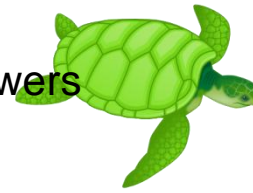


Florida Sea Turtle Nesting Data Answers



Mapping out the Data

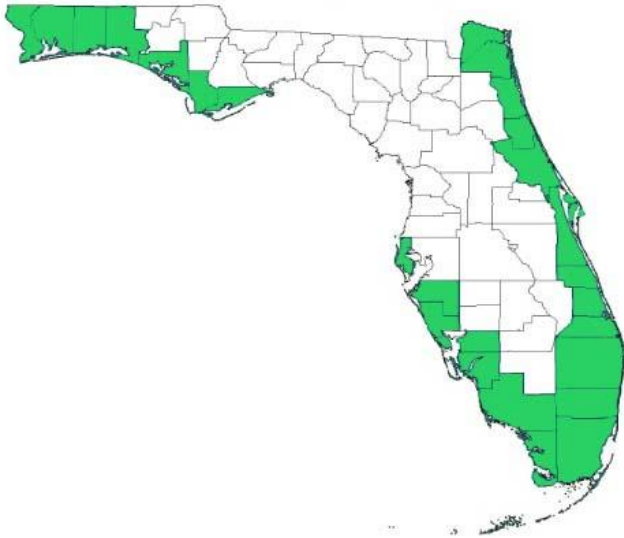
Using the data provided, locate and color in the counties in which Green, Leatherback and Loggerhead turtles have been observed nesting.

Green data: http://research.myfwc.com/engine/download_redirection_process.asp?file=Green_Turtle_Nesting_Data_1990-2006.pdf&objid=2496&dctype=article

Leatherback data: http://research.myfwc.com/engine/download_redirection_process.asp?file=Leatherback_Nesting_Data_1990-2006.pdf&objid=2479&dctype=article

Loggerhead data: http://research.myfwc.com/engine/download_redirection_process.asp?file=Loggerhead_Nesting_Data_1990-2006.pdf&objid=2411&dctype=article

GREEN



LEATHERBACK



LOGGERHEAD

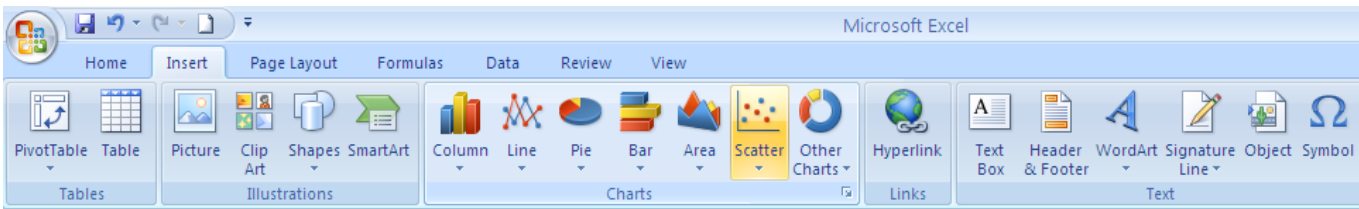


Graphing out the Data

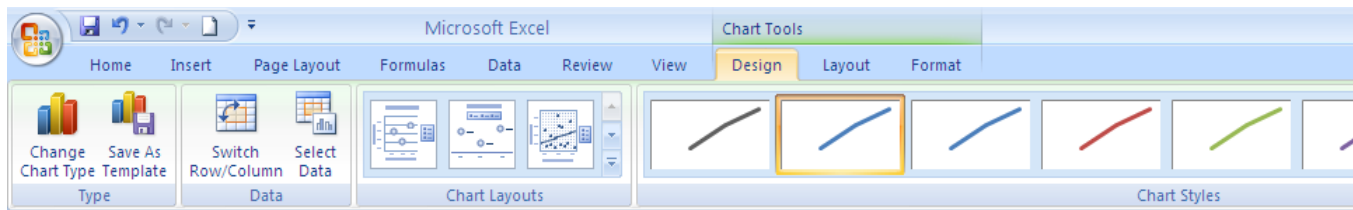
Using the same data, make a graph using Microsoft Excel which depicts the change in **yearly statewide total** nesting observations for the three turtles from 1990 to the present date.

Directions for making a graph in Excel 2007:

1. Open up a new spreadsheet.
2. In cell **A1** type the **title** of the graph.
3. In cell **A2** type **Year**.
4. In cell **B2** type **Green**.
5. In cell **C3** type **Leatherback**.
6. In cell **D4** type **Loggerhead**.
7. In **column A** fill in years starting with 1990 to end date.
8. In **column B** fill in the nesting data for Green sea turtles starting with 1948 to present.
9. In **column C** fill in the nesting data for Leatherback sea turtles.
10. In **column D** fill in the nesting data for Loggerhead sea turtles.
11. Select a cell from within the data set (highlight any date or nesting number).
12. Click on the **Insert tab** in the tool bar at the top of the screen. Chose the **Scatter** plot graph in the **Charts** group (see below).



