	2012-12-24 00:45		CST	2.6	P	4.81	P
USGS	05576000	2012-12-24 01:00		CST	2.6	P	4.81	P
USGS	05576000	2012-12-24 01:15		CST	2.6	P	4.81	P
USGS	05576000	2012-12-24 01:30		CST	2.6	P	4.81	P
USGS	05576000	2012-12-24 01:45		CST	2.6	P	4.81	P
USGS	05576000	2012-12-24 02:00		CST	2.7	P	4.82	P
USGS	05576000	2012-12-24 02:15		CST	2.6	P	4.81	P
USGS	05576000	2012-12-24 02:30		CST	2.7	P	4.82	P
USGS	05576000	2012-12-24 02:45		CST	2.7	P	4.82	P
USGS	05576000	2012-12-24 03:00		CST	2.7	P	4.82	P
USGS	05576000	2012-12-24 03:15		CST	2.7	P	4.82	P
USGS	05576000	2012-12-24 03:30		CST	2.7	P	4.82	P
USGS	05576000	2012-12-24 03:45		CST	2.7	P	4.82	P
USGS	05576000	2012-12-24 04:00		CST	2.7	P	4.82	P

Table of Data

Select (highlight) the entire table, and copy. Then paste into cell A1 of a new Excel spreadsheet.

Date / Time	Dis-charge, ft3/s,	Gage height, feet,
12/24/2012 00:00 CST	2.6^P	4.81^P
12/24/2012 00:15 CST	2.6^P	4.81^P
12/24/2012 00:30 CST	2.6^P	4.81^P
12/24/2012 00:45 CST	2.6^P	4.81^P

Downloadable Data

Some data websites provide a link for downloading data into Excel. Look for a link either above or below the table. Download the file, then open it in Excel.

Crude Oil Production

Period-Unit: Monthly-Thousand Barrels

Download Series History Definitions, Sources & Notes

Production	Graph / Clear	May-12	Jun-12	Jul-12	Aug-12	Sep-12	Oct-12	View History
U.S.	☐	195,416	187,033	197,056	194,786	194,509	211,434	1920-2012
PADD 1	☐	706	693	701	723	722	902	1981-2012
Florida	☐	171	179	189	173	179	199	1981-2012
New York	☐	31	30	31	31	30	31	1981-2012
Pennsylvania	☐	313	303	313	313	303	422	1981-2012
Virginia	☐	1	1	1	1	1	1	1981-2012
West Virginia	☐	191	181	167	205	209	250	1981-2012

If none of these methods work, you can always enter the data into Excel by hand. You may have to do it this way if your numbers come from more than one website or if you find data in a print publication.

For this assignment:

1. Use one of the methods above to create an Excel file with your data.
   - If your table does not automatically have column headings in row 1, then insert a row and type in headings.
2. Make a graph
   - Choose the scales on both X-axis and Y-axis so that your data points spread across the entire chart area.
   - Include labels on the axes, and add a title to each axis.
   - If your graph has more than one data series, then include a legend to explain.
3. Save your file, and either upload it to the class website or print and hand in hard copy.

Contact one of the instructors if you have questions.

Due Date: Week 9 of a 15-week semester or Week 5 of an 8-week online course

Project Element 3: Summary (First Draft)

Instructions

Make sure you have reviewed all of the details on the Project Overview page.

Submit a draft of the summary section of your poster. The summary should:
- Mention the organization, agency, or scientist that collected the data.
- State where the numbers came from and when they were collected.
- Be mostly a discussion of the graph:
  - What the graph shows
  - Why this is valuable information
  - Whether it suggests a direction for future study
  - **Discussion of your graph is the most important part of the summary!**
- Not contain any errors in spelling or grammar. Run a spell-checker!
- Be approximately 300 words in length.
- Fit on a single sheet of paper.
  - On the poster itself, your summary should be in 18-point font.
  - The summary should fill an entire sheet of paper.
  - You may need to adjust margins, font type, and font size to satisfy both of these requirements.

For this assignment, save your summary as a Word or text document; upload it to the class website or print and hand in hard copy. Contact one of the instructors if you have questions.

Due Date: Week 11 of a 15-week semester or Week 6 of an 8-week online course

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Project Element 4: References

Instructions

Make sure you have reviewed all of the details on the Project Overview page.

Submit your complete reference list, including data, background information, pictures, maps, etc. No particular format is required for references, but readers must be able to understand what each reference is and where to find it.

Three references are required, but you will receive a higher score for your poster if you have more.

Websites are acceptable references, but use them carefully. Some websites are more reliable than others. Contact an instructor if you have questions about a specific site. Also, you will receive a higher score if you include printed resources such as textbooks or journals.

For this assignment, save your references as a Word or text document; upload it to the class website or print and hand in hard copy. Contact one of the instructors if you have questions.

Due Date: Week 12 of a 15-week semester or Week 7 of an 8-week online course