Tortoise Anatomy (Confirmation)

An Elementary Science Lesson Plan
Designed For Group Inquiry
Based on the 5E Inquiry Model

GRADE LEVEL: 7th Grade

SCIENCE CONCEPT (the Main Idea or Enduring Understanding): This lesson is aimed at getting students familiar with the anatomy of a tortoise. Students will analyze and label the basic anatomy of a tortoise.

RELATIONSHIP TO CALIFORNIA SCIENCE CONTENT STANDARDS:
Structure and Function in Living Systems
5. a. Students know plants and animals have levels of organization for structure and function, including cells, tissues, organs, organ systems, and the whole organism.

LEARNING OBJECTIVE:
Students will label the basic anatomy of a tortoise.

EVALUATION IDEAS:
Formative:

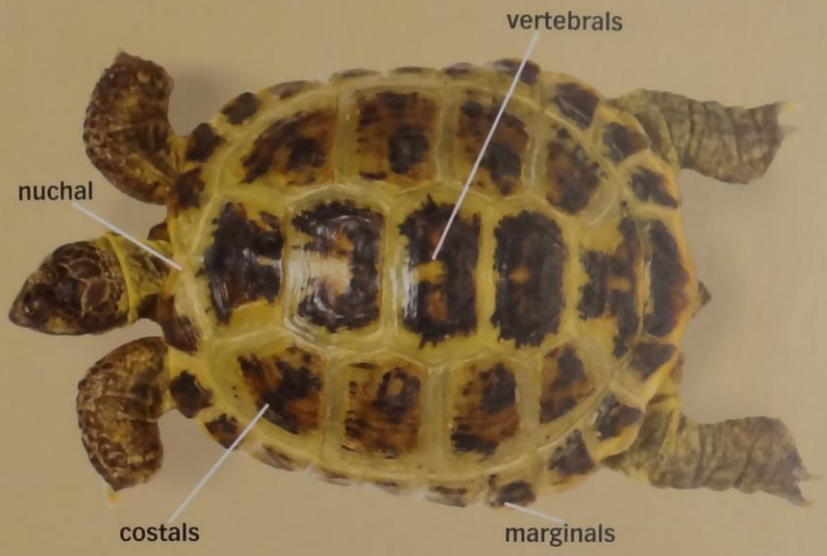
1. The teacher will go around the class and make sure that the students are labeling the tortoise correctly.
2. The teacher will make the class repeat the anatomy of the tortoise as he/she goes through it.

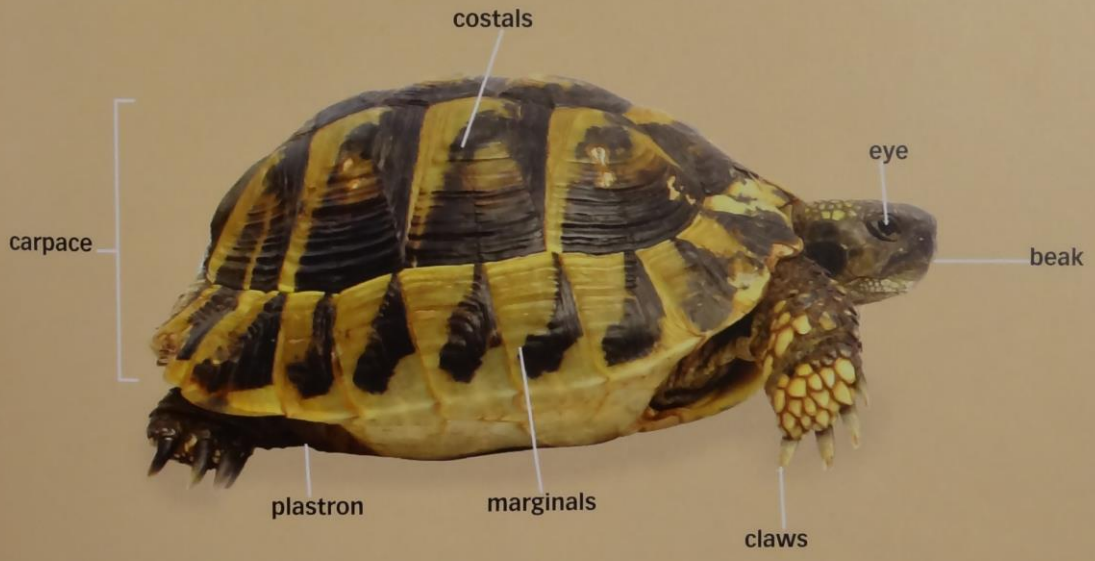
Summative:

1. Students will label the basic anatomy of a tortoise using the provided worksheet.
2. Students will point at a picture of a tortoise and name all the parts.

CONCEPTUAL BACKGROUND:
The teacher must know the basic anatomy of a tortoise as listed on the next page (Pirog, p. 19, 2012).

Tortoise Anatomy





carapace: top part of the shell
plastron: bottom part of the shell
SCL: abbreviation for Straight Carapace Length
scute: the individual plates that make up the shell

The scutes are named according to their position:
costal scutes: scutes on the side of the carapace between the marginals and the vertebrals

marginal scute: scutes on the outer edge of the carapace
nuchal scute: scute directly above the neck (absent in some species)
vertebral scute: scutes on the midline of the carapace; the scutes directly above the spinal column

LESSON PLAN IMPLEMENTATION: This lesson is designed for group inquiry with up to four students.

ENGAGE – The teacher will have the students stand up. The teacher will point at their body parts and have the students mimic and name those parts. This will help students start to think about the name of their body parts.

EXPLORE – The teacher will transition to tortoises. The teacher will use p. 19 of *Tortoises* by E. J. Pirog and go through the anatomy of a tortoise (Pirog, 2012).

EXPLAIN – The teacher will have students get into groups of 4. The teacher will handout a worksheet in order for students to compare and contrast human anatomy to tortoise anatomy.

ELABORATE – The teacher will have students state their findings. Facilitate a discussion on the comparison of tortoises and humans.

EVALUATE –
Summative – Students will label the basic anatomy of a tortoise using the provided worksheet.

Formative – The teacher will go around and make sure students are labeling the Russian tortoise's anatomy correctly.

DIFFERENTIATION PLANS:
Behavioral for Student A – Move the student to another seat.

Cognitive for Student B – Allow the student more time to think about their comparisons between humans and tortoises.

Cognitive for Student C – Allow the student more time to label the anatomy of the Russian tortoise.

Affective for Student D – Make the student a time keeper to allow everyone in his/her group to speak equally.

Language Demands for Students
E – Write the parts of the tortoise on the board as a reference
F – Make sure to point at parts of the tortoise and have the class repeat.
G – Give the student a sentence starter on their comparison worksheet such as "Humans are similar to tortoises because . . ."

LIST OF MATERIALS (PER GROUP):
1. Paper
2. Worksheets
3. *Tortoises* by E.J. Pirog

DIRECTIONS OR SPECIAL INSTRUCTIONS; SAFETY CONCERNS, ETC.

REFERENCES:
Pirog, E. (2012). *Tortoises*. Neptune City: TFH Publication, Inc.

Ferri, V. (2002). *Turtles & tortoises.* Buffalo, NY: Firefly Books.

SUGGESTED READINGS:
Alderton, D. (1988). *Turtles & tortoises of the world*. New York: Facts on File, Inc.

Taylor, B. (2004). *Nature watch turtles and tortoises*. London: Lorenz Books.