



<b>Author Name:</b> Amy Jennings	<b>Content Areas:</b> Biology
<b>Lesson Plan Title:</b> Classifying Sea Turtles	<b>State:</b> GA
<b>Lesson Time Frame:</b> 1 class period	<b>Inspired by an Earthwatch Expedition:</b> Trinidad's Leatherback Sea Turtles
<b>Student Level:</b> Elementary	

**Unit Title:** Sea Turtles

**Academic Standards:**

Content Standard C - Life Science

Students should develop an understanding of:

- The characteristics of organisms
- Life cycles of organisms
- Organisms and environments  
(from National Science Education Standards)

**Abstract:** This lesson from the sea turtles unit is designed to introduce the students to the various species of sea turtles and their differences. Introduction to dichotomous keys has already taken place and students have discussed the need for scientific names rather than just the common names we use.

**Goals:**

- Students will identify sea turtles using pictures, diagrams, and descriptions.
- Students will understand the principles of dichotomous keys and classification.

**Performance Indicators:**

- Students accurately identify sea turtles using pictures, diagrams, and descriptions.
- Students successfully use dichotomous keys to classify sea turtle species.

**Background Information:**

Students will have already worked with dichotomous keys in other activities (a great one to try is from Science and Children magazine using Bernie Bott's Every Flavor Beans, of Harry Potter fame). The students will also have been introduced to the different species of sea turtle and relevant vocabulary (see acknowledgements below).

**Materials** (all from website):

- Scientific key
- Graphic key
- Pictures, descriptions, and diagrams
- Paper, pencils, etc.

**Technology:**

If students have access to the website they can take the quizzes. The teacher can print out the other information if Internet access is not possible.

**Instructional Procedure:**

1. Students will begin with a discussion on why they think classification, keys, and taxonomy are important. The teacher can point out that even scientists have a difficult time trying to “organize” living things into neat groups, so it is sometimes hard to figure out which is which. Reiterate the importance of having Latin names for all living things. If time permits, have students research how to say “turtle” or “sea turtle” in other languages.
2. Hand out keys, either the scientific or graphic (or both). Show the students pictures of various sea turtles. Unfortunately the ones from the website don't work, but I have listed some sites that I use with good pictures. Printing them out works well, but on the computer (in a power point) is also effective.
3. Using the pictures and keys to determine which turtle is which. The students can also complete the quizzes on the website if they feel confident in their abilities!
4. To extend this activity, students can come up with other ways to make their own dichotomous keys (examples include students in the class, teachers in the school, or cars in the parking lot).

**Assessment:**

The students can take the quizzes online or the teacher can make up his/her own. Specific assessment includes if the students can tell the difference between the sea turtle species; general assessment includes being able to use dichotomous keys in different situations.

**Connections to other areas:**

This lesson could be extended into geography (mapping turtle habitats), math (measurements and comparing sizes), art (drawing pictures of turtles), etc.

**Extensions:**

See unit plan

**Acknowledgements**

Website lesson was taken from:

[http://www.education-world.com/a\\_lesson/TM/WS\\_seaturtles.shtml](http://www.education-world.com/a_lesson/TM/WS_seaturtles.shtml)

Link for vocabulary

<http://telematics.ex.ac.uk/euroturtle/ident/glossary.htm>

Picture Sites

Hawksbill Turtles

<http://www.turtles.org/hawksd.htm>

<http://www.dec.state.ny.us/website/dfwmr/wildlife/endspec/athafs.html>

#### Leatherbacks

<http://www.cresli.org/cresli/turtles/leaback.html>

<http://www.turtles.org/leatherd.htm>

<http://www.dnr.state.md.us/wildlife/leather.asp>

#### Green Turtles

<http://mbgnet.mobot.org/salt/coral/animals/green.html>

<http://www.cyhaus.com/marine/turtles/greent.gif>

<http://www.colszoo.org/animalareas/shores/gturtle.html>

#### Eastern Pacific Green (Black)

<http://mobry.dyndns.org/~bhorling/photos/Hawaii/Underwater/img221-1-0.shtml>

<http://www.seaworld.org/whats-new/znn/1997/july/wrong-way-corrigan-release.htm>

#### Australian Flatback

<http://www2.rnw.nl/rnw/en/features/cultureandhistory/031204tur2.html>

#### Loggerhead

<http://www.cyhaus.com/marine/turtles/log.gif>

<http://www.cyhaus.com/marine/turtles/logger.gif>

[http://www.nmfs.noaa.gov/prot\\_res/species/turtles/loggerhead.html](http://www.nmfs.noaa.gov/prot_res/species/turtles/loggerhead.html)