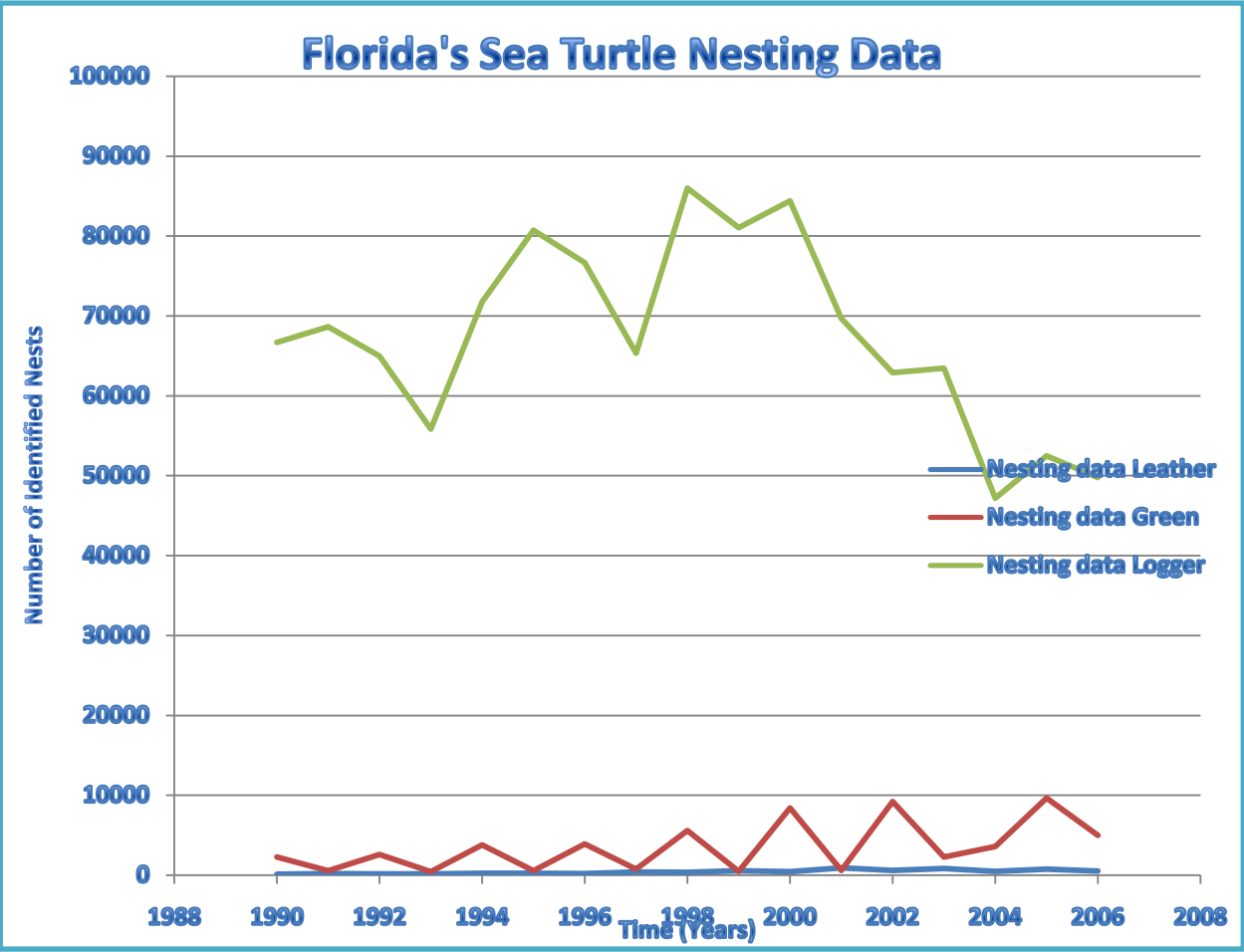
13. Choose a scatter plot graph with **straight lines** and **no markers**.
14. You can change the color of the line and background of the chart using the **Design tab** in the **Chart Tools** group (see below).



15. Click on **Layout** in the **Chart Tools** group. Use the **Chart Titles**, **Axis Titles** and **Legend** to label your data.
16. Click on **Format** to further change colors, borders and fonts within your chart.
17. Right click on your chart. Select **Move Chart** and choose to place your chart in a **New Sheet**.
18. Enlarge your chart so that it fills the page. **Print** your Chart on a separate piece of paper.
19. Go back to **Sheet 1** and **print** out your data set.

Nesting data

Year	Leather	Green	Logger
1990	120	2266	66685
1991	188	550	68652
1992	177	2603	64976
1993	142	435	55826
1994	259	3783	71753
1995	230	568	80714
1996	205	3906	76668
1997	400	737	65305
1998	351	5557	85988
1999	558	479	81046
2000	453	8404	84386
2001	935	581	69681
2002	596	9201	62905
2003	842	2262	63446
2004	473	3577	47173
2005	782	9642	52469
2006	540	4970	49776



Questions

1. **List** the counties in which all three sea turtles have nesting sites.

Escambia, Okaloosa, Bay, Gulf, Sarasota, Monroe, Miami-Dade, Broward, Palm Beach, Martin, Saint Lucie, Indian River, Brevard, Volusia, Flagler, Saint Johns, Duval and Nassau counties.

2. **Describe** the *trends*, or *patterns*, in the nesting data for each sea turtle (use the graph you created to answer this question.)

Answers may vary.

Green: alternating years of higher and lower number of nests, showing a slight increase (on average)

Leatherback: small change in number of nests between years, some oscillation, showing a slight increase (on average)

Loggerhead: almost on a two year cycle of peaks and declines until after 2000 mostly decreasing in number

3. **Describe** the *differences* in the nesting data of the sea turtles.

Answers may vary – students should note differences between number of nesting sites (loggerhead most, leatherbacks least), should also note differences in fluctuation between years (cycles).

4. **Explain** how this data might be useful to conservation biologists.

Answers may vary – students should explain location and number of nesting sites important for conservation biologists because it allows them to identify areas where turtles are most active in nesting to create and enforce protection laws (among other possible answers.)