

Part A: Shark Identification Information

Record the information from the shark data cards for each shark on the table below. These are common variables that marine scientists record. Do not forget units.

Shark #	Shark ID #	Temperature in °C	Salinity in ppt	Month	Sex	Age Class
#1						
#2						
#3						
#4						
#5						

Part B: Bloody Sampling Data

For each shark, take three subsamples and record the number of stress biomarker beads, then calculate the mean.

Shark # _____	Mean Biomarker Count:	Sample 1: _____
Sample 1: _____	_____	Sample 2: _____
Sample 2: _____	Shark # _____	Sample 3: _____
Sample 3: _____	Sample 1: _____	Mean Biomarker Count:
Mean Biomarker Count:	Sample 2: _____	_____
_____	Sample 3: _____	
Shark # _____	Mean Biomarker Count:	
Sample 1: _____	_____	
Sample 2: _____	Shark # _____	Shark # _____
Sample 3: _____		

Student Worksheet

Name: _____

Sample 1: _____

Mean Biomarker Count:

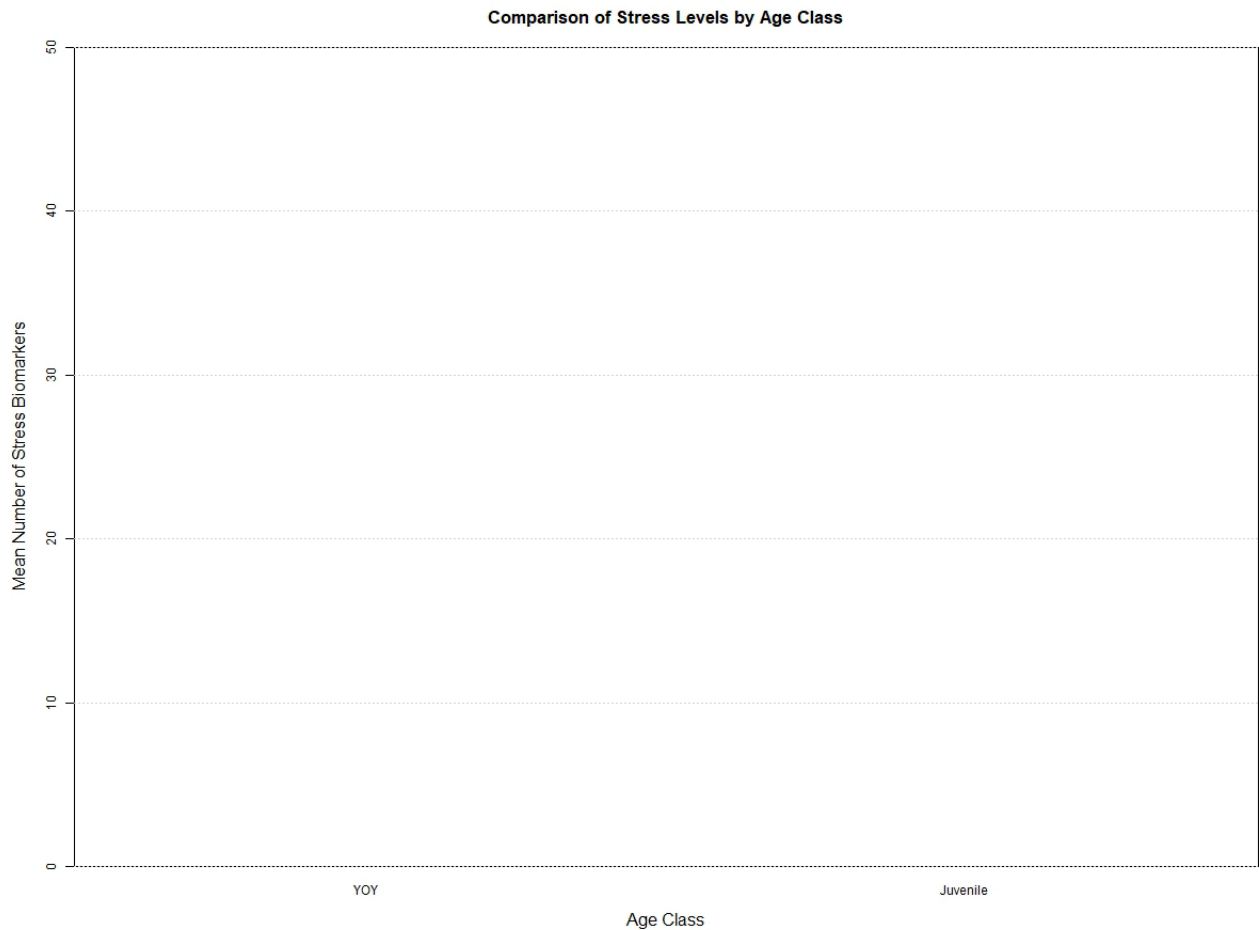
Sample 2: _____

Sample 3: _____

Part C: Graphing Data

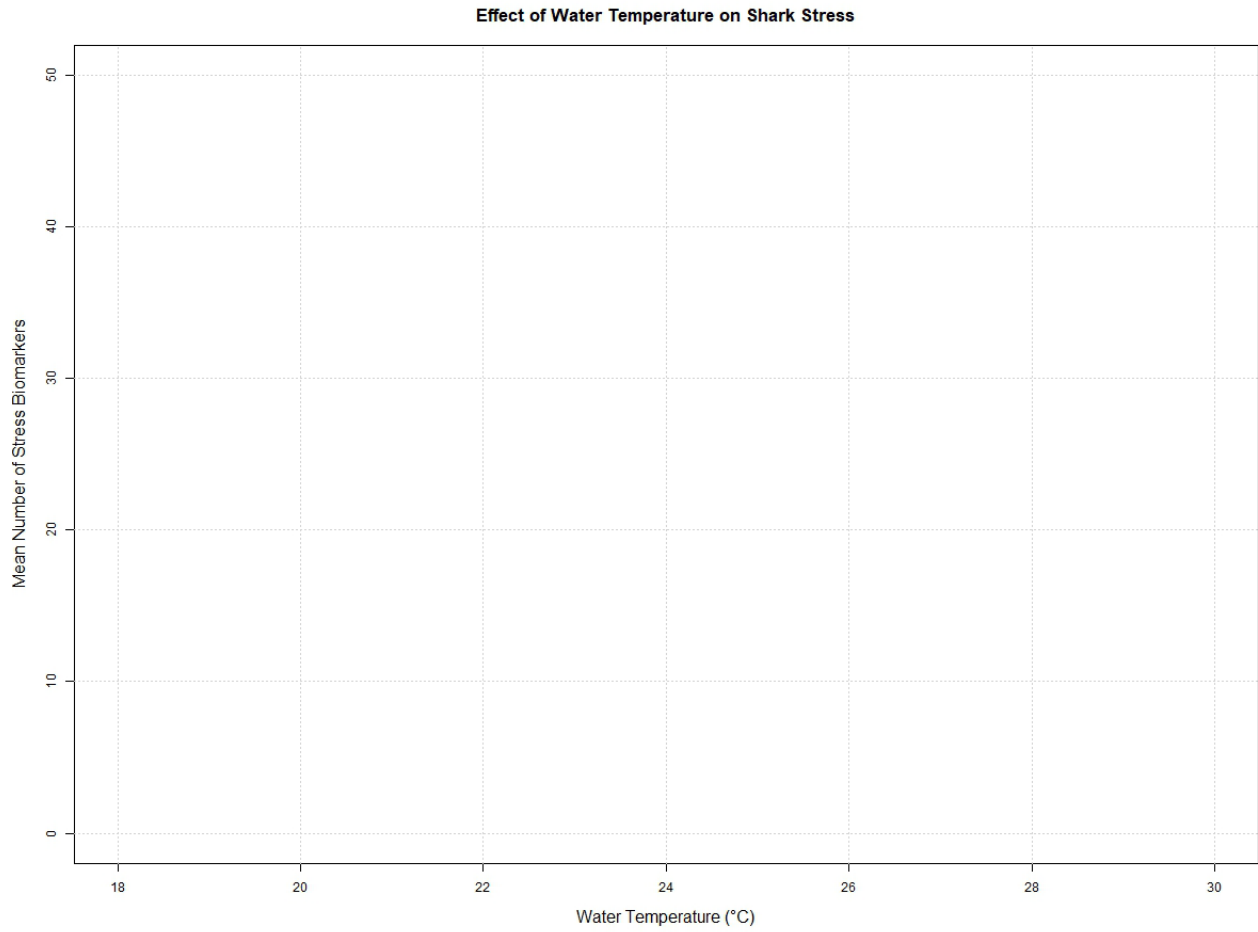
For each graph, first determine what type of graph would best suit the data. Would a bar graph or a line graph be appropriate for the data?

