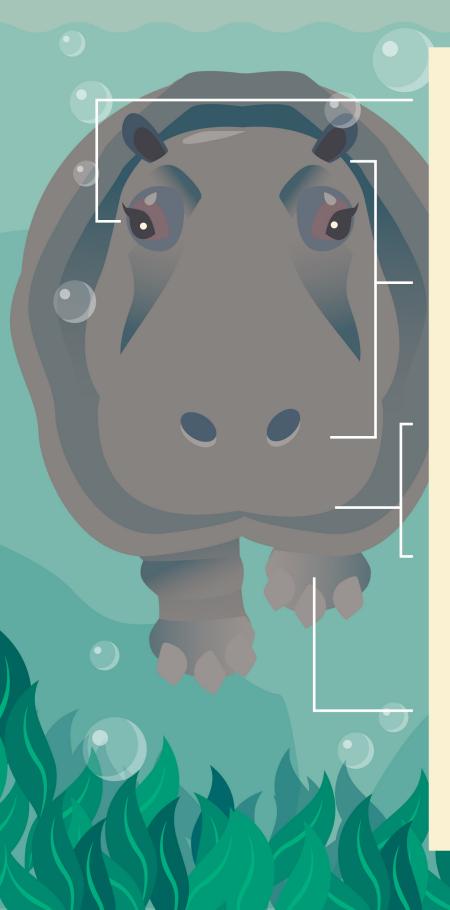


[amazing creation]

FAST FACTS: HIPPOPOTAMUS STUDY BOOKLET CONTENTS

Hippopotamus Facts	ч
Part 1	6
Part 2	10
Part 3	14
Part 4	18
Part 5	22
Part 6	26

HIPPO FACTS



EYES

The Hippopotamus can see underwater! And that's because they have a special clear membrane that covers their eyes while submerged.

EARS AND NOSE

When the Hippopotamus submerges, their nose and ears automatically shut, protecting them from water.

MOUTH

An adult Hippo can open its mouth wide enough that a 4 foot child could stand inside.

ТЕЕТН

The Hippo's teeth are made of ivory, and they are razor sharp. Their lower canine teeth are curved and can be up to 20 inches long!

LEGS

The Hippopotamus has leg bones that are very heavy, which allows them to stay underwater and not float to the surface.

BODY

A full grown male Hippopotamus can weigh as much as 3,000 pounds. That's more than a Toyota Corolla!

The Hippo's body can be up to 17 feet long and stand 5 feet tall at their shoulders.

MOIST

SKIN

The Hippo's skin must stay moist. If it doesn't, their skin will dry out and crack which isn't good since their skin is up to 2 inches thick.

STOMACH

Hippos can have up to 300 pounds of undigested grass and vegetation in their stomach at any given time.



The Greeks called the Hippopotamus the "River Horse" because they love the water so much.

OUICK OUIZ

Why did the Greeks call the Hippo, "River Horse"?

- Why do you think Hippos stay in the water so much?
- How long can Hippos hold their breath under water? (Who was Houdini?)
- Why do you think God placed the Hippos eyes and nose on Ч the top of their heads?
- - What was today's amazing Fast Fact?

DIGGING DEEPER

- Read Genesis 1:26-28, Psalm 19:1, Matthew 6: 26-29 and Romans 1:20-25. Why does the Bible say God created such a variety of different looking, uniquely designed creatures? How should we, as Christians view these creations?

Review the Creation story in Genesis 1.

PREVIEW

Why do you think the Hippopotamus has such thick skin?



PART 1: ANSWER SHEET

QUICK QUIZ

- 1. Because it will spend up to 16 hours a day in the water.
- 2. It protects the animal from the African sun and from predators.
- Up to 5 minutes. (Houdini was an American magician who was famous for his famous escape acts.)
- 4. It's a great design. It allows them to keep their entire body under water while taking a breath.
- 5. The skin of the Hippo can be up to 2 inches thick!

DIGGING DEEPER

- The variety, design, and beauty we see in creation display's the power, glory, and magnificence of God. As Christians we should see the animals and world around us as such and take up our "dominion" (Gen. 1:26-28) over them. At the same time we need to be very careful that we see God's creation as pointing to the Creator. The book of Romans warns us about those who worship God's creation in place of the Creator.
- 2. The Hippopotamus was created on day 6 with the "livestock and creeping things and beats of the earth according to their kinds." (Genesis 1:24b)







PART 2



QUICK QUIZ

Ч

- Is it true that the Hippopotamus is a very friendly, domestic animal?
- Why is the thick skin of the Hippopotamus so important?
- How many people do Hippo's kill every year?
 - What animal kills more people than the Hippo every year?

