

USGS Data Exploration Unit: Bald Eagle Activity 2 Excel Directions

Taking another look – Bald Eagle Data divided by State

You may need to refer to the Excel directions handed out earlier for Bald Eagle Activity

1. Be sure to have them at hand.

Sometimes looking a data in a different way reveals new insights. In this exercise you will take a second look at your data by dividing the data into groups by state and then further dividing the data for each state into 2 year groups: 1969-1979 and 1980-2000. You will then make a graph and discuss your results.

Section A: Organize your data

1. Make a copy of “BaldEagleSort” and name this copy “BaldEagle2”. Use “BaldEagle2” for the rest of this activity.
2. Sort multiple columns. Go to “Data” on the menu bar and select “Sort”. Sort by “STATE”, Then by “YEAR_FROM”, Then by “YEAR_TO”. Make sure Header row is selected and then click ok.
3. Your data is now arranged in ascending order by state. Within each state group the data is further organized in ascending order by year. Using the same procedure we used in Bald Eagle Activity 1, insert 3 rows to separate every state group. For example, first separate Alaska (AK) from California (CA). You should end up with 6 state groups: Alaska (AK), California (CA), Delaware (DE), Florida (FL), Maryland (MD), and Maine (ME).
4. Now go back and insert 2 rows to separate the data for each state into 2 year groups: 1969-1979 and 1980-2000. For example, for AK insert 2 rows after row 7. CA and FL cannot be divided into 2 year groups since there is only data for one of the two time periods. Leave these states as they are; they will only have 1 year group.

Section B: Calculate DDE averages

Now calculate DDE group averages for each state/year group. Follow the same procedure you used in Bald Eagle Activity 1:

1. Title column K “N*DDE” and column L “DDEgrpavg”. Format cells for both of these columns to be 1 decimal numbers.
2. In cell K2, type the formula “=H2*I2”, hit enter, and then highlight K2-K7 and hit Control “d”. Repeat this to other cells in column K as needed.
3. Using Σ , determine sum values for N and N*DDE for each state/year group.
4. Calculate the “DDEgrpavg” for each state/year group by using the same formula you created in Bald Eagle Activity 1 to calculate a group DDE average.

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Section C: Graph your results

- ➡ 1. Write down the values for N and DDEgrpavg for each state/year group in the table provided your workbook.
2. In Excel, go to “Insert” on the menu bar and select “Worksheet”.
3. Recreate the table in your workbook, the one you just filled in for step 1 of this section, in the new worksheet you just inserted in Excel. Include titles for each column.
4. Graph your results:
- Click on the bar graph icon. Choose “Column” for Chart type and the left top icon for Chart sub-type with the description name “Clustered Column”.
 - The correct data range should automatically be selected. You should see a graph displayed in the Chart Wizard in which each state is listed on the x-axis with two columns, one for each year group if available for that state. If this is not the case, select cells A2-C7 as your Data range using your mouse in Sheet1 and make sure Columns is marked for Series in. Click Next.
 - For Chart title type, “DDE in Bald Eagle eggs by State and Year “, for Category (X) axis type “State”, and for Value (Y) axis type “DDE” ug/g ww. Then go to the Data labels box and select “Show value”. Click on Next.
 - Place chart as a new sheet. Click finish.
- ➡ *****Save to disk. Print out graph and worksheet, you will need to hand these in with your workbook and you will use them to answer the questions in your workbook.**