Type of graph: _____



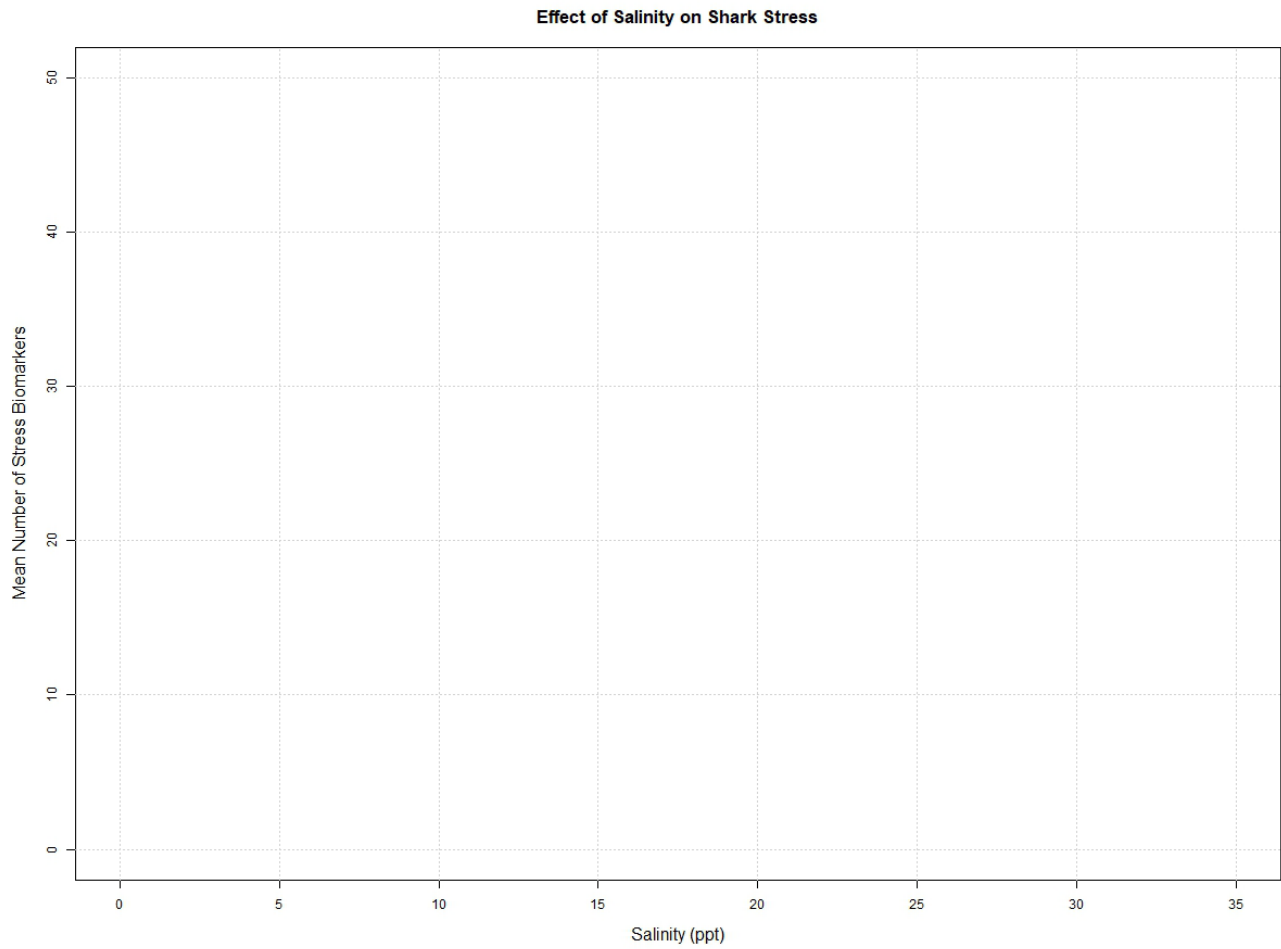
1. Describe what you see.

