



## MAKING SCIENTIFIC OBSERVATIONS

To *observe* is to carefully or attentively notice something. You can observe something using any of your senses including sight, smell, sound, taste, or feel. Observation is an important skill for scientists, who must pay attention to details and take notes on what they perceive (see, smell, hear, taste, or feel).

During your trip to the zoo, you will need to observe animals and use the given clues to answer a question.

1. Alligators and Crocodiles are often confused, since they look very similar. They are related as members of the reptile order "*Crocodylia*". Using the tips below, carefully observe the crocodylian at Potawatomi Zoo and determine if it is an alligator or a crocodile.
  - a. Tip #1 – Look at its head. Crocodiles have narrow, pointed snouts that appear V-shaped. An alligator has a broader, more rounded snout that looks U-shaped.
  - b. Tip #2 – Look at its mouth. The alligator's lower jaw is smaller than its upper jaw, so its lower teeth are hidden while the mouth is closed. If you only see downward facing (upper) teeth, you are looking at an alligator. A crocodile's jaws are the same size, so its teeth interlock when its mouth is closed. If you can see teeth pointing both up and down (upper and lower), you are looking at a crocodile.

Potawatomi Zoo is home to...    an alligator            a crocodile

2. Cheetahs, jaguars, and leopards are all spotted cats, which means they are often confused with each other. However, if you look carefully at the cat's spots, you will be able to determine which cat you are viewing. Use the tips below to determine whether Potawatomi Zoo is home to a cheetah, a jaguar, or a leopard.
  - a. Cheetahs have solid, black spots. They also have a more slender body shape with long legs and a distinguishing black "tear line" that runs from the inner eye to the outer corner of their mouth.
  - b. Jaguars have open-circle spots known as "rosettes" that have a spot in the center.
  - c. Leopards have rosettes, but they will not have spots in the center.

Potawatomi Zoo is home to...    a cheetah            a jaguar            a leopard

3. Snakes do not have eyelids instead there are transparent caps called a “brille” that cover and protect the snake’s eyes. As a result, a snake is unable to close its eyes, and you can therefore see the snake’s eyes even while it’s sleeping. So, how can you tell if a snake is sleeping? A snake’s sense of smell is very important, but instead of smelling with their nose like humans, snakes use their tongue to collect air particles and bring them into the mouth where a Jacobson’s organ identifies smells. Because snakes rely on their sense of smell more than sight, they are often sticking out their tongue when awake. Carefully observe the snakes on exhibit in Potawatomi Zoo’s Learning Center, and count how many are sleeping and how many are awake during your visit.

How many snakes are sleeping?

How many snakes are awake?

4. Animals living in the wild spend most of their time searching for food. Because keepers deliver food to animals at the zoo, zoo animals have more free time than their wild relatives. As a result, keepers offer the animals *enrichment* in the form of toys, scents, or treats. Enrichment helps to stimulate an animal’s mind and make them more active. Looking at exhibits around the zoo, what types of enrichment can you find?