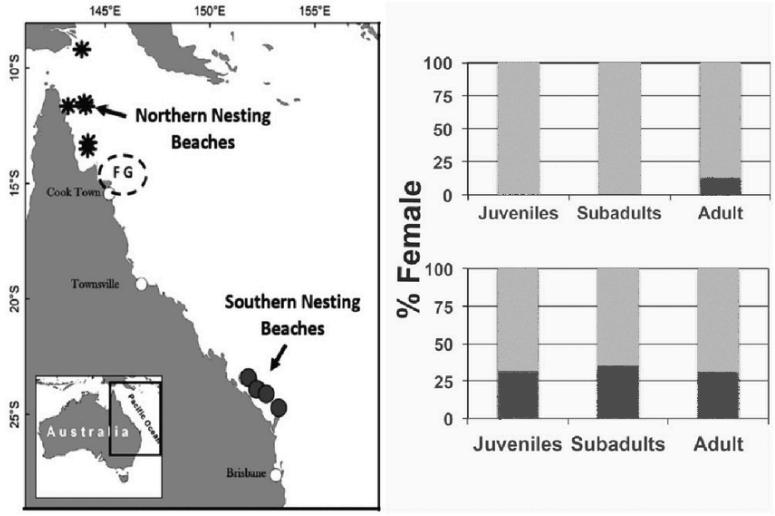
Name: _____ Date: _____

Sexing Turtles - "Hot Chicks and Cool Dudes" - CER

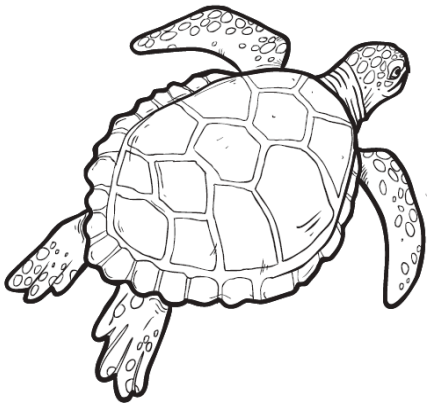
On average, each sea turtle nest contains 100 eggs. The female digs a nest to a depth of 46-56 cm (18-22 inches) and deposits the eggs. There is a natural temperature gradient that occurs within the nest. The eggs at the upper range of temperature (29C) produce females. Eggs at the lower range produce males.

The data shows green turtle eggs hatched in two locations in Australia at the Great Barrier Reef. Australia is in the southern hemisphere. The Northern beach locations are closer to the equator and have warmer temperatures than the southern locations.

Examine the graph showing the percentages of females hatched at each location The upper graph summarizes the proportions of females (gray) and males (black) in each life stage class for the Northern GBR population. The lower graph shows similar data for the Southern GBR population.



Source: DOI: 10.1093/icb/icaa044



1. What determines the sex of hatchling sea turtles?

2. The data shows two hatching sites in Australia. How does the location of the sites influence the temperature of the nests?

3. Based on the data, what CLAIM can be made about the sex ratios of turtles at the two locations?

4. Summarize the EVIDENCE from the graphs that support the claim.

5. How does this study connect to the broader issue of climate change? (REASONING)

6. How could the data from this study be used to protect endangered turtle populations?