

DISCOVERY

SCRIPTURE AND
SCIENCE FOR KIDS

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OSTRICHES



OSTRICH
DESIGN



OSTRICH
SPEED



OSTRICH
EYE

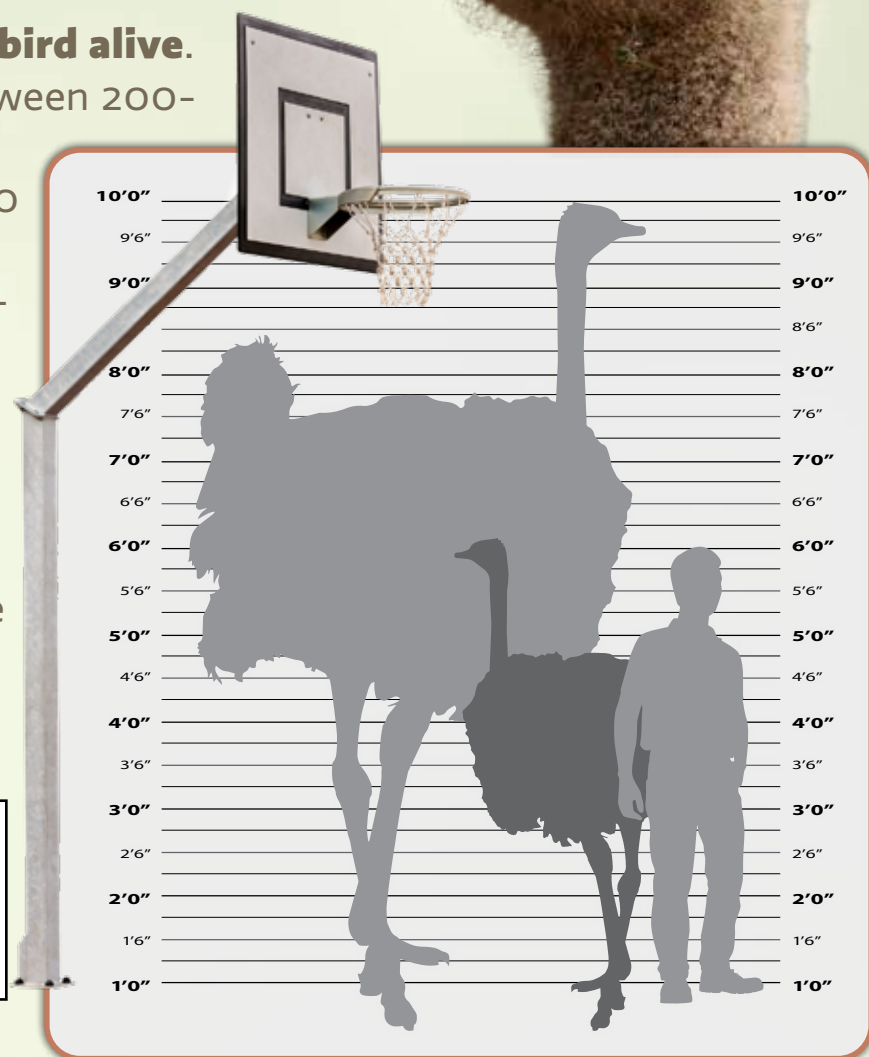
WHAT ANIMAL LAYS THE BIGGEST EGG IN THE WORLD, RUNS THE FASTEST OF ANY TWO-LEGGED ANIMAL, HAS THE LARGEST EYE OF ANY LAND-LIVING CREATURE, AND HAS ONE OF THE BEST IMMUNE SYSTEMS IN THE WORLD?

If you guessed the ostrich, you would be correct. This amazing bird is one of God's most interesting creations. Let's learn about the anything-but-ordinary ostrich.

The ostrich is the **largest bird alive**. Adult ostriches weigh between 200-300 pounds. They can reach heights between 6-10 feet. Think about how tall that is. A tall ostrich standing up could reach the rim of a basketball goal. Also, they have large wings that, when spread out, have a span of about six feet. They do not use these wings to fly.



CLICK QR code to watch a video about **THE OSTRICH: A VERY INTERESTING BIRD**



They use them for shade, and for helping with balance and change of direction when they are running. Ostriches can live between 40-50 years.



Female ostriches are called hens. They can lay between 40-130 eggs each year. These eggs are rather remarkable. They are the **largest eggs in the world**. Normally, they are about six inches in diameter and weigh about three pounds. One ostrich egg is the equivalent to about 24 regular chicken eggs. The largest egg ever laid by any animal on record was an ostrich egg

that weighed almost six pounds. During the time of year that ostriches lay eggs, they gather together in small flocks. The alpha hen digs a nest that is about 2 feet deep and 10 feet wide. This **nest can hold about 60 eggs**. All of the hens in the flock lay their eggs in the same nest. Remarkably, each mother knows which eggs are hers. Both the males and the females take turns sitting on the eggs, which hatch in about 40 days. The Bible mentions that ostriches lay their eggs on the ground (Job 39:13).



OSTRICHES LIVE IN VERY DRY, DESERT CLIMATES. GOD DESIGNED THEM WITH JUST THE RIGHT FEATURES FOR THIS LIFE.



First, they can go long periods of time without drinking water—more than two weeks.

Second, they have long eyelashes that protect their eyes from sand.

Third, they have a nictitating membrane that slides over their eyes when they blink, acting like a windshield wiper, cleaning their eyeballs.

Fourth, they have thick eyelids that act as protective shields against harsh winds and sand.