Type of graph: _____



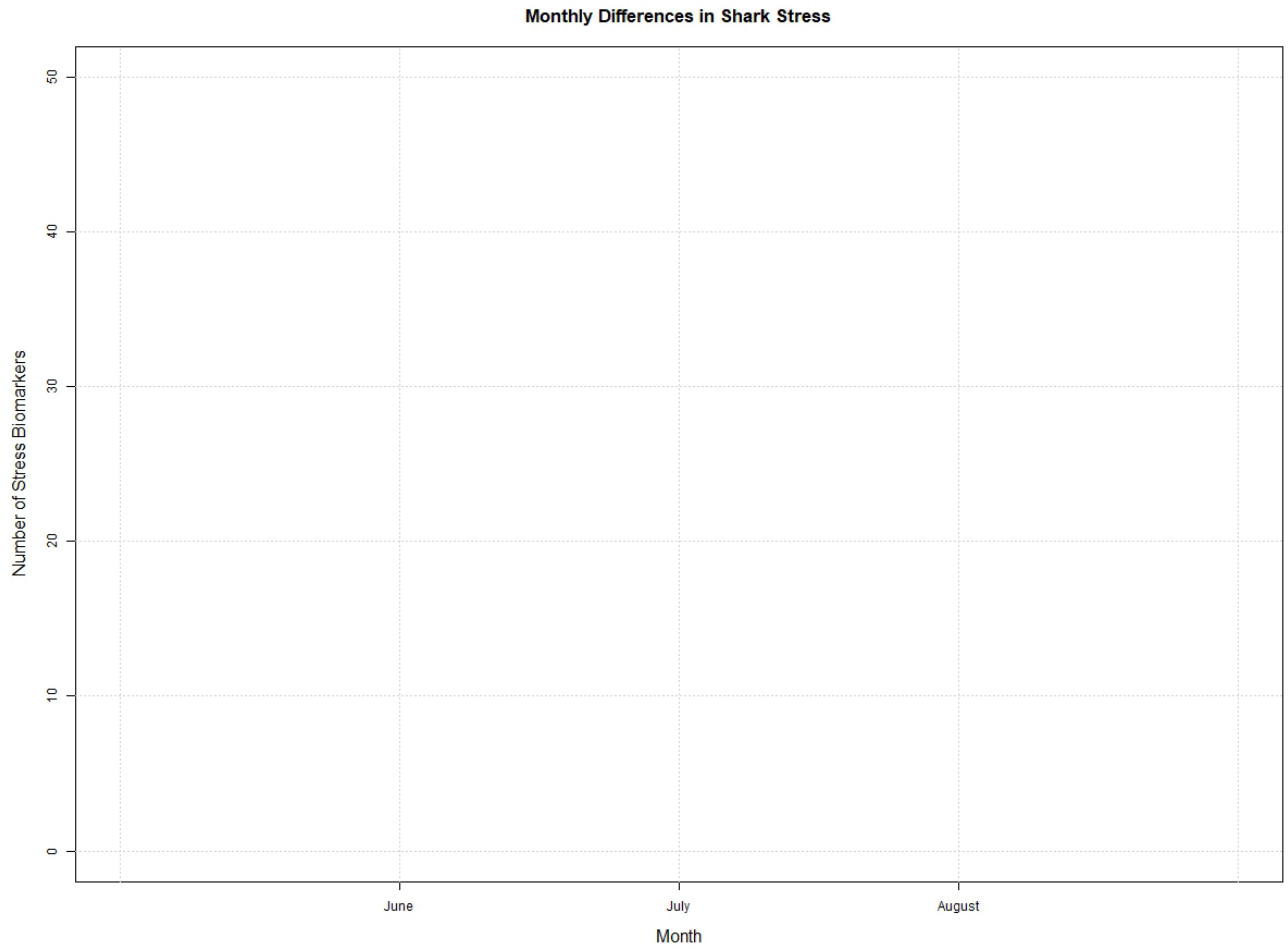
2. Describe what you see.

Type of graph: _____



3. Describe what you see.

Type of graph: _____



4. Describe what you see.

Part D: Data Analysis Questions

1. Which shark had the highest mean biomarker count? What environmental conditions were associated with that shark?
2. Which variable appears to be most strongly related to higher stress levels? Use evidence from your data.
4. Why is it important that scientists take multiple samples and calculate a mean instead of relying on one measurement?
5. Give 3 examples of an environmental variable.
6. Describe what a stressor is and give one example of how a stressor can affect a fish.