Bird Beak Adaptation Match Game!

What is an adaptation?

An adaptation is an evolutionary process that allows an organism to better survive in its environment. It takes a long, long time (many generations) for this to happen.

Why do adaptations happen?

It happens because certain characteristics or behaviours allow animals and plants that have them to survive and reproduce better than plants and animals that don't have them. This means that the next generation will also have those characteristics and behaviours. As long as the characteristic or behaviour is useful in some way in the environment, it can become an adaptation. So, adaptations help organisms survive in their environments.

Are all characteristics adaptations?

No, only those characteristics that give the organism a survival and reproductive advantage in a certain environment is likely to be an adaptation. For biologists to know for sure they must conduct a lot of research on the characteristic.

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Birds have developed many interesting beak adaptations, mainly associated with how they capture their food.

	**Curlew** The curlew has long thin downward curved beak to probe the shorelines and sediments for worms and invertebrates.
	**Spoonbill** The spoonbill uses its beak like a shovel. It sweeps it's beak back and forth in shallow water to disturb small invertebrates, fish and crustaceans in the mud.
	**Hummingbird** The hummingbird has a long thin beak that allows it to probe deep into flowers to get nectar. The tongue is split and brushy at the tip, so it uses it's tongue like a sponge to lap up fluid. A hummingbird laps up nectar with its tongue by extending and contracting it up to 13 times per second**.** **Hummingbirds do NOT use the tongue and bill as a straw.**
	**Flamingo** The flamingo uses its beak upside down! There are special hairs along the edge of the beak that filter shellfish and algae from the water as it skims its beak along the mud and silt.
	**Heron** This large bird uses its beak like a spear to stab fish and frogs before grabbing them and lifting them out of the water.

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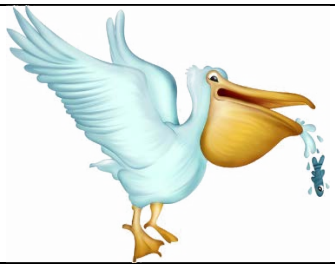	**Pelican** The pelican has a stretchy pouch under the beak that it uses as a scoop as it flies close to the surface and skims the water.
	**Cardinals** These bright birds have beaks that are broader at the base and short overall. This allows them to use their beak like a nutcracker to crack open seeds.
	**Canada geese** It you look carefully at their beaks, it looks like they have teeth! But these are not really teeth, they are just a jagged part that allows it to grasp slippery food like water plants.
	**Woodpecker** The woodpecker has a thick and strong beak with a chisel like tip for drilling. The woodpecker's long tongue has a barbed tip and is covered in sticky saliva allowing the bird to capture and extract insects from the holes it drills. The skull fits very tightly around the brain to prevent damage while the bird pecks into hard tree trunks.

Now that you have learned about different beak adaptations, it's time to play the biodiversity beak match game! Print out the photographs of the beaks shown below and see if you can match the photos with the birds listed in the chart above. Good luck! Answers are on the very last page but remember…no peeking!

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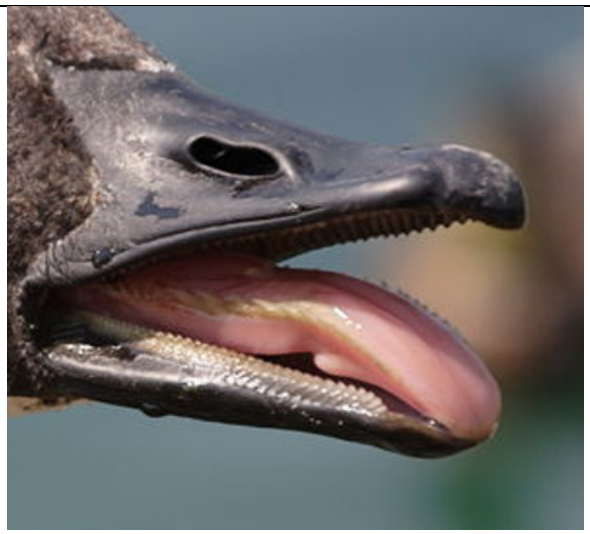

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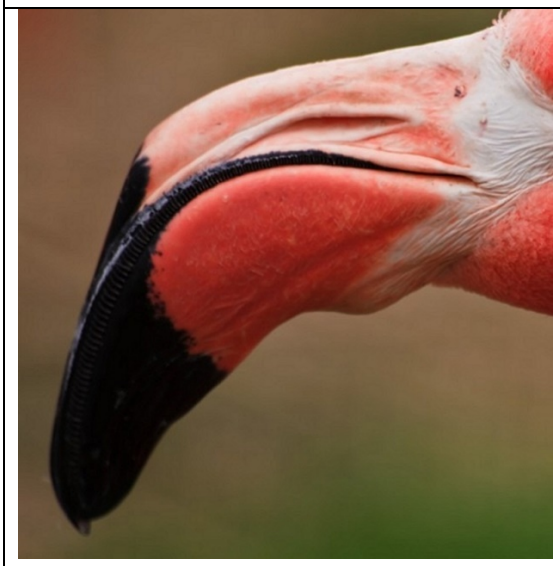

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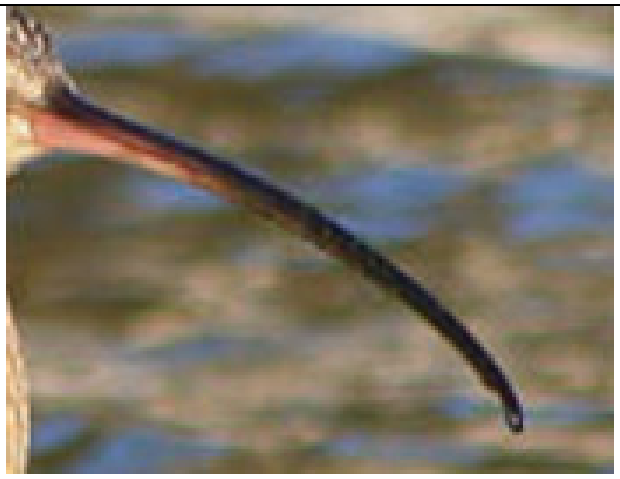

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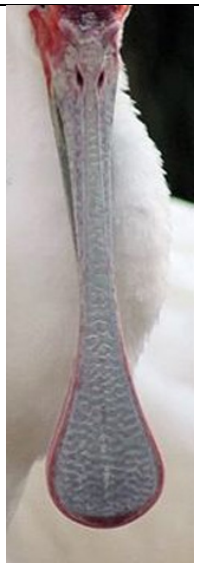

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Answers:

1. Cardinal
2. Canada Goose
3. Flamingo
4. Curlew
5. Woodpecker
6. Hummingbird
7. Spoonbill
8. Pelican
9. Heron