

MARYLAND SCIENCE CENTER'S SCHOOL GROUP ANSWER KEY

Scavenger Hunt

DINOSAUR MYSTERIES

- 1. Observe the large and small dinosaurs at the entrance to Dinosaur Mysteries. What are their names? How are they similar?**
Giganotosaurus (large) Compsognathus (small) Both are meat-eaters (theropods). While their size is very different, their teeth, claws, and skeletal structure are very similar.
- 2. What are 3 types of animals that lived at the same time as dinosaurs?**
Frogs, lizards, rodents
- 3. Dinosaur fossils have been found in Antarctica. How could dinosaurs have survived in Antarctica?**
At the time of dinosaurs, the land masses were located at or around the equator. The land masses shifted after the dinosaurs died off and part became what we know as Antarctica.
- 4. Name 2 dinosaurs that have been found in Maryland.**
Astrodon, Acrocanthosaurus
- 5. Find the eggs in the large dinosaur nest. Are they from plant-eating or meat-eating dinosaurs?**
The oval shaped eggs are from meat-eating dinosaurs. Plant-eating dinosaurs eggs are round like balls.
- 6. Why are there bird skeletons in Dinosaur Mysteries?**
There are some strong similarities between the skeletal structure of modern birds to the skeletal structure of theropod (meat eating) dinosaurs. Many scientists believe the similarities suggest a link between dinosaurs and modern birds.

NEWTON'S ALLEY

- 1. Experiment with all three of the Pulley Chairs. Why is one chair easier to lift than another?**
The more pulleys you have in a system, the more work they will do for you. The easiest chair has 3 pulley systems, the middle chair has 2 and the most difficult chair only has 1.
- 2. What happens when you mix red, blue and green light?**
Red, blue and green are the primary colors of light. When they are mixed they create white light.
- 3. What happens when you drop a stack of balls?**
When the stack reaches the bottom of the wire rod, the kinetic energy from all dropping balls will transfer into the one on top of the stack, sending the top ball only shooting back up the rod.
- 4. Why does an electric spark climb up metal rods?**
When electricity flows through the rods, it creates a charge in the air so the electricity jumps from rod to rod. This heats up the air, which makes it glow (the spark!), and then the hot air rises, making the spark climb up the rods.
- 5. Is the tug of war a fair match? Why or why not?**
It is not a fair match. One side pulls from the top while the other side pulls from the bottom. Winning the match from the bottom-pulling side is almost impossible.

TURN OVER FOR MORE CHALLENGES



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HUMAN BODY

1. Why don't the nails at the Bed of Nails poke through your skin?

When you lay down, your weight is spread out across the whole bed, so when the nails (placed closely together) come up they are able to lift you. You're not really putting much pressure on the nails. If you were to step on a nail, your entire weight would push against the nail and injury to your foot would be likely.

2. What is the hardest working muscle in your body?

The heart never stops beating. It's the muscle that never takes a break.

3. How does your body digest food?

Acids and other powerful juices in your mouth, stomach and intestines break food down into simple chemicals (fat, sugar, proteins) which are absorbed into the blood stream.

4. Your body protects you from the moment you're born. List 4 ways your body helps protect you from germs and/or injury.

- Hair protects head from sunburn.
- Eyelashes, nose hair, and ear wax keep dirt and dust out of your body.
- Soles of your feet are covered in extra thick skin to protect you from injury.
- Tears wash away particles and kill germs.
- Skin covers your body like a glove and keeps out germs.
- Sweat and oils stop germ growth.
- Coughing and sneezing force germs back out.
- Saliva and stomach acids kill germs.

5. What happens to your body when you are stressed?

Your breathing and heart rate speed up. Your muscles tighten up and your temperature rises as your body prepares for fight or flight.

CELLS: THE UNIVERSE INSIDE US

1. Why can our bodies be called "Communities of Cells?"

Different kinds of cells make up our bodies and work together in all life activities.

2. How many cells make up the human body?

There are trillions of cells in the human body.

3. Name some different types of cells and describe their jobs.

Nerve cells: send messages between brain and body
Skin cells: protect inner organs from the outside world

Red blood cells: carry oxygen
Bone cells: build/shape bones

4. What does the nucleus of a cell do?

The nucleus can be considered the control center or "boss" of a cell. It carries DNA (the instructions for making all the proteins that carry out life activities).

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CELLS: THE UNIVERSE INSIDE US (CONTINUED)

5. How does exercise make our cells stronger?

Exercise can help our bodies fight infection, make bones stronger, build muscles, decrease stress, grow new brain cells, bring more red blood cells and oxygen to every organ.

6. Describe how red blood cells move through a clogged artery differently than through a healthy artery.

Red blood cells move very, very slowly through a clogged artery which slows the flow of oxygen through the body. Clogged arteries create jams of red blood cells while healthy arteries allow a rapid flow of red blood cells.

FOLLOW THE BLUE CRAB

1. What is special about the water in the Chesapeake Bay?

The water in the Chesapeake Bay is a mixture of salt and fresh water (called brackish). This type of water creates a special environment for the creatures and plants around the Bay.\

2. How old is the Chesapeake Bay?

The Chesapeake Bay was formed at the end of the last Ice Age, less than 10,000 years ago.

3. After crabs hatch from their eggs, what 4 stages of development do they go through?

Zoea, megalopa, juvenile, adult

4. What other animals live in the Chesapeake Bay?

Fish, oysters, clams, snails, sea horses, starfish

5. Describe how the outer coverings of Chesapeake Bay animals help protect those animals.

Hard spines and shells protect the soft bodies of some Chesapeake Bay animals while allowing those soft bodies to move.

6. What material do terrapin shells and human hair and nails have in common?

Keratin

TURN OVER FOR MORE CHALLENGES