DIGGING DEEPER

Read Genesis 3: 15-22, and Romans 8:18-25, how did Adam's fall affect creation?

2 Read Isaiah 11:6-7, 65:25 and Romans 8:20-23. How are these pictures different than what we see in the animal wild today?

What does the skin of the Hippo also show us about God?

PREVIEW

3

What do you think would happen to the Hippo's skin after so many fights and attacks?



PART 2: ANSWER SHEET

QUICK QUIZ

- 1. No! The Hippo is a very dangerous and territorial animal.
- 2. Because Hippo's fight a lot and will bite each other with razor sharp teeth. Their thick skin protects them from each other as well as other animal attacks.
- 3. 2,900
- 4. The Mighty Mosquito. The mosquito carries malaria, which kills over 400,000 people every year.

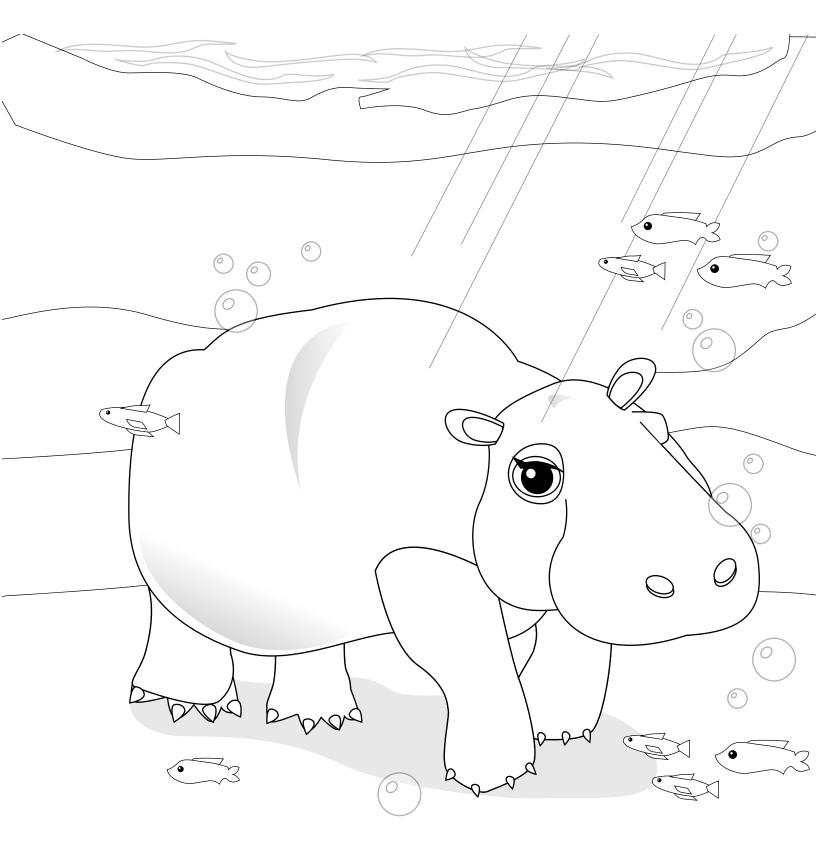
DIGGING DEEPER

- God gave Adam dominion over creation, so when he fell, the whole creation suffered. What God had declared as "good" would have reflections of evil in them due to the death, pain, suffering, and enmity that came because of the fall.
- These verses show peace between animals that today we see violence between. It shows us that sin has affected what God had declared good and even creation will experience a form of redemption when sin is no more.
- 3. It also shows us that God was prepared. He knew that man was going to destroy the perfect creation the He had given to us by our sin. So, he prepared animals with design features that would allow them to survive a fallen world.

REINFORCE

- 1. How long can Hippo's hold their breath? 5 Minutes
- 2. What is another name for the Hippo? The River Horse







PART 3

When the Hippopotamus submerges, their nose and ears automatically shut so water doesn't get inside.

QUICK QUIZ



- What color is "blood sweat" at first and what does it turn into when it is exposed to air?
- List three things the Hippo's antiseptic "blood sweat" can do:
 - a. cleanses _____,
 - b. kills _____,
 - c. speeds up the _____ process.



