

## Ice Day – Staying Cool in the Hot Sun

### How Do These Animals Keep Cool?

Ice Day is on July 16th, so join the Fort Wayne Children's Zoo to stay cool during the hot summer days! Practice your students' critical thinking skills while they learn about zoo animals and how they keep themselves cool during the summer! Each animal has its own adaptations to control their body temperatures, especially when the surrounding environment changes temperature, known as thermoregulation. Did you know that not all animals can sweat like we do to keep cool?! See below for a variety of questions to engage your students even further:

- ✦ Where does this animal live in the world?
- ✦ How do you stay cool in the hot summer days?
- ✦ How do you think the animals are able to keep themselves cool?
- ✦ What are some differences and similarities in how you and the animal stay cool?
- ✦ How do you think zoo keepers help the animals stay cool?

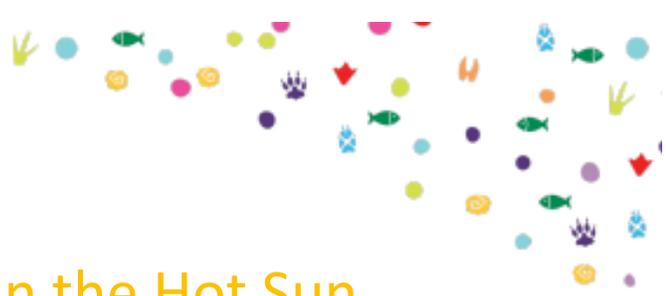
Bring both sheets with you and ice cubes to play with your family in the backyard. Have your child roll the ice cube onto the paper without the description. Once the ice cube lands on an animal, ask the player these three questions:

- ✦ What animal is this?
- ✦ Where does this animal live?
- ✦ How do you think they stay cool in the heat?

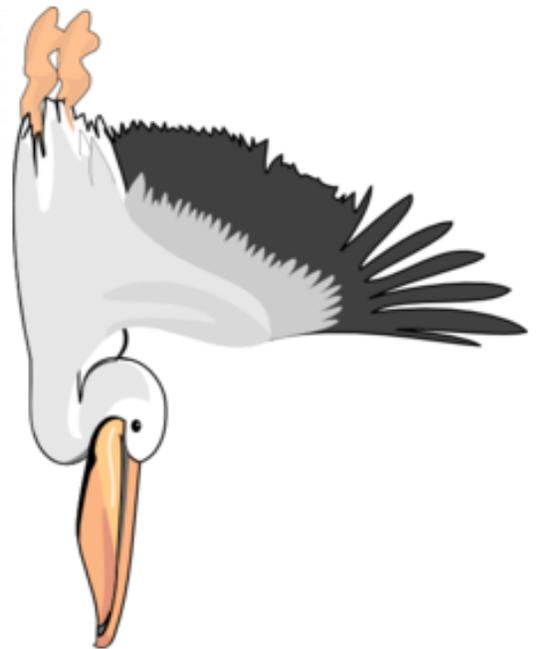
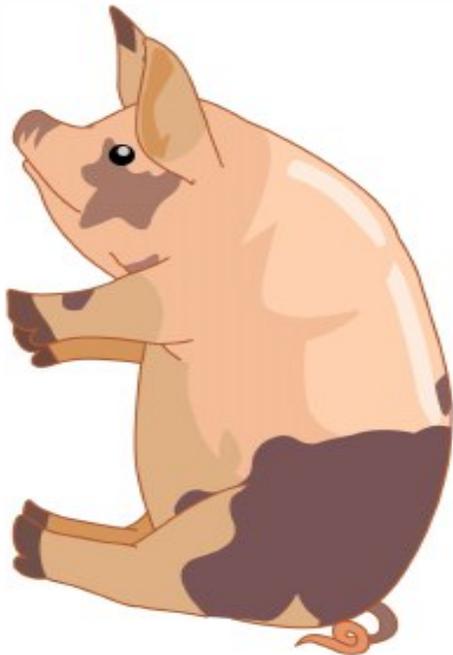
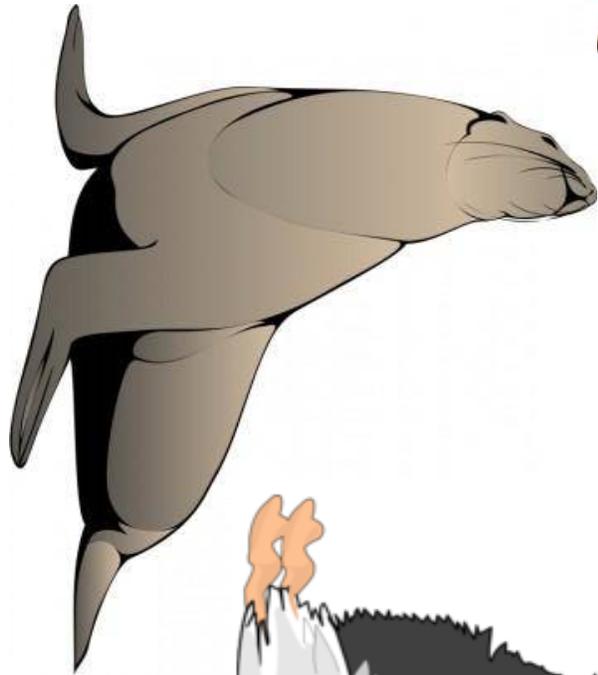
The first two questions are worth one point each, and the last question is worth five points. If the player answers all questions correctly for the animal, he or she will get seven points. The next player will go, and it is possible to land on the same animal. If the next player lands on the same animal, ask the same questions to see if they were listening! Continue playing until the ice cube lands on all animals. Whoever has the most points win the game!

