

Vale Middle School Reading Article

Could You Really Outrun a Tyrannosaurus rex? (1130L)

Instructions: COMPLETE ALL QUESTIONS AND MARGIN NOTES using the CLOSE reading strategies practiced in class. This requires reading of the article three times.

Step 1: Skim the article using these symbols as you read:

(+) agree, (-) disagree, (*) important, (!) surprising, (?) wondering

Step 2: Number the paragraphs. **Read** the article **carefully** and **make notes in the margin**.

Notes should include:

- Comments that show that you **understand** the article. (A summary or statement of the main idea of important sections may serve this purpose.)
- Questions you have that show what you are **wondering** about as you read.
- Notes that differentiate between **fact** and **opinion**.
- Observations about how the **writer's strategies** (organization, word choice, perspective, support) and choices affect the article.

Step 3: A final quick read noting anything you may have missed during the first two reads.

Your **margin notes** are part of your score for this assessment. Answer the questions carefully in **complete sentences** unless otherwise instructed.

Student _____ Class Period _____

Could you really outrun a Tyrannosaurus rex?

Let's start off this article by saying that we realize we'll never have a definitive answer to this question. There's obviously no way to test it, however fun it would be to hop into a time machine, blast back to the Cretaceous period and challenge the nearest Tyrannosaurus rex (T. rex) to a 100-meter (109-yard) dash. We'll just have to be satisfied with conjecture about what would happen in such an amazing situation.

We do have real numbers to work with, though. Scientists at the University of Manchester in England actually computed the top speed of a T. rex using animated computer models based solely on information gleaned from fossils. They were able to estimate muscle mass and predict how dinosaurs used those muscles to move their bodies. And based on that, they computed the running speeds of many dinosaur species. With a maximum pace of about 18 mph (29 kph), the T. rex didn't come close to being the fastest dinosaur -- that honor went to the chicken-size Compsognathus, which clocked in at 40 mph (64 kph) -- but it was fairly swift [source: Sellers].

Usain Bolt, the world's fastest man, reached a top speed of 27.79 mph (44.16 kph) when he set the world record in the 100-meter

Notes on my thoughts, reactions and questions as I read:

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sprint in 2009 [source: BBC]. A four-minute miler runs 15 mph (24 kph). So, on paper, the T. rex is going to crush the average human in a race. But as long as we're playing this suspension of disbelief game, let's be "realistic" here. You're not going to be running a friendly race against this T. rex. You're going to be running for your life.

In a predator/prey scenario, your relatively tiny size gives you the advantage. The T. rex has you beat in pure speed, but even if you were racing from a starting line, you'd have a healthy lead before the dinosaur even got its massive body into proper running position. If you were just wandering around in Dinosaurland, you'd likely see the T. rex coming way before it sees you, so you'd again have a good head start.

Once it's spotted you and started the chase, the T. rex would gain on you fast, given its relatively enormous stride. It would probably get exhausted pretty quickly, though. How long do you think it could keep up that 18 mph pace? Usain Bolt certainly couldn't hold his top speed for 100 meters, and he's about one-hundredth the size of a 17,600-pound (8,000-kilograms) dinosaur [source: Hutchinson].

Of course, you probably couldn't hold your top speed for very long either. But you'd also have agility on your side -- that lumbering T. rex would undoubtedly not enjoy trying to keep up with your zigzagging and sudden changes of direction. You would probably win the endurance game, too. Humans (well, some of them, at least) can run miles upon miles. Could a 17,600-pound dinosaur come anywhere close to finishing a marathon? The effort probably wouldn't be worth the payoff of such a small meal. It'd give up after a while and go find some bigger, less nimble prey.

So here's our final, very scientific, conclusion: the T. rex could run faster, but you could outrun a T. rex. At least you'd hope you could...

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Comprehension questions – answers may be in phrases.

1. *Approximately how many feet is in a 100-meter dash? Show your math.*
2. *Who is Usain Bolt?*
3. *Define **definitive** as used in the text.*
4. *According to the research, how much faster will the fastest dinosaur run in comparison to the T.rex? Show your math.*
5. *Define **conjecture** as used in the text.*

7/8.RI.1.2.3.4

Answer each question in one or more complete sentences.

1. *Explain the use of quotations around the word “realistic” in paragraph three.*
2. *List a minimum of three pieces of evidence supporting the author’s claim that the conclusion is truly “scientific.”*
3. *Explain why a dinosaur would likely choose to find a slower meal than a human.*

7/8.RI.4,5,6

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3. Complete the chart. Use complete sentences citing evidence from the text for each detail.

MAIN IDEA:

DETAILS:

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.

7/8.RI.2

4. Using the provided illustrations (which are obviously not to scale), create an advertisement for a prehistoric race. Include facts such as speed, name of the entrants, likely winner, and other details from the text. A minimum of 9 pieces of cited evidence is required.



7/8.RI.3,7,8