

2002 Winter Olympic Medal Standings Teacher Directions



Section 1: Collecting the Data – Feb 8 - 24

Print the document, “olydata.pdf” (linked from the description of this activity on the Sun Associates website and distribute to students. Students may work in pairs or individually to track the Olympic medals that are won. They can use the Internet, newspapers, or other news media for gathering data. You may want to bookmark the website, (<http://www.uen.org/2002/>), into your browser for the latest information, or use your local newspaper.

Section 2: Creating a Chart

Copy the following pages on “Creating a Chart Using Excel”. Have students complete this activity on the computer. Students may explore various types of charts to present their data. Print out the student-created charts.

An example of a data sheet and the chart it produced follows below. This data is drawn from 1998 Winter Olympic Medal Standings.

1998 Winter Olympic Medal Standings by Country

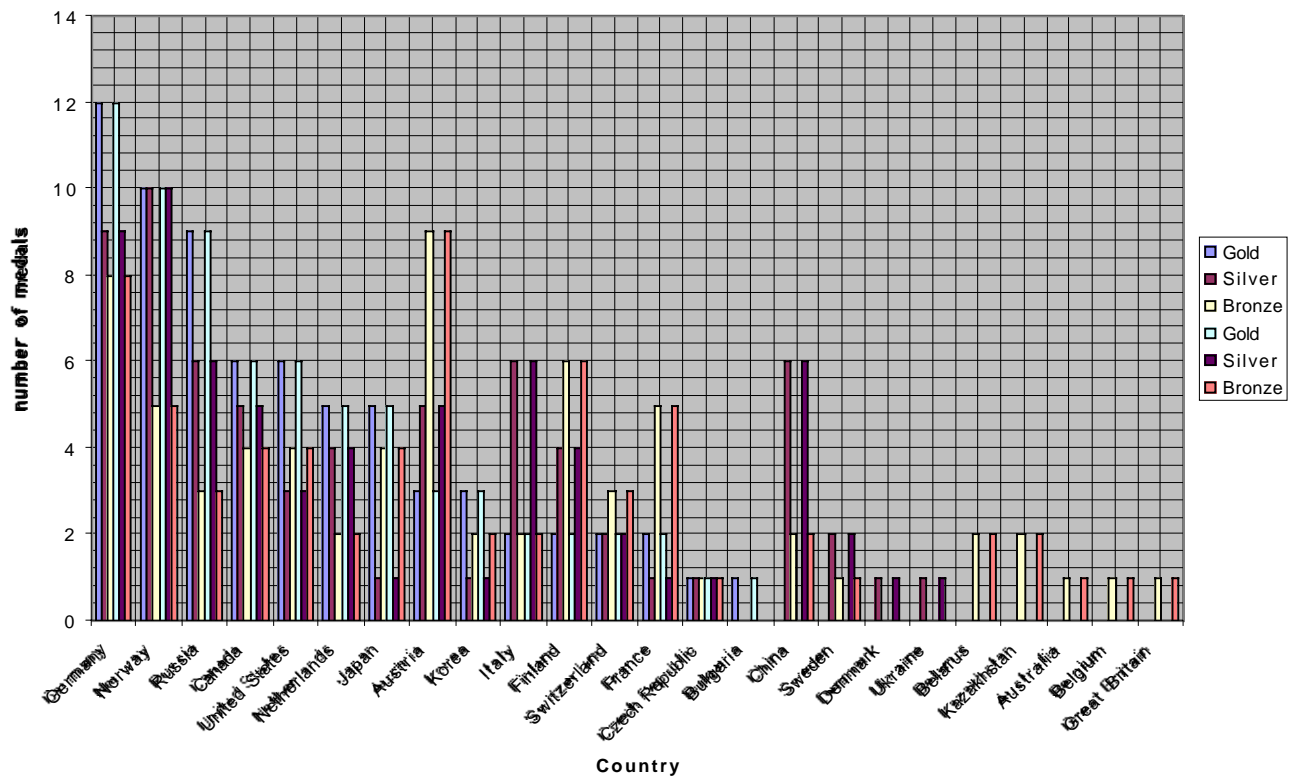
| Country | Gold | Silver | Bronze |
|----------------|------|--------|--------|
| Germany | 12 | 9 | 8 |
| Norway | 10 | 10 | 5 |
| Russia | 9 | 6 | 3 |
| Canada | 6 | 5 | 4 |
| United States | 6 | 3 | 4 |
| Netherlands | 5 | 4 | 2 |
| Japan | 5 | 1 | 4 |
| Austria | 3 | 5 | 9 |
| Korea | 3 | 1 | 2 |
| Italy | 2 | 6 | 2 |
| Finland | 2 | 4 | 6 |
| Switzerland | 2 | 2 | 3 |
| France | 2 | 1 | 5 |
| Czech Republic | 1 | 1 | 1 |
| Bulgaria | 1 | 0 | 0 |
| China | 0 | 6 | 2 |
| Sweden | 0 | 2 | 1 |
| Denmark | 0 | 1 | 0 |
| Ukraine | 0 | 1 | 0 |
| Belarus | 0 | 0 | 2 |
| Kazakhstan | 0 | 0 | 2 |

