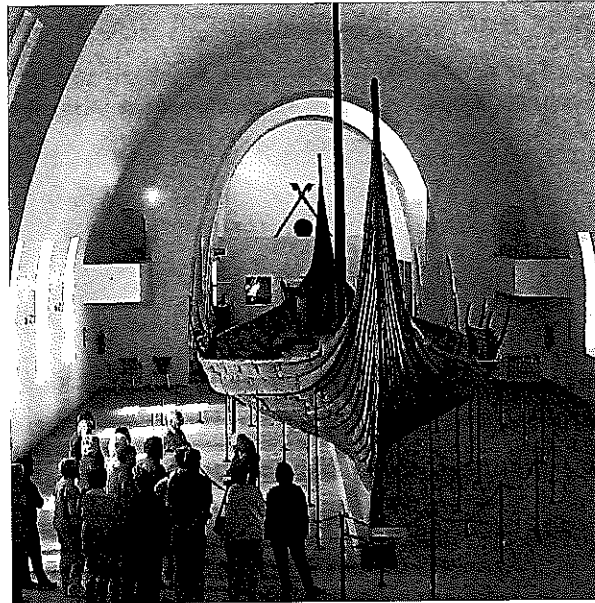


The Secrets of Viking Ships

NTI DAY #10

15th Day Missed

Today, the Vikings are mostly known as violent pirates and raiders. And it is true that Vikings did raid and destroy many towns and villages along coastlines, all the way from what is now northern Russia to Morocco. But the Vikings were also traders and merchants and didn't simply destroy things. They also built towns and markets of their own, including Hedeby, which in the 10th century had a population of 1,500, making it the largest trading town in Northern Europe. At their height, the Vikings attacked, settled or traded on four continents. They were active all the way from Canada (they became the first Europeans to travel to the Americas) to present day Istanbul.

All of their travel, trade and warfare were made possible by Viking ships, which were far more advanced than anything else sailing around Europe at the time. The most famous, and most feared, was the *drekar*, or longship. At sea, these ships could move quickly thanks to their large sails. The hulls of the ships were shallow and fat, which made them ride high in the water. This meant they could be driven right onto beaches, where the soldiers would jump over the side to attack and plunder villages and cities. The ships were also light enough that they could be carried from one body of water to another over short sections of land called portages. This greatly extended their range. Several such *drekar* ships were found off the coast of Roskilde, formerly the capital of Denmark, between 1957 and 1962. The longest *drekar* measured 119 feet long with a crew of 100 men and space for 72 oars. With its gigantic sail, shallow hull and so many oarsmen, the ship must have been incredibly fast and highly maneuverable.

Name: _____ Date: _____

1. What is a *drekar*?

- A a Viking town
- B a merchant ship
- C a longship
- D an ocean-going ship

2. The author tries to persuade the reader of what?

- A Vikings were only violent pirates and raiders.
- B There was no connection between the Vikings' success and their ships.
- C Viking ships were more advanced than ships today.
- D Vikings were not simply pirates and raiders.

3. The Vikings considered speed an important quality in a ship. What evidence from the passage supports this conclusion?

- A The hulls of the *drekar* were shallow and fat so the ships rode high in the water
- B The *drekar* had very large sails and space for many oarsmen.
- C The *drekar* were light enough to be carried from one body of water to another.
- D The *drekar* could be driven right onto beaches to allow soldiers to jump over the side.

4. Read the following description of the *knarr*: "The *knarrs* would have looked similar to the *drekars* except they were longer, fatter and taller, and the space dedicated to cargo left less room for oarsmen. These were the backbones of the Viking empire, which they used to carry everything from gold coins to timber, spices and fine fabrics."

What can you infer about the *knarrs*?

- A They were not designed for warfare.
- B They were faster than the *drekars*.
- C They were designed to carry soldiers.
- D They were used for the same purpose as *drekars*.

5. What is this passage mostly about?

- A why Vikings are known as violent pirates
- B the different kinds of Viking ships
- C how Vikings decorated their ships
- D the two methods used to build Viking ships

6. Read the following sentences: "Viking ships were so advanced for their time they often were the biggest, tallest and most **striking** ships many people had ever seen. The Vikings made them even more intimidating using bright colors and intricate designs."

What does "**striking**" mean in this sentence?

- A violent
- B dangerous
- C impressive
- D delightful

7. Choose the answer that best completes the sentence below.

Vikings designed and used their ships for multiple purposes, _____ warfare, trade, and travel.