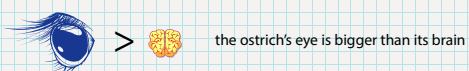


And speaking of their eyes, **OSTRICHES HAVE THE LARGEST EYES OF ANY LAND-LIVING ANIMAL.**

Ostrich eyes are about 2 inches in diameter, which is about the size of a tennis ball. Their

eyes are five times larger than human eyes. Interestingly, ostrich eyes are larger than the bird's brain. It is not surprising that in the book of Job, when God speaks about ostriches, He says that they are “deprived of wisdom” and are not “endowed with understanding” (Job 39:17). Needless to say, when an animal's eye is larger than its brain, it does not rank as one of the most intelligent creatures.

Size of Ostrich's Eye vs. Brain



Ostriches need their great eyes to look across the land and spot predators such as lions and wild dogs.

WHEN AN OSTRICH SEES A PREDATOR, IT HAS SEVERAL DEFENSIVE STRATEGIES.

First, it can run away. This works most of the time since ostriches are the fastest two-legged animals in the world, with a speed between 30-45 mph. In a good run, an ostrich can span 15 feet in a

single stride. Because of this speed, humans sometimes tame ostriches and race them. The book of Job says that when an ostrich “lifts herself on high, she scorns the horse and its rider” (Job 39:18). This means the ostrich can run faster than a horse and rider.





Second, if an ostrich does not think it can run away from a predator, sometimes it will lie down on the ground and almost “**play dead**” by laying its neck and head on the dirt and sand in front of its body.

There is an old idea that ostriches stick their heads in the sand when they are scared. That is not true, but the idea may have started because of how they lay down on the ground to hide themselves.

Third, ostriches have very powerful legs that can pack a mean punch—or should we say—kick. In fact, ostriches can kick so hard that a single blow is powerful enough to kill an adult lion or human.

Ostriches are omnivores, which means they will eat just about everything. They eat all kinds of plants, seeds, and grains as well as insects, small rodents, and reptiles. These huge birds do not have teeth for chewing. So how do they digest their food? Like other birds, they swallow rocks and pebbles that act as food grinders in their digestive systems. These stones are called gastroliths. An adult ostrich usually carries about 2-3 pounds of these in its body at any given time. In addition, ostriches have three stomachs that help to break down the tough plant stems and things that they eat.



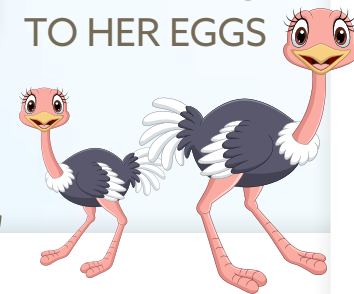
CLICK QR code to watch a video titled: **THE OSTRICH: AN AMAZING FLIGHTLESS BIRD**



Activity Page



WANT MORE?
CLICK THE QR CODE TO HELP OPAL THE OSTRICH FIND HER WAY BACK TO HER EGGS



Solve, Find, & Circle

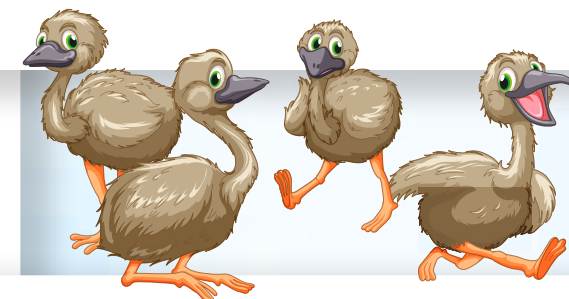
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1. Book of the Bible in which God spoke from a whirlwind about an ostrich _____
2. Ostriches have large amounts of _____ that fight germs and disease

True or False



1. ___ Ostriches have one of the weakest immune systems of any animal.
2. ___ Ostriches only eat plants.
3. ___ An adult ostrich usually carries about 2-3 pounds of gastroliths in its body at any given time.
4. ___ Ostriches have three stomachs.
5. ___ Sometimes an ostrich will lie down on the ground and basically “play dead.”
6. ___ God designed ostriches with powerful legs.
7. ___ Ostriches have huge teeth for chewing.
8. ___ Scientists are attempting to harvest antibodies from ostrich eggs and use them in medicine that can boost immunity in humans.



3. A word used to describe an animal that will eat just about anything _____
4. Rocks that some animals (like ostriches) swallow which act as food grinders in their digestive systems _____
5. Ostrich body part that is larger than any land animal _____
6. Dry area in which ostriches often live _____
7. Name for a female ostrich _____
8. The Bible mentions that ostriches lay their eggs on the _____.
9. The fastest two-legged animal in the world _____

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Many people do not know that ostriches have one of the most active and efficient immune systems of any animal in the world. Several years ago when the bird flu was killing so many birds, researchers noticed that ostriches were unharmed. As they began to study the huge birds, they found that their bodies contain large amounts of antibodies that fight germs and disease. These antibodies keep ostriches safe from viruses and diseases such as influenza, Zika virus, Ebola, and Dengue fever. The antibodies are more resistant to heat and higher levels of acid than many other kinds of antibodies. Because of this, doctors are currently attempting to harvest these antibodies from ostrich eggs and use them in medicine that can boost immunity in humans.



ISN'T IT INTERESTING THAT IN THE BOOK OF JOB, WHEN GOD WAS TRYING TO EXPLAIN TO JOB HOW AWESOME AND POWERFUL GOD IS, HE USED THE OSTRICH AS AN EXAMPLE OF HIS AMAZING CREATIVE ABILITY (**JOB 39:13-18**)?

ANSWERS

SOLVE, FIND, AND CIRCLE: 1. Job; 2. antibodies; 3. omnivore; 4. gastroenteritis; 5. eyes; 6. desert; 7. hen; 8. ground; 9. ostrich.
TRUE OR FALSE: 1-F; 2-F; 3-T; 4-T; 5-T; 6-T; 7-F; 8-T.

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