

## HOW LARGE ARE SAWFISH?

### Educator Information For Student Activity 2

#### Lesson Summary:

This lesson examines the different species of sawfish and the maximum length of each of these species. Skills used include reading, math, and graphing.

#### Vocabulary:

Genus, species, feet, meters, graphing, data

#### Background Information:

There are six recognized species of sawfish throughout the world. In this activity the maximum length of each species will be graphed and compared. Information on each species can be found in the “Sawfish In Peril” teaching binder within each of the species profiles.

Smalltooth Sawfish (*P. pectinata*): maximum length 24.7 feet (7.6 meters)

Large-tooth Sawfish (*P. perotteti*): maximum length 21.2 feet (6.5 meters)

Green Sawfish (*P. zijron*): maximum length 24.0 feet (7.3 meters)

Freshwater Sawfish (*P. microdon*): maximum length 19.7 feet (6.0 meters)

Dwarf Sawfish (*P. clavata*): maximum length 10.0 feet (3.0 meters)

Knifetooth Sawfish (*Anoxypristis clavata*): maximum length 11.5 feet (3.5 meters)

#### Materials:

Copies of activity sheet and species profiles

Pencils: colored pencils recommended

#### Procedure:

The activity begins by getting students excited about sawfishes and about determining how large they can get! Students can form groups or work individually, and begin the activity by either 1) look up the maximum lengths of each sawfish species (enough copies of species profiles will need to be available), or 2) be given a handout with the length data for each species. They will be asked to graph the maximum length for each species on the activity sheet. A discussion will follow on how large sawfish can grow and how size is used as one measure to determine differences between species in addition to other physical differences such as number of rostral teeth and relative fin placement.

#### Discussion Questions:

How big are sawfish?

Is there much variation across the different species throughout the world?

#### Extension Activities:

Once maximum length for each sawfish species has been determined (via reading the species profiles) and graphed for comparison, a roll of yarn or string can be cut to represent the maximum length of each sawfish species. Younger students may skip the graphing activity, and participate in this activity which may be more appropriate.



## Student Activity 2: How Large Are Sawfish?

### **Sawfish can reach large sizes if they live long enough. Just how large?**

Today you will learn about the size of different sawfish species and comparing these sizes in a math and graphing activity.

### **Background**

Although little is known about some sawfish species, enough data has been gathered to give scientists information about what size each of these species can grow to. Some of this data has been collected from sawfish captured by fishing as well as preserved sawfish specimens that can be found in museum collections throughout the world.

### **Key Questions**

What sawfish species reach the largest sizes?

What sawfish species is the smallest?

### **Instructions**

Before getting started on this activity, make a guess to which species you think may be the largest and which you think may be the smallest based on a list of the sawfish common names and species names. Next, you will need to read the sawfish species profiles to find information on maximum reported lengths for each of the six species. Make a table with this data and then graph this data using a bar graph. Keep in mind, you will need to make the graph with units that will show the differences between each of the species.

### **Questions**

1) Which sawfish species reaches the largest size?

2) Which sawfish species is the smallest?

3) Was your guess correct? If so, why?

### **Extra Credit**

To be extra creative, rather than making a graph using bars, try drawing an outline of each sawfish on the graph to illustrate the maximum species length.



## Student Activity 2: How Large Are Sawfish?

### Data/Table/Graphing Sheet

#### Data

Smalltooth Sawfish (*P. pectinata*): maximum length 24.7 feet (7.6 meters)

Largetooth Sawfish (*P. perotteti*): maximum length 21.2 feet (6.5 meters)

Green Sawfish (*P. zijsron*): maximum length 24.0 feet (7.3 meters)

Freshwater Sawfish (*P. microdon*): maximum length 19.7 feet (6.0 meters)

Dwarf Sawfish (*P. clavata*): maximum length 10.0 feet (3.0 meters)

Knifetooth Sawfish (*Anoxypristis clavata*): maximum length 11.5 feet (3.5 meters)

**Create a table with the above data (using either feet or meters):**

Sawfish Species	Maximum Length

**Graph the above maximum length data (using either feet or meters as in the table above):**