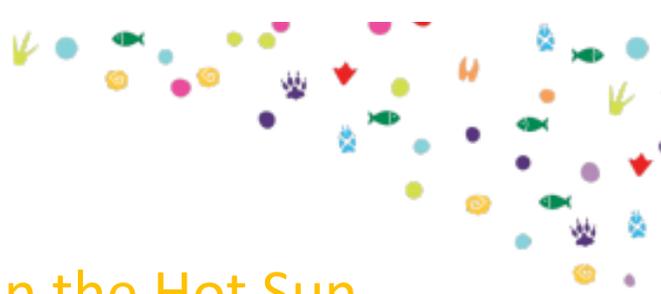
Be on the lookout for the animals and observe how they stay cool at the zoo! Share your lessons with the Fort Wayne Children' Zoo. Tag #fwkidszoo or email [education@kidszoo.org](mailto:education@kidszoo.org) to express how you used these supplemental activities and who won the game!





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**Pigs** – They keep themselves cool by wallowing in the mud. They are one of the few animals that lack the ability to sweat to cool off, so mud is a way that keeps the pigs cool in the same way that sweating can. The idea of rolling around in mud may sound gross, but it allows the pigs to survive the hot heat.

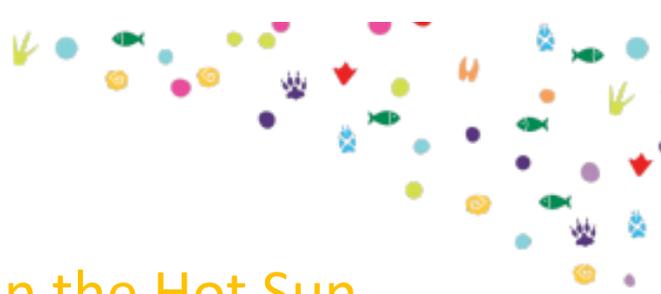


**Giraffes** – They live in exceptionally dry, hot conditions in Africa, but they don't sweat as humans do. While the spots of a giraffe are mostly for camouflage, they do serve another purpose. There are clusters of veins and capillaries underneath each spot. They can direct warmer blood to the vessels at the edge of the spots, forcing the heat out of their bodies. Since they are so tall and have a large surface area, it is an effective way for giraffes to regulate their body

heat in the hot, dry environment.

**Sea Lions** – These Californian animals have a few ways to keep themselves cool in the hot heat by lifting to expose their flippers in the air. The blood vessels are located under the skin, where they release the





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heat to the surrounding environment. Another way to stay cool is that they will spend longer periods in the water, or they can lose the excess heat on the damp sand or in the shade.



**Kangaroos** – In order to stay cool in the unforgiving Australian desert, these marsupials lick their arms and legs. There is a network of blood vessels in their forearms, which helps cool down their whole body. As they lick themselves until they are wet, their whole body temperature decreases as the saliva evaporates into the air.

**Pelicans** – Some birds such as pelicans have developed a unique way of keeping cool, which is gular fluttering. They will rapidly vibrate the muscles and bones in their throats to expose the moist membranes in their throat to air. This process allows these birds to enable more effective evaporation to keep themselves cool in the Florida's hot sun. This action uses very little energy, and they can do this while sitting still.