#### Kemp's ridley

<http://www.ridleyturtles.org/>

<http://www.nefsc.noaa.gov/faq/fishfaq8.html>

<http://www.cresli.org/cresli/turtles/kemprid.html>

#### Olive ridley

[http://www.nmfs.noaa.gov/prot\\_res/species/turtles/olive.html](http://www.nmfs.noaa.gov/prot_res/species/turtles/olive.html)

<http://www.seaturtleinc.com/turtles/olive.html>

[http://en.wikipedia.org/wiki/Olive\\_Ridley](http://en.wikipedia.org/wiki/Olive_Ridley)

#### **Unit Title:** Sea Turtles

**Grade Level:** 3<sup>rd</sup>

**Content Areas:** Biology, ecology, geography

**Time Allotment:** two one-hour lessons per week for approximately two months for the unit; one hour for the lesson provided

#### **Academic Standards:**

##### 1. Content Standard C - Life Science

Students should develop an understanding of:

- The characteristics of organisms
- Life cycles of organisms
- Organisms and environments

##### 2. Content Standard F - Science in Personal and Social Perspectives

Students should develop an understanding of:

- Changes in environments
- Science and technology in local challenges

\*Adapted from National Science Education Standards

**Abstract:**

The unit on sea turtles will be a part of a larger unit on environmental science that will be taught to four classes of 20 third graders each in the spring semester. While the main goal of the unit is to explain and identify reasons for conservation, both locally and on a global scale, the primary content will be based on sea turtles and their survival.

**Goals:**

- Students will recognize and identify each of the sea turtle species.
- Students will discuss the habits of sea turtles, including diets and habitat preference.
- Students will describe the life cycle of a sea turtle, including mating, nesting, location, and hatchling behavior.
- Students will become aware of conservation efforts as well as how they can contribute to conservation of sea turtles.

**Performance Indicators:**

- Are students able to recognize and identify each of the sea turtle species?
- Are students able to discuss the habits of sea turtles?
- Are students able to describe the life cycle of a sea turtle?
- In what ways have students become aware of conservation efforts?

**Background Information:** All content information the students will need will be obtained through this unit. Inquiry skills required include questioning, classifying, comparing, predicting, and measuring. Students will also have been exposed to dichotomous keys and how living things are named scientifically.

**Materials:**

Books on sea turtles

Examples:

- |   |                              |
|---|------------------------------|
| • <u>Our Wild World Series: Sea Turtles</u> | Lorraine A. Jay              |
| • <u>The Life Cycle of a Sea Turtle</u>     | Bobbie Kalman                |
| • <u>Sea Turtles</u>                        | Gail Gibbons                 |
| • <u>Sea Turtles</u>                        | Jeff Ripple                  |
| • <u>Sea Turtles: The Watchers Guide</u>    | M. Timothy O’Keefe           |
| • <u>Sea Turtles: An Ecological Guide</u>   | David Gulko and Karen Eckert |

Pictures and power point from my trip to Trinidad

Various art supplies for projects and presentations

**Technology:**

Students will visit various sites to learn more about topics such as sea turtle anatomy, conservation, and nesting sites.

Examples:

- <http://www.seaworld.org/infobooks/SeaTurtle/home.html>
- <http://www.cccturtle.org>
- <http://www.nmfs.noaa.gov/pr/species/turtles>
- [http://www.npca.org/marine\\_and\\_coastal/marine\\_wildlife/seaturtles.asp](http://www.npca.org/marine_and_coastal/marine_wildlife/seaturtles.asp)

### **Instructional Procedures:**

Sample Lesson Plan From Sea Turtle Unit: Classifying Sea Turtles (see attached)

### Examples of Other Activities:

- Turtle movement – have the students move around on the floor using only their straightened arms as an example of how difficult it is for the mother turtles to move on the beach
- Conservation – have the students find a person or organization to write to either to support their cause or ask them to change their policies. They should have enough information to back up their letter, so this would be done towards the end of the unit.
- Paper Mache – the students could make a replica of a leatherback (or other sea turtle). This would integrate both art and math, as the students would need to research to find specific dimensions of a turtle and accurately scale it (or make it life-sized!).

### Culminating Activity:

The third graders will write an ABC book for the kindergarten and first graders. Each class will have 6-7 letters and research various aspects of the turtles' lives for that page. For example: A is for approaching, C is for carapace, J is for jellyfish, etc. Each word will have a description as well as a picture, either sketches or photographs.

### **Assessment:**

Assessments depend on lessons implemented. See classification lesson plan for details.

### **Connections to Other Content Areas:**

This unit could easily be adapted to other content areas, especially social studies (beyond geography). I only teach science, but could include activities involving math (measuring, distances swam, etc.), mapping skills, reading and writing.

### **Extensions:**

Students could research a different endangered species and compare that with the sea turtles. My hope is that this will also encourage the students to look for ways to conserve in their own communities.

\*Note: This unit is intended to be a precursor to the endangered species unit that is taught in depth at our school in the 7<sup>th</sup> grade.