| | | | |
|---------------|---|---|---|
| Australia | 0 | 0 | 1 |
| Belgium | 0 | 0 | 1 |
| Great Britain | 0 | 0 | 1 |

Now that you have completed the tracking sheet make a bar graph that shows all the countries that **won** medals during the games.

1. Open a new *Excel* document and make a spreadsheet of all the countries that won medals. Use the categories- Country, Gold, Silver, and Bronze. (see below)

1998 Winter Olympic Medal Standings by Country



| | A | B | C | D | E | F |
|----|---|-------------|---------------|---------------|---|---|
| 1 | 2002 Winter Olympic Medal Standings by Country | | | | | |
| 2 | | | | | | |
| 3 | Country | Gold | Silver | Bronze | | |
| 4 | | | | | | |
| 5 | | | | | | |
| 6 | | | | | | |
| 7 | | | | | | |
| 8 | | | | | | |
| 9 | | | | | | |
| 10 | | | | | | |

2. Highlight the data that you want to include in your chart (country, gold, silver, and bronze headings along with the numbers under each).

3. Click **Insert, Chart**

4. Follow these four steps to make a bar graph of the data.

Step 1 of 4

- Under chart type choose **Column**, then click **Next**.

Step 2 of 4

- Under the data range tab check to make sure **Series in: Columns** is chosen, then click **Next**.

Step 3 of 4

- Under the title tab give your chart the title **2002 Winter Olympic Medal Standings by Country**
- Label the category (x) axis **Country**
- Label the value (y) axis **Number of Medals**
- Under the gridlines tab check all major and minor gridlines
- Click **Next**

Step 4 of 4

- Choose place chart as **New Sheet** and give it the title **Olympic Medal Graph**

Section 3: Discussion Questions and Extensions

An important aspect of working with data is the interpretation of the data. Important questions should be asked about the charts. What standards of measurement are being used in the charts, and can we rely on these measurements qualitatively? Would the data chart show a different perspective if the scale were different? Finally, what can we learn from the results?

Here are some examples for extensions to follow this lesson. If you would like to share other successful activities that you have used with our readers, please send them to info@sun-associates.com

1) Ask students to rank countries on the basis of medals won, and discuss how different countries may produce different rankings based on different ordering criteria. (E.g. total # medals, total # of gold medals, giving a certain # of points to gold, silver, and bronze medals)

2) Have students interpret data in a graph and write a summary of that interpretation

Example: Are you bigger or smaller than your great- grandparents were at your age? Graph the data on the average height and weight of North American boys from 1900 and 2000. What can you conclude from the graphs? What are some possible explanations for this increase in size?

3) What other information can we collect about people, and how would we make up a chart? Have students research careers or find specific activities that use statistics.

4) How would you create a data sheet and chart for collecting weather for a month?"

5) What other data can students think about collecting in this way? Can students make their own project about a personal collection?