

STUDY QUESTIONS

TO “7 NATURAL CHAMPIONS”

Study and learn facts and ideas based on this Young Naturalists nonfiction story in *Minnesota Conservation Volunteer*, May–June 2016, www.mndnr.gov/mcvmagazine.

Minnesota Conservation Volunteer magazine is your guide to wild things. Every other month, six times a year, the magazine arrives in your school library. Each one has a story for Young Naturalists like you. **Are you curious about wild things?** Young Naturalists tells true stories that can answer all kinds of questions such as these—

Have you ever heard of a purple wartyback? How about a pink heelsplitter, pimple-back, or monkeyface? All are Minnesota freshwater mussels. Read Young Naturalists stories to learn which species (kinds) of critters live in Minnesota—frogs, salamanders, snakes, wild cats, wild dogs, weasels, mice, and rabbits.

Want to **peek inside the den of a red fox** and see how the kits grow up? Are you a rock hound searching for agates? Have you ever wondered what’s alive under snow? How animals see? Why is a bluebird blue? How birds fly?

Would you like to hear the true story of **giants of the ice age**? Young Naturalists also tells you about the underground universe. You can read the story of a tiny owl that went to a hospital with an injured wing. Find out about a boy who worked in a logging camp. Read the story of Ojibwe children today hunting and gathering like their ancestors did.

Learn how to get started **camping, snowshoeing, ice fishing, or canoeing**.

Find these stories and more online at www.mndnr.gov/young_naturalists.

Your knowledge of wild things helps you explore and enjoy the outdoors. Have fun!

"7 NATURAL CHAMPIONS" STUDY QUESTIONS

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1. HOW FAR DOES AN AMERICAN EEL SWIM FROM MINNESOTA TO ITS BREEDING GROUNDS IN THE SARGASSO SEA? IF 1 MILE EQUALS ABOUT 1.6 KILOMETERS, WHAT WOULD THAT DISTANCE BE IN KILOMETERS?

2. WHERE DO AMERICAN EELS GET THE ENERGY FOR THEIR MARATHON SWIM?

3. WHAT MAKES AN EEL SLIPPERY? HOW DOES THAT HELP IT SWIM?

4. SHOW ON THE MAP BELOW THE APPROXIMATE LOCATION OF THE SARGASSO SEA.



5. WHAT DOES A PAVEMENT ANT DO WHEN IT FINDS A PIECE OF FOOD?

6. WHY CAN PAVEMENT ANTS LIFT 10 TIMES THEIR WEIGHT, BUT HUMANS CAN ONLY LIFT THREE TO FOUR TIMES THEIR OWN WEIGHT?

7. IN WHICH OF THESE PLACES WOULD YOU BE MOST LIKELY TO FIND A WATER BOATMAN?

- A. Mississippi River
- B. a puddle
- C. Lake Superior
- D. a pond

8. AN EXPERT OSPREY USUALLY CATCHES A FISH ONE OUT OF EVERY FOUR DIVES. IF AN OSPREY DIVES 72 TIMES IN ONE WEEK, HOW MANY FISH IS IT LIKELY TO CATCH?

9. WHAT PARTS OF AN OSPREY'S HEAD HELP THE OSPREY BE A GOOD DIVER, AND HOW?

10. A BULLSNAKE KILLS ITS PREY BY:

- A. squeezing it.
- B. injecting it with venom.
- C. swallowing it alive.
- D. beating it to death with its tail.

