

## Observing a Sea Turtle from the Eastern Pacific

### Description:

In this two-part activity, you will observe a live sea turtle in order to identify the species of this sea turtle, and compare it to an ancient, extinct marine turtle.

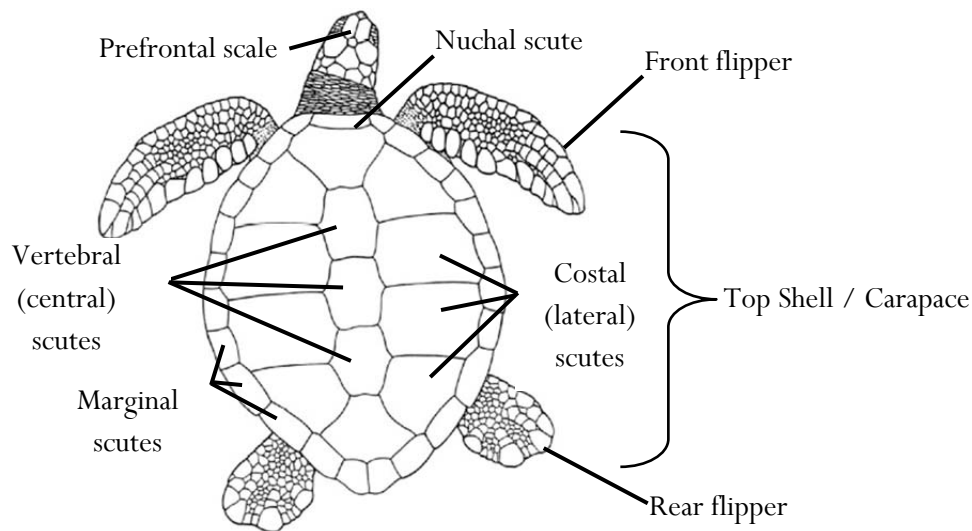
### Part A – Sea Turtle Species Identification

There are seven species of sea turtles in the world. Five of these species are found on the Eastern side of the Pacific Ocean – along the coast of Mexico and California. Today you will observe one of these turtles and make observations about its physical appearance by making use of a special identification road map called a “dichotomous key”.

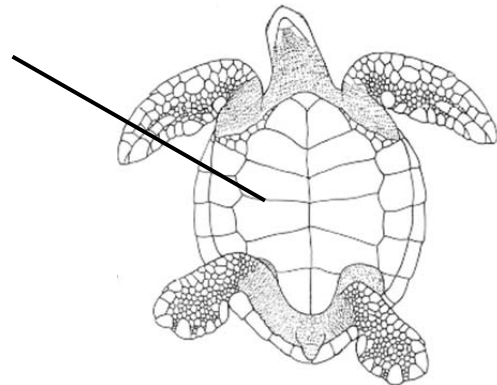
Review the diagram below, and then use the data table provided to record your observations. After recording your observations, use the provided key to identify the species of sea turtle.

### External Anatomy of a sea turtle

(*External = outside; Anatomy = parts of the body*)



A sea turtle's bottom shell is called the “plastron”.



Images adapted from: Pritchard, P. and Mortimer J., Taxonomy, external morphology, and species identification, Found In: Eckert, K. L., Bjorndal, K. A., Abreu-Grobois, F. A., Donnelly, M. Eds, *Research and Management Techniques for the Conservation of Sea Turtles*. IUCN/SSC Marine Turtle Specialist Group Publication No. 4. 235 pp.; 1999, p. 21-38.