What other ingredient does "blood sweat" include?

DIGGING DEEPER

Research How is "blood sweat" an argument for God's design over the slow development of evolution?

 Compare and contrast human sweat to Hippo "blood sweat".

PREVIEW

What food do you think a Hippo eats to maintain its heavyweight status?



PART 3: ANSWER SHEET

QUICK QUIZ

- Because Hippo's don't have doctors! The water they spend most of their time in is full of bacteria. Without the "blood sweat", there's a good chance the hippo would get infections and die.
- 2. "Blood Sweat" is clear until exposed to air, it then becomes red.
- 3. Purpose of "Blood Sweat":
 - a. Cleanses wounds
 - b. Kills bacteria
 - c. Speeds up the healing process
- 4. "Blood sweat" also includes a sunblock!

DIGGING DEEPER

- 1. Hippos that did not have "blood sweat" would most likely get infections due to the open wounds that would be easy access for these bacteria and die. According to the evolutionary model, the Hippopotamus slowly evolved from a groundhog type animal. One problem is, groundhogs do not have "blood sweat" and even if a groundhog could grow bigger to live in water, they would die due to infection very quickly. God's design perfectly equips the Hippopotamus to live and thrive in the environment He meant them to be in.
- Sweat in the human body is used to maintain body temperature by cooling the skin through evaporation. "Blood sweat" in the Hippo is used to clean wounds and help the healing process while protecting the skin from the sun.

16

REINFORCE

- 1. Is the Hippo a friendly animal? No, they are very dangerous.
- 2. What animal kills the most humans every year? Mosquito



PART 4

111

Hippos are vegetarians, travel up to six miles a night, and eat up to 100 pounds of grass every day.

QUICK QUIZ

1

What does the Hippopotamus eat?

- 2 How many miles can Hippo's travel each night searching for food?
- B How

How many pounds of vegetation can Hippos have digesting in their stomach at any given time?

4 How fast can Hippo's run? (How fast can Usain Bolt run?)

DIGGING DEEPER

Research What are the other 2 land animals that are larger than the Hippo?



****Research**** Compare the speed of the Hippo to some other animals.

DIGGING DEEPER

How do you think the Hippo can stay underwater for so long?



PART 4: ANSWER SHEET

QUICK QUIZ

- 1. A vegetarian diet.
- 2. Up to 6 miles.
- 3. Up to 300 pounds.
- 4. 30 mile per hour, (Usain Bolt: 29 mph)

DIGGING DEEPER

- 1. Elephants, and White Rhinoceros.
- 2. Hippopotamus: 30 mph

North African Ostriches: fastest birds on land at 40mph

Cheetah: 61 mph

Lion: 50 mph

Quarter horse: 47.5 mph

Elephant: 40 mph

Saltwater Crocodile: 17 mph

REINFORCE

- 1. Why do Hippo's need "Blood Sweat"? It is an antiseptic that helps heal wounds and also contains a sunblock.
- 2. Do Hippo's eat steak? No, they are vegetarian.
- 3. How long can Hippo's hold their breath? Up to 5 minutes.





PART 5

2nd

•

1st

The Hippopotamus, whose hide alone can weigh 500 pounds, is the third heaviest land mammal after the Elephant and White Rhinoceros

QUICK QUIZ

- How are Hippo's lungs different from human lungs?
- Why is this type of lung beneficial to the Hippopotamus?
- 3 What would seem to be the problem with having lungs like this and living in the water?
 - Why is it good for Hippo's to have unique lungs?

DIGGING DEEPER

Read Psalm 104 focusing on verses 24 and 25 and I Corinthians 8:6. What do these verses say about God and how can that be applied to the different designs he has for different creatures?

PREVIEW

Ч

How do you think the Hippopotamus can stay under water with so much air in its lungs?



PART 5: ANSWER SHEET

QUICK QUIZ

- 1. Human lungs are made up of lobes; the Hippo lobe is one big compartment.
- 2. It allows the Hippo to take in a lot of air to stay under water longer.
- 3. A large amount of air would make you float to the top
- 4. This allows them to take in a LOT of air in a very short amount of time so they can stay underwater.

