Identifying Organisms of the Great Barrier Reef

The Great Barrier Reef is located along the northeastern coast of Australia, spanning more than 2000 km North to South across a wide range of climates. The clear, shallow, coastal water is home to a wide variety of plants and animal species.

A **dichotomous key** is a tool that allows one to identify items in the natural world, such as trees, reptiles, rocks, and fish. Keys consist of a series of choices that lead the user to the correct name of a given item. *Dichotomous* means "divided into two parts", therefore, a dichotomous key always give two choices in each step.

Using the dichotomous key below and the images provided on the following pages, identify each species from the Great Barrier Reef and answer the remaining activity questions. (*Note that there is no need to print the five pages with images*.)

Identification Key:

Step 1	The fish shape is long and skinny…..**go to step 2**
	The fish shape is not long and skinny….. **go to step 3**
Step 2	The fish has pointed fins…..it is a **trumpet fish**
	The fish has smooth fins…..it is a **spotted moray eel**
Step 3	The fish has both eyes on top of the head…..**go to step 4**
	The fish has one eye on each side of the head…..**then go to step 5**
Step 4	The fish has long whip-like tail…..it is a **spotted eagle ray**
	The fish has short, blunt tail…..it is a **peacock flounder**
Step 5	The fish has spots…..**go to step 6**
	The fish does not have spots…..**go to step 7**
Step 6	The fish has chin "whiskers"…..it is a **spotted goat fish**
	The fish does not have chin "whiskers"…..it is a **band-tail puffer**
Step 7	The fish has stripes…..**go to step 8**
	The fish does not have stripes…..it is a **glassy sweeper**
Step 8	The fish has a v-shaped tail…..it is a **squirrel fish**
	The fish has a blunt tail…..it is a **glass-eye snapper**

1. [SP 1] Using the dichotomous key provided, identify each of the nine species given.
2. [SP 1, SP 6] Predict what might happen if a key contained a step in which the two choices were not opposites.
3. [SP 7] Describe a situation in which it might be important to use a key to correctly identify an organism.
4. [SP 1] a) If you were designing a key to identify plant species, describe how you would decide on the order of steps.
   b) Identify the characteristics would you use.
   c) Provide reasoning for why you chose the characteristics in (b) that you did.
   d) For one of the characteristics, construct two separate steps of a dichotomous key.
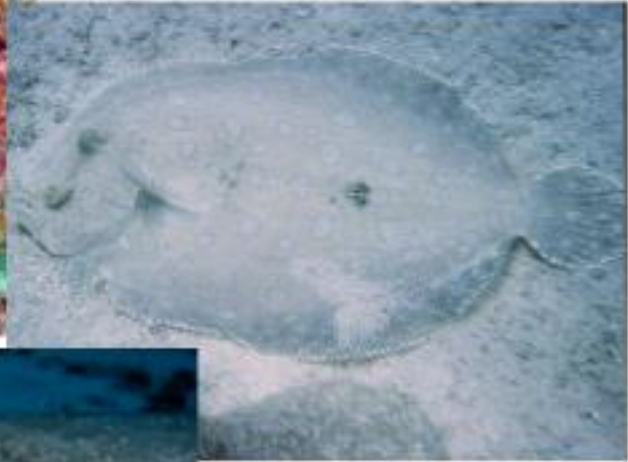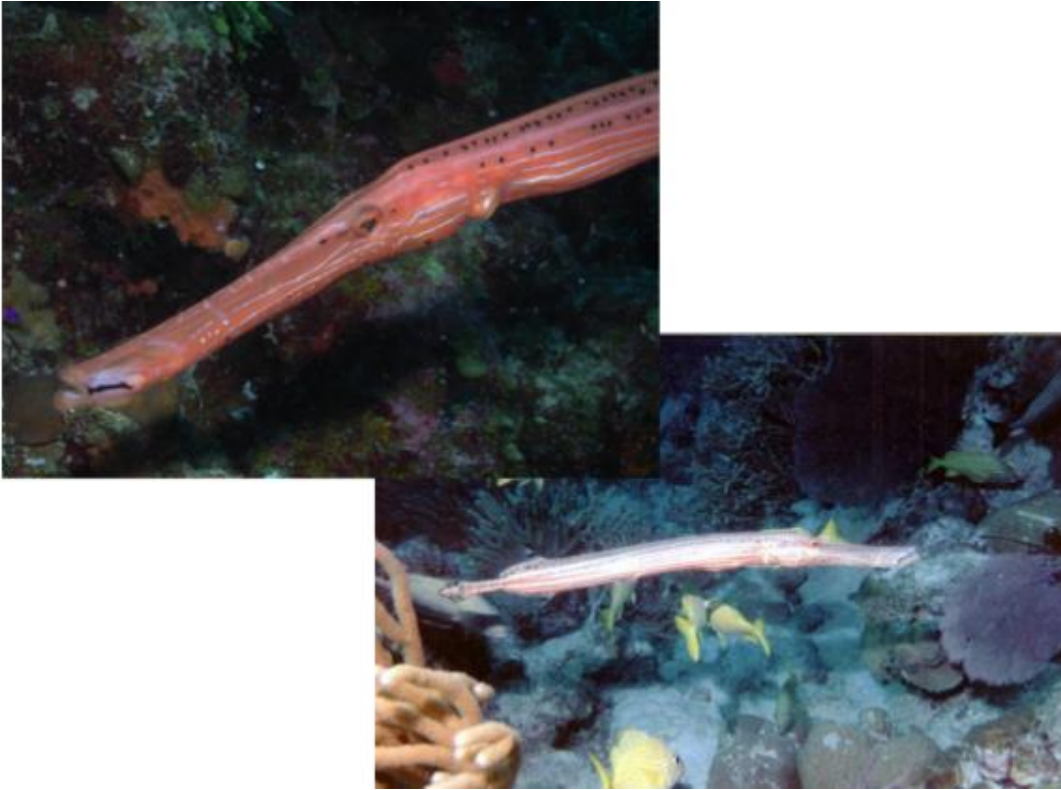
Species 2