**Observation Data Table**

<b>Initial observations about turtle:</b> (size, carapace color, plastron color, what is the turtle doing? other notes)		
<b>External Anatomy</b>	<b>What to look for</b>	<b>Record your responses in this column, along with any additional observations</b>
<b>Carapace</b>	<i>Appears Hard or Soft? Coloring?</i>	
<b>Vertebral Scutes</b>	<i>How many?</i>	
<b>Costal Scutes</b>	<i>How many on each side?</i>	
<b>Nuchal Scute</b>	<i>Does it touch the costal scutes?</i>	
<b>Marginal Scutes</b>	<i>How many on each side?</i>	
<b>Prefrontal Scales</b>	<i>How many?</i>	

Use the provided Sea Turtle Identification Key and your recorded observations to correctly identify the species of sea turtle and answer the question below.

**What species is the turtle?** \_\_\_\_\_  
*Common name*
*Scientific name*

**What information from your Sea Turtle Identification Key supports this theory?**

### **Part B – Meet an Ancient Sea Turtle Species**

The seven species of sea turtles shown on the dichotomous key used for Part A are called “extant” species because they are still alive. Species that are no longer living are called “extinct”. Millions of years ago, there were other species of sea turtles swimming in the world’s oceans. Some of these ancient, now extinct, sea turtles were huge! Looking at the pictures below of *Archelon*, record similarities and differences between this *extinct* turtle, and today’s *extant* turtles, like the one you saw recently. Then theorize about why these changes may have occurred.

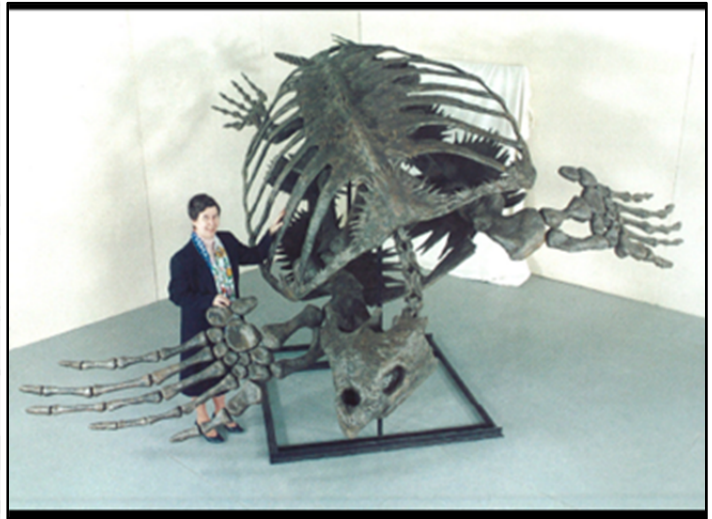
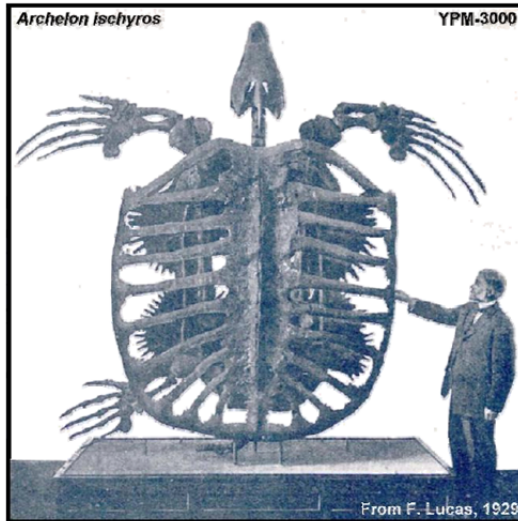
**Similarities between *extinct* and *extant* sea turtles:**