11. HOW DOES SYNCHRONIZED SWIMMING HELP GOLDEN SHINERS SURVIVE?

12. WHAT DO GOLDEN SHINERS EAT?

13. WHICH IS FASTER—A HUMAN OR A WHITE-TAILED JACKRABBIT? WHICH CAN JUMP FARTHER?

14. TRUE OR FALSE: A jackrabbit is a type of rabbit.

15. MATCH THE NATURAL OLYMPIAN TO THE TRAIT THAT HELPS IT “PERFORM” IN ITS EVENT:

American eel	huge hip muscles
pavement ant	many sets of vertebrae and ribs
water boatman	waterproof oil
osprey	following unwritten rules
bullsnake	fine hairs called setae on its legs
golden shiner	strong neck and leg muscles
white-tailed jackrabbit	slimy skin

CHALLENGE: IMAGINE THAT YOU AND A JACKRABBIT ARE IN A RACE. YOU BOTH START AT THE SAME PLACE AND AT THE SAME TIME. THE JACKRABBIT RUNS 36 MILES PER HOUR AND YOU RUN 6 MILES PER HOUR. HOW FAR AHEAD OF YOU WILL THE JACKRABBIT BE AFTER 5 MINUTES?

MINNESOTA COMPREHENSIVE ASSESSMENT

NAME _____ **PERIOD** _____ **DATE** _____

1. What kind of animal is the American eel?

- A. a fish
- B. a reptile
- C. an amphibian
- D. a snake

2. Pavement ants known for

- A. their color.
- B. their strength.
- C. biting Olympic athletes.
- D. destroying pavement.

3. What does a water boatman use as oars?

4. In a school of shiners, which fish chooses the direction?

- A. the fish in front
- B. the second fish
- C. the last fish
- D. none of the above

5. What is the Sargasso Sea?

STUDENT STUDY GUIDE: VOCABULARY

EMERGENT showing up when individual parts come together

MARATHON a race that covers 26.2 miles

MICROSCOPIC something that can be seen only through a microscope

PAVEMENT a hard, flat surface for traveling on, such as concrete or blacktop

PERPENDICULAR at right angles

PROPEL to push or force

SCHOOLS groups of fish swimming together

SETAE bristlelike sets of fine hairs

STREAMLINED shaped in a way that allows water or air to flow easily past

STRIDE a stretched out step

SYNCHRONIZED happening at the same time

TRANSPARENT see-through

UROPYGIAL GLAND a structure near a bird's tail that produces oil for grooming

WATERLOGGED filled with water

STUDENT STUDY GUIDE: VOCABULARY CARDS

Cut along horizontal lines, fold in the middle and tape or staple. Blanks are provided to allow you or your students to add new words or phrases

What is EMERGENT behavior?	FOLD	BEHAVIOR THAT SHOWS UP WHEN INDIVIDUAL PARTS COME TOGETHER is
What is a MARATHON ?	FOLD	A RACE THAT COVERS 26.2 MILES is a
When something is MICROSCOPIC it	FOLD	Something that CAN ONLY BE SEEN WITH A MICROSCOPE is called
PAVEMENT is	FOLD	A HARD, FLAT SURFACE FOR TRAVELING ON, SUCH AS CONCRETE OR BLACKTOP, is called
When two things are PERPENDICULAR , they are	FOLD	Things that are AT RIGHT ANGLES TO EACH OTHER are called

To **PROPEL** something means

TO PUSH OR FORCE is to

FOLD

When fish swim in
SCHOOLS, they are

Groups of fish **SWIMMING
TOGETHER** are called

FOLD

What are **SETAE**?

**FINE HAIRS OR BRISTLES
FOUND ON SOME
ANIMALS** are called

FOLD

An animal that
is **STREAMLINED** is

**TO BE SHAPED IN
A WAY THAT ALLOWS
WATER OR AIR TO FLOW
EASILY PAST** is to be

FOLD

A STRIDE is

**A LONG,
STRETCHED-OUT
STEP** is known as a

FOLD

When things are
SYNCHRONIZED, they

**WHEN THINGS HAPPEN AT
THE SAME TIME**, they are

FOLD

Something that is **TRANSPARENT** is

A **SEE-THROUGH** object is

FOLD

A **UROPYGIAL GLAND** is

**A STRUCTURE NEAR A BIRD'S
TAIL THAT PRODUCES OIL
FOR GROOMING** is a

FOLD

When something is
WATERLOGGED, it is

To be **FILLED WITH
WATER** is to be

FOLD

FOLD

FOLD

FOLD