

T. rex: The Ultimate Predator

ACTIVITIES FOR GRADES K-2



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Activity Overview

Fossil evidence shows that *Tyrannosaurus rex* hatchlings were small and adults were really big.

In this three-part activity, students will engage in the practice of obtaining, evaluating, and communicating information and apply the crosscutting concept of structure and function to explore how *T. rex* lived, hunted, and survived as it grew from a small, helpless hatchling to a huge, ferocious predator.

- 1. Before the Visit:** Through short videos and an online pre-assessment quiz, students are introduced to the *T. rex: The Ultimate Predator* exhibition and its major themes. In response to these resources, students then generate questions about the evidence scientists use to help them understand *T. rex* growth and size, which they will revisit after the trip.
- 2. At the Museum:** At three highlighted locations in the exhibition, students use worksheets to record observations of fossils, models, and other information as they explore what *T. rex* may have looked like at three different ages.
- 3. Back in the Classroom:** Students process and share what they've learned at the Museum about *T. rex* as it grew from a small hatchling to a large adult.

This activity supports the following Next Generation Science Standards:

Disciplinary Core Ideas:

- LS1.A: Structure and Function

Science & Engineering Practices

- Obtaining, Evaluating, and Communicating Information

Crosscutting Concepts

- Structure and Function

Before the Visit

Through short videos and an online pre-assessment quiz, students are introduced to the *T. rex: The Ultimate Predator* exhibition and its major themes. In response to these resources, students then generate questions about *T. rex*'s growth and size, which they will revisit after the trip.

TIME	40 minutes
PREPARATION	<ul style="list-style-type: none">• Review the Educator's Guide to see how themes in the exhibition connect to your curriculum and to get an advance look at what your students will encounter.• Review this three-part activity and decide how you would like students to engage with the content before, during, and after the visit.
PROCEDURE	<ol style="list-style-type: none">1. Students get a preview of the exhibition content and the featured phenomena of this activity—that fossil evidence shows that <i>T. rex</i> hatchlings were small and adults were really big—by exploring one or more of the following resources:<ul style="list-style-type: none">○ Video: What did a baby <i>T. rex</i> look like? (6:20) amnh.org/explore/videos/exhibits/growing-up-tyrannosaurus-rex Students are introduced to the idea that <i>T. rex</i> wasn't always giant and ferocious; it began as a helpless hatchling that was likely covered in fluffy feathers.2. In response to the video, students generate questions about <i>T. rex</i> growth and size. Questions can be recorded on a class or small group chart so that students can revisit the questions after their trip to the Museum.

At the Museum

At three highlighted locations in the *T. rex: The Ultimate Predator* exhibition, students