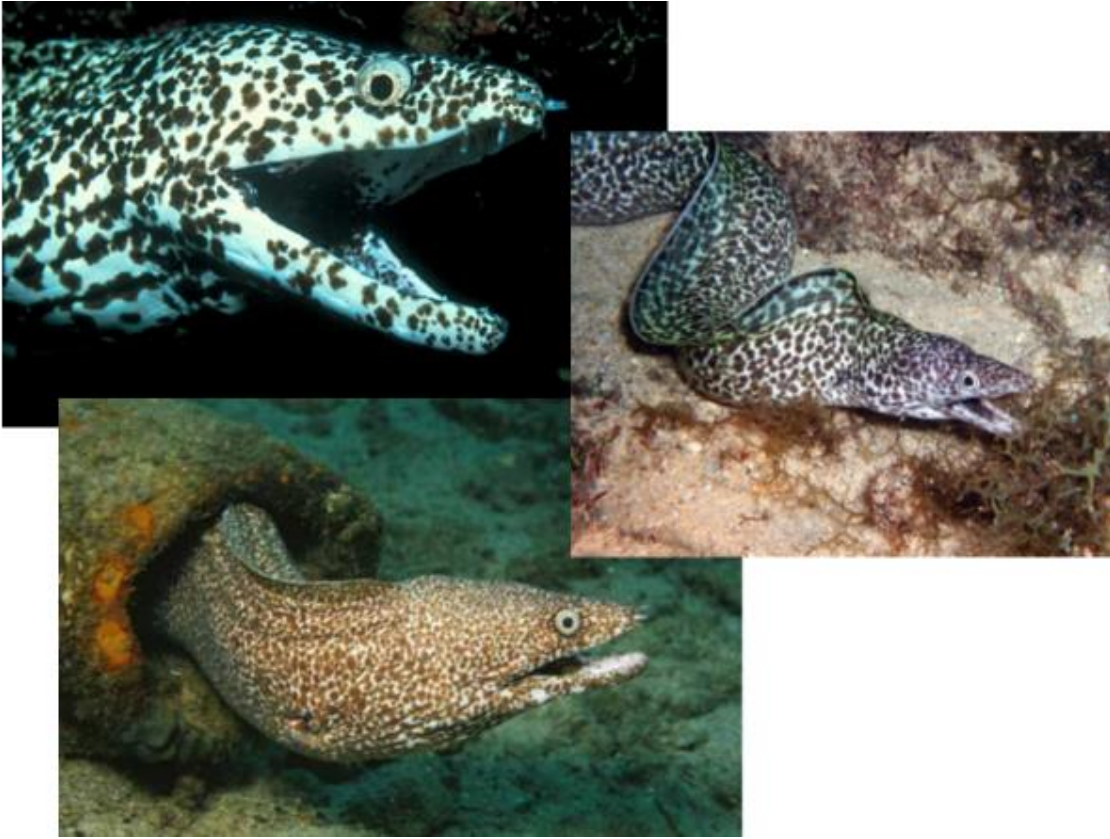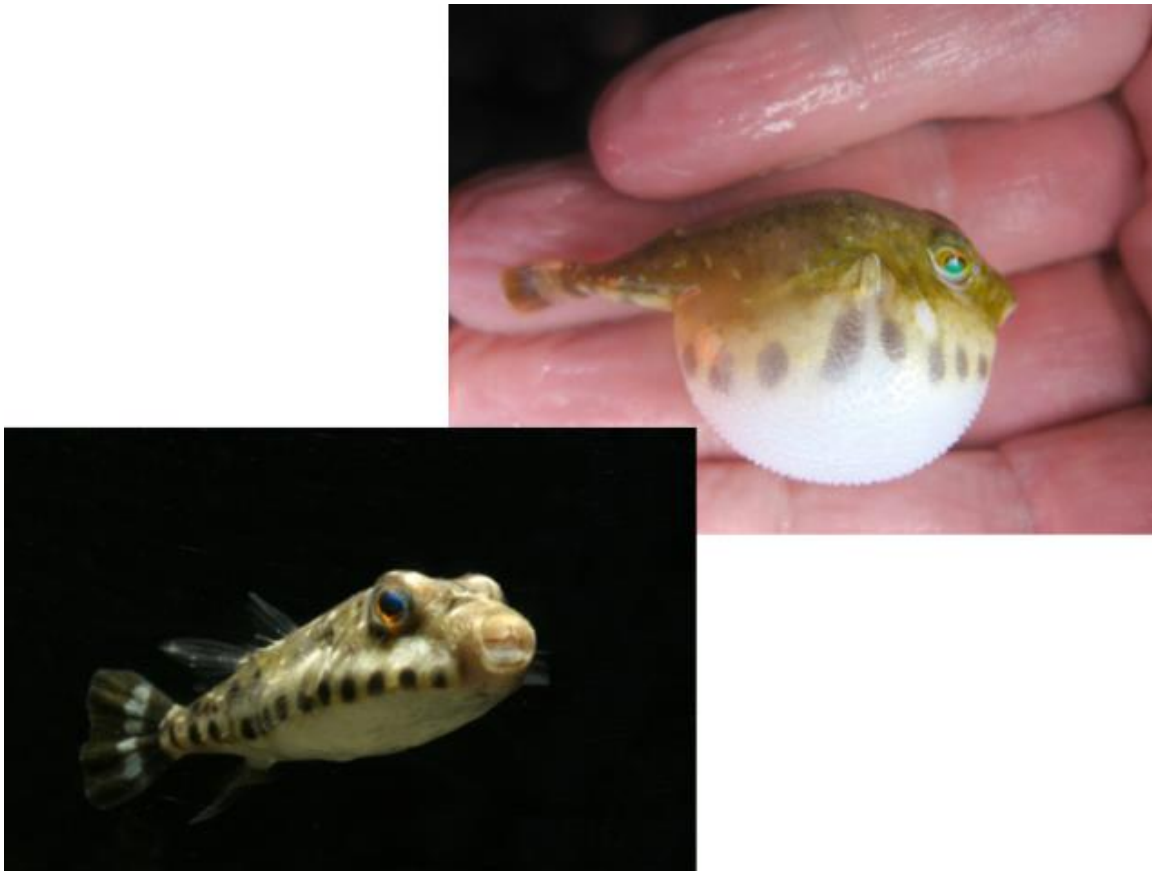# Species 3

Species 4

Species 5

Species 6

Species 7

Species 8

Species 9