

**TED® Extension, Category 2**  
**Shape-shifting Dinosaurs**

**Overview**

Mensa for Kids' TED Extensions are short, easy-to-use guides that help teachers, parents and youth use TED talks in a classroom or home setting. They are not written in a lesson plan format, but they do have a list of discussion questions, all at higher levels of thinking.

**Watch the TED talk at:**

[www.ted.com/talks/jack\\_horner\\_shape\\_shifting\\_dinosaurs.html](http://www.ted.com/talks/jack_horner_shape_shifting_dinosaurs.html)

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**THINK ABOUT IT:**

1. Museums don't like people cutting into the bones of their dinosaurs. Can you think of any other technology we may be able to use in the future to glean information without cutting the bones?

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2. Dr. Horner says that to determine relatedness, you have to look at similarities, not differences. Why do you think that is? Can you think of similarities between humans and dinosaurs? What about between fish and birds?

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3. Why would museums want “big” dinosaur specimens? What are some things we like big and some things we think are neat when they’re small?

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4. Part of Dr. Horner’s idea is that scientists missed the juveniles because they were so focused on the big dinosaurs. Can you think of something obvious you have missed because you were too focused on something else?

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5. Dr. Horner’s doctoral student, John Scanella, was the one who figured out that *Triceratops* and *Torosaurus* were one and the same. In an interview, he said, “Even a dinosaur like *Triceratops*, which we’ve known about for 120 years, still has surprises in store for us and a lot to teach us about the history of life on this planet.” Can you think of three things on earth that we know a lot about but are still full of surprises?

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

6. Dr. Horner started the talk with a list of 12 dinosaurs and ended with only seven. Typically we think of discovery as being the finding of things that were unknown. How is eliminating types of dinosaurs discovery, even though we have fewer, not more?

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7. If you were starting a dinosaur museum and could only have five dinosaurs, which dinosaurs would you choose and why?

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## DO IT:

Dr. Horner says that we have too many named dinosaurs because scientists have big egos and like to name stuff. Do the lesson plan on classifying animals at:

[www.mensaforkids.org/pop\\_lesson\\_template.cfm?showPage=/content/school\\_lesson\\_pop.cfm&planID=10&gameName=Lesson\\_Plan\\_10](http://www.mensaforkids.org/pop_lesson_template.cfm?showPage=/content/school_lesson_pop.cfm&planID=10&gameName=Lesson_Plan_10)

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## READ ABOUT IT:

- Article about John Scanella's findings on *Triceratops*:  
[www.earthmagazine.org/article/age-changes-you-torosaurus-actually-just-old-triceratops](http://www.earthmagazine.org/article/age-changes-you-torosaurus-actually-just-old-triceratops)
- *The Dinosauria*, Dr. Dodson's book on dinosaurs, published by the University of California Press

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## WATCH IT:

Watch these TED talks on dinosaurs:

- [www.ted.com/talks/paul\\_sereno\\_digs\\_up\\_dinosaurs.html](http://www.ted.com/talks/paul_sereno_digs_up_dinosaurs.html)
- [www.ted.com/talks/jack\\_horner\\_building\\_a\\_dinosaur\\_from\\_a\\_chicken.html](http://www.ted.com/talks/jack_horner_building_a_dinosaur_from_a_chicken.html)

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## SURF IT:

- Visit Dr. Horner's museum: [www.museumoftherockies.org](http://www.museumoftherockies.org)
- Visit John Scanella's web site: [www.johnscannella.com](http://www.johnscannella.com)