



Saddle Up!

Audience: Upper Elementary and Middle School

Duration: 30 minutes for key, 3 class periods for the research and creation of report

STEM Process Skills:

Observations, Conclusions, Comparing, Interpretation

Learning Objectives/Goals: The students will be able to use a classification key to identify seahorse and pipefish

TEKS: 3rd—8th grade 1A,

Ocean Literacy Principles: 2, 5

Vocabulary: appendage, camouflage, classification key, couplet, species

Set Up/Break Down: Copy the key for each student

Updates March 22, 2018

Description: Introduce your students to the world of sea horses, pipefish, and sea dragons in the order *Sygnathidae*.

Materials: Copy of the key for each student

Program Outline: Introduce the students to a classification key as a way of identifying individual species of animals that look very similar. The keys are based on making a choice between 2 characteristics. Copy the key for each student. Hand out 1 per student. Have the students identify the 3 *sygnathidae* fish located above the key. After the students have identified the fish, have them use the resources listed to research more about the animals. Have the students create a field guide page, “facebook” page, or poster to report their research.

Extensions: For younger grades, work through the key together. For older grades, have the students create their own classification key on a group of animals of their choice.

Background Information: Biologists have struggled to determine exactly how many of the 30 seahorse species live in the Gulf of Mexico. Much of their confusion has been the result of camouflaging masquerades worn by seahorses. They are capable of all manner of color changes and can even develop small, wispy appendages. Since the colors and appendages seem to be a function of environment rather than species, they offer no clues to identification.

One helpful tool to identification is the classification key. The key consists of consecutively numbers pairs of contrasting statements called couplets. Each couplet has an “A” and “B” choice which compares physical features of organisms. By reading the couplets and following the directions, given with the choice that best describes the animal, identification is relatively easy.

Resources Used:

gulfofmexicoalliance.org

www.arkive.org

www.eol.org

fishbase.org

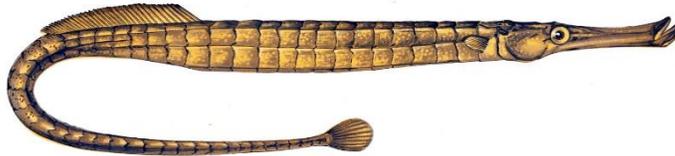
www.iucn.org

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Sygnathidae Key Page



Common name: Dwarf seahorse
Length: .8 – 1 inch



Common name: Northern pipefish
Length: 4 - 8 inches



Common name: Lined or Common seahorse
Length: 5.9 inches

Use the classification key to identify the Sygnathidae members above.

1. A. Tail, prehensile, caudal fin absent 2
 - B. Tail not prehensile, caudal fin present *Sygnathus fuscus*

2. A. Dorsal fin elements (rays) 18—19 *Hippocampus erectus*
 - B. Dorsal fin elements (rays) 12 *Hippocampus zosterae*

Using the scientific name, research more about these animals. For each animal research:

- where each animal is found in the world
- what habitats it lives in
- what it eats
- what are its predators
- is the animal is a protect