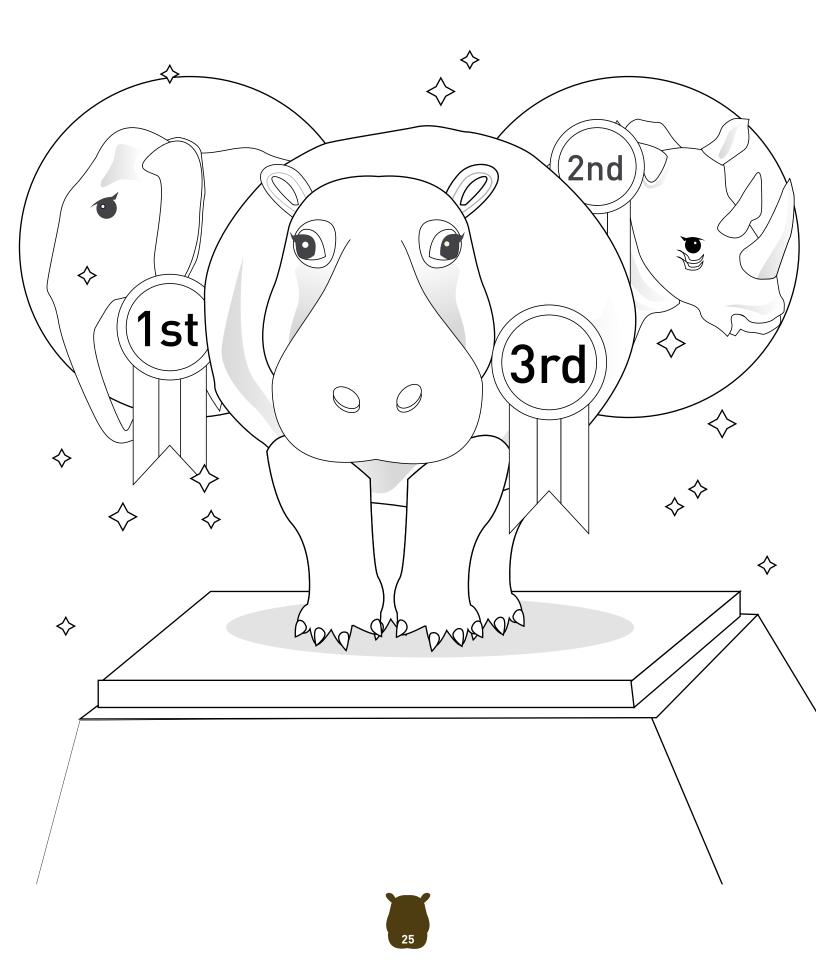
DIGGING DEEPER

In the beginning God gave us what He wanted for us. A perfect place! No death, no tears, no sorrow. When Adam sinned, it changed everything that God had given to us. As a consequence we now see the ugly things that we see.

REINFORCE

- 1. How far can Hippo's travel each night to eat? 6 miles
- 2. How fast can Hippo's run? 30 mph





PART 6

•

Baby Hippos nurse underwater! With practice, they can nurse up to 2 minutes before having to come up and take a breath.

QUICK QUIZ

- Which body part allows the Hippo to stay at the bottom of a lake or river?
- 2 How is this part of the Hippo designed to act like a "weight belt"?
- 3 Why is this "weight belt" necessary for the Hippopotamus to survive?

DIGGING DEEPER

****Pulling it together!**** Have your student/child list as many of the design features that were covered in this series. Talk with them about which worldview these design features are consistent with. Naturalistic processes or Creation?