- A finally
- B although
- C ultimately
- D including

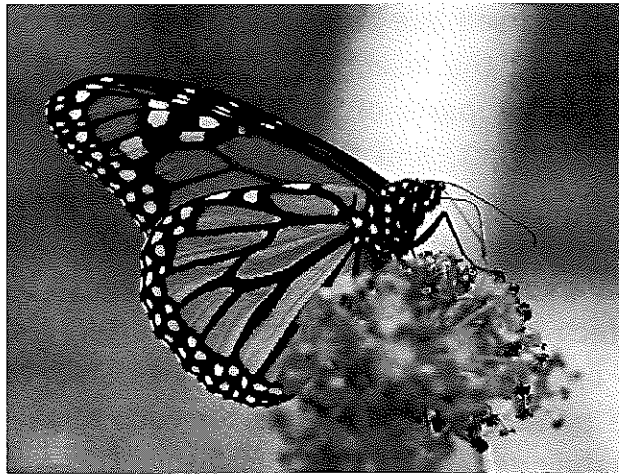
8. Describe the *knarr*.

9. Describe the differences between Viking ships and other ships at the time.

10. Explain whether Vikings should be known mostly as pirates and raiders. Support your argument using details from the passage.

Genetic Basis of Butterflies

By ReadWorks



If you've ever been in a park during the summer, you may have seen butterflies flitting from flower to flower. They are quite beautiful, and like humans, seem to have individual traits. There are orange butterflies with big brown eyes, blue butterflies with black markings on their wings, and white butterflies with small black antennae. According to some butterfly experts, there are approximately 20,000 kinds of butterflies in the world. Each species (or type) of butterfly has its own genetic information that dictates what characteristics it will have and distinguishes it from other butterflies.

Inherited genetic information explains why certain species look different from others. Monarch butterflies, orange butterflies with black markings and white spots on their wings, are most common in Mexico and the United States. Their bright color makes them easily noticeable to predators, but also acts as a warning that they are poisonous if eaten.

How do we know that their bright and beautiful coloring reveals that they are poisonous? Well, what we think of as butterflies are the adult versions of caterpillars. As caterpillars, monarchs feed on milkweed, which contains a toxin that is poisonous to most vertebrates but not to monarch caterpillars. When the caterpillars become adult monarch butterflies, the milkweed in their bodies is poisonous to any predators that might try to eat them.

An unsuspecting predator that did not know the monarch butterfly was poisonous would soon realize its mistake. After tasting the poisonous bug, most predators quickly spit out the monarch and learn not to eat them again. Unlike other butterflies, whose genetic information (and therefore their coloration) helps them blend into their habitats in order to defend themselves from predators, monarch butterflies rely on their bright coloration to keep them safe. An interesting fact: another species of butterfly, the viceroy, mimics the coloration of the monarch in order to keep predators from eating it!

Even though there are many kinds of butterflies that look very different, all butterflies share a certain number of traits, which are also determined by their genetic information. They all have the same life cycle. First a caterpillar hatches from an egg. The caterpillar eats plants and grows bigger. Then it covers itself in a hard case called a chrysalis, and it enters a stage of transformation. During this stage, the insect is called a *pupa*. Inside the chrysalis, the pupa grows the legs, wings, and other parts of an adult butterfly. Once the butterfly is fully developed, the chrysalis splits apart, and the butterfly emerges. All butterflies have four wings—two upper, two lower—that are covered in tiny colored scales. A butterfly's genes determine the color of its scales, and more—they dictate the insect's size and shape as well.

Colorful decorations are key to the survival of the monarch butterfly. Vivid colors signal danger to the predators which might otherwise eat the butterfly. Other species of butterfly, with different genes, rely on different survival strategies, and have their own distinctive designs. But no matter the pattern, the blueprints for each of the 20,000 different species' development are written in their genetic codes.

Name: _____ Date: _____

1. What does genetic information dictate, or control?

- A what characteristics an organism will have
- B where an organism will live and die
- C which predators will eat the organism
- D who the organism's parents were

2. The passage describes the sequence of a butterfly's life. Which of the following shows the life cycle of a butterfly in the correct order?

- A egg, pupa, adult, caterpillar
- B pupa, egg, caterpillar, adult
- C egg, caterpillar, pupa, adult
- D egg, pupa, caterpillar, adult

3. Monarch butterflies are protected by their bright coloration. What evidence from the passage supports this conclusion?