**Differences between *extinct* and *extant* sea turtles:**

**In what ways have sea turtles changed over the past 100 million years?**

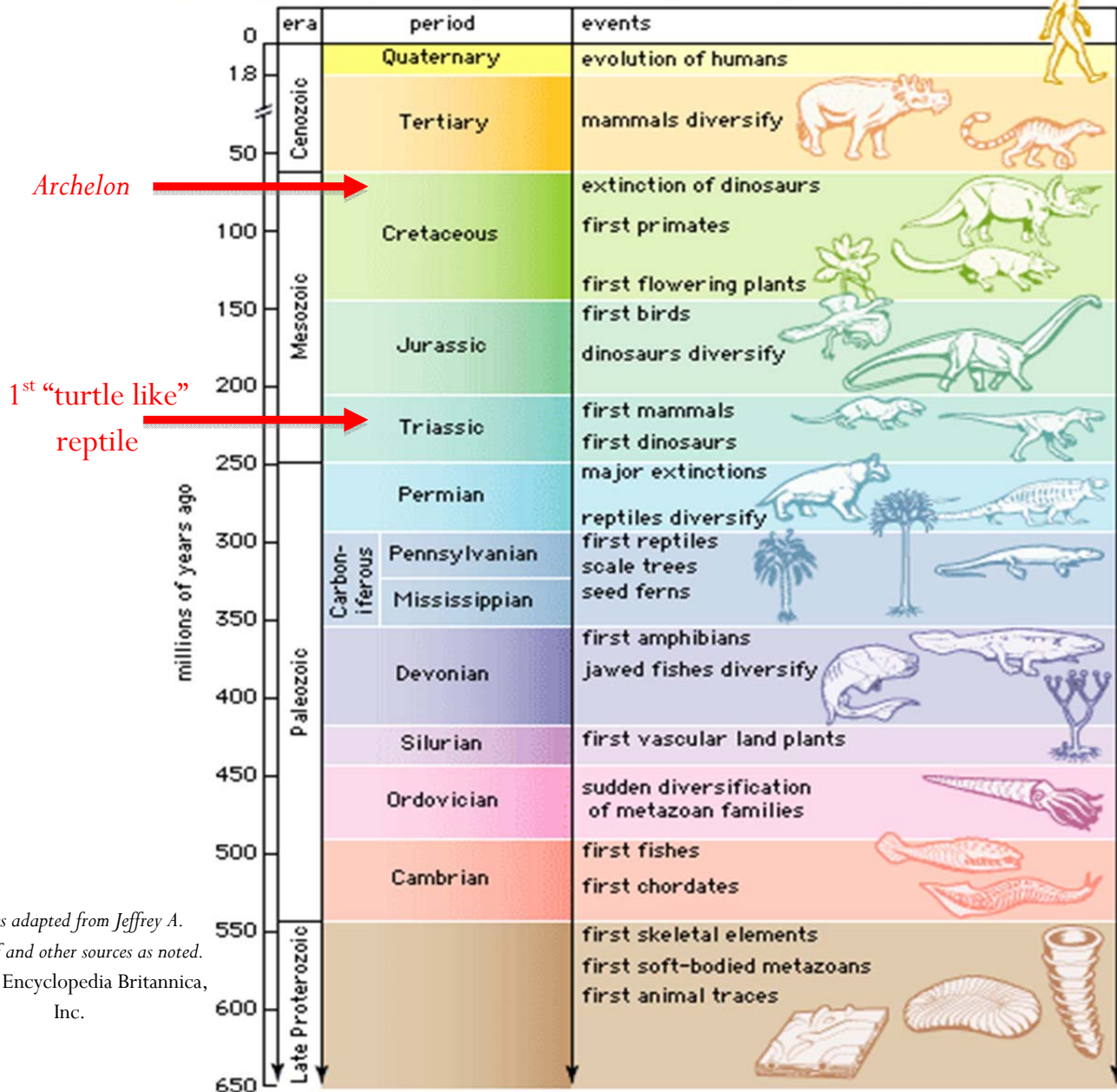
**Why do you think sea turtles have needed to adapt over time?**

Meet *Archelon*, the largest prehistoric turtle that ever lived; about 15 ft long from head to tail



from Cretaceous (144.2 - 65 mva)

Geologic time scale, 650 million years ago to the present



Images adapted from Jeffrey A. Seminoff and other sources as noted.  
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