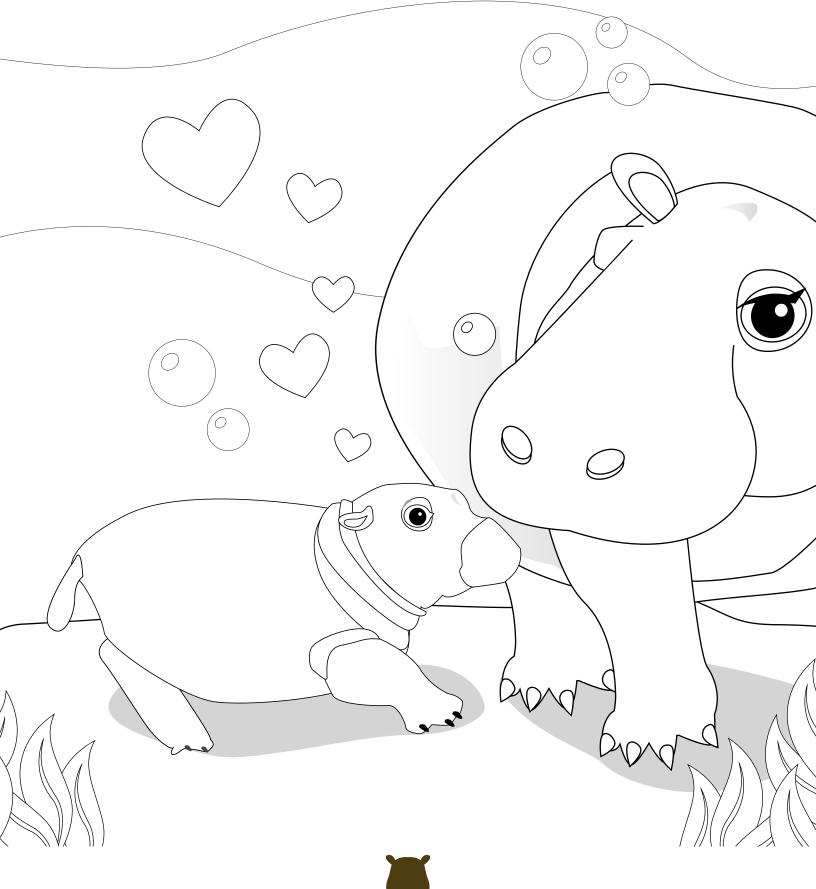
PART 6: ANSWER SHEET

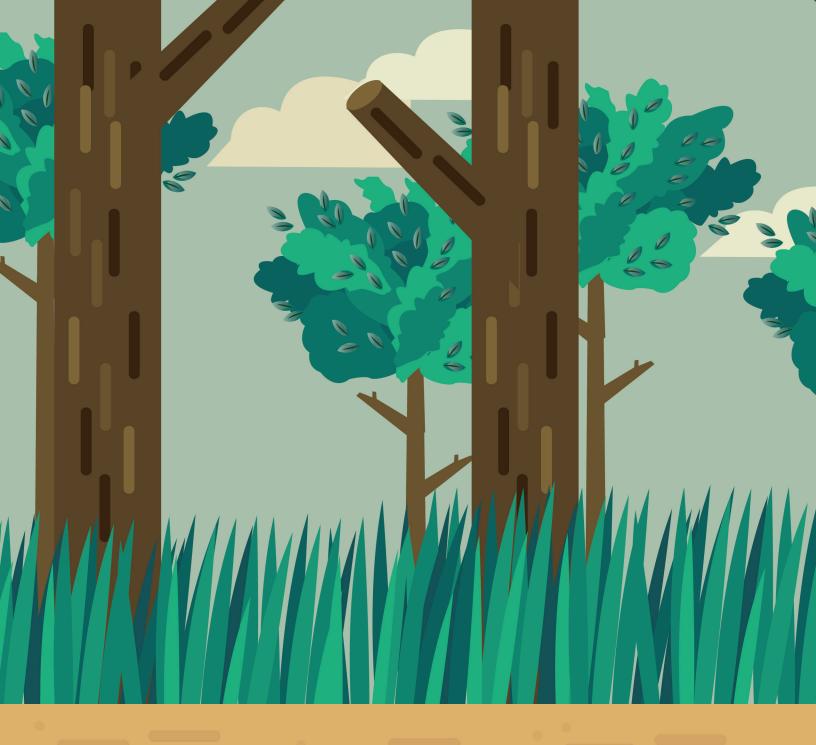
QUICK QUIZ

- 1. Their legs.
- 2. They are very dense and heavy with no marrow.
- It gives the Hippo the ability to stay submerged underwater for protection from the sun and predators.

DIGGING DEEPER

- 1. **Wrap it up!** These design features are strong evidence for a Creator. It is impossible for them to just happen by random chance processes. Life itself cannot come from non-life. In the same way, paintings require a painter, buildings requires a builder and design demands a designer. The only designer that makes sense of what we see in the world around us is God.
- 2. Review Genesis 1 one more time.
- If you'd like to dig even deeper let me suggest that you obtain a copy of the book, "The Genesis Record" and read through it. It is one of the best books I've ever read to help correctly interpret the book of Genesis.







For more information please check out our website at www.rforh.com