- A Their bright coloration makes monarch butterflies easily noticeable to predators.
- B The monarch's color warns predators that they are poisonous, so they don't get eaten.
- C Unlike other butterflies, monarchs do not blend into their surroundings to protect themselves.
- D If a predator eats a monarch, it can taste the poison and will spit the butterfly out.

4. Butterfly A is blue with black markings. Butterfly B is green with brown spots. What conclusion can you make about these two butterflies?

- A Both butterflies protect themselves by blending into their surroundings.
- B The two butterflies have different life cycles.
- C Both butterflies have the same genetic information.
- D The two butterflies have different genetic information.

5. What is this passage mostly about?

- A monarch butterflies
- B viceroy butterflies
- C milkweed toxins
- D caterpillars and pupae

6. Read the following sentences: "Inside the chrysalis, the pupa grows the legs, wings, and other parts of an adult butterfly. Once the butterfly is fully **developed**, the chrysalis splits apart, and the butterfly emerges."

What does the word "**developed**" mean?

- A young and small
- B changed and grown
- C safe and protected
- D soft and vulnerable

7. Choose the answer that best completes the sentence below.

Monarch butterflies are brightly colored; _____, they are highly visible to predators.

- A however
- B for example
- C as a result
- D initially

8. Why are monarch butterflies poisonous?

9. How do predators know that monarch butterflies are poisonous?

10. How does the monarch's coloration help both the butterfly and its predators?

Name: _____ Date: _____

NTi 7th math - Day #10

Question 1 of 10

Which expression is equivalent to

$$-3(x + 5)?$$

- A. $-3x + 5$
- B. $-3x - 5$
- C. $-3x - 15$
- D. $3x + 5$

Question 2 of 10

Add: $-7y + 6 + 8y$.

- A. $-y + 6$
- B. $15y + 6$
- C. $y + 6$
- D. $-15y + 6$

Question 3 of 10

Simplify the following expression by combining like terms:

$$10xy - 6x + 14xy - 3x.$$

- A. $15xy$
- B. $-4xy + 3x$
- C. $24xy - 9x$
- D. $4y + 11y$

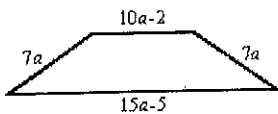
Question 4 of 10

Simplify the following: $3(y - 2) + 4y$.

- A. $7y - 6$
- B. $7y^2 - 6$
- C. $13y$
- D. $-13y$

Question 5 of 10

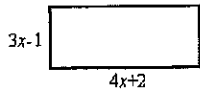
Find the perimeter of the trapezoid:



- A. $32a - 7$
- B. $32a^3 - 7$
- C. $39a - 7$
- D. $39a^3 - 7$

Question 6 of 10

Find the perimeter of the rectangle:



- A. $14x - 2$
- B. $14x + 2$
- C. $14x^2 - 8$
- D. $14x - 8$

Question 7 of 10

Small candles at \$2.50 each

Large candles at \$4.00 each

Potpourri at \$3.00 each

Small stuffed animals at \$10.00 each

Large stuffed animals at \$12.00 each

You are in a store that creates gift baskets for special occasions. One basket has two small candles and a large stuffed animal. The second has a large candle, potpourri and a small stuffed animal. The third basket has potpourri and a small and large stuffed animal. The fourth basket has a small and large candle and the potpourri.

Which basket costs the least?

- A. the first basket
- B. the second basket
- C. the third basket
- D. the fourth basket

Question 8 of 10

$$5x + 6 = 31$$

What is the first thing that should be done to both sides of the equation in order to solve for x ?

- A. Add 6 to both sides of the equation.
- B. Subtract 6 from both sides of the equation.
- C. Divide both sides of the equation by 5.
- D. Subtract 5 from both sides of the equation.

Question 9 of 10

What is the first step you would take to solve the following equation for x ?

$$7 = \frac{1}{2}x + 1$$

- A. Multiply each side by $\frac{1}{2}$.
- B. Multiply each side by 2.
- C. Add 1 to each side.
- D. Subtract 1 from each side.

Question 10 of 10

After college, Maria has to decide between two jobs. Job A would have a starting salary of \$25,000 with a raise of 8% of her starting salary per year. Job B would have a starting salary of \$30,000 with a raise of 5% of her starting salary per year. Which job would pay more after 10 years?

- A. Job A.
- B. Job B.
- C. They are the same.
- D. It cannot be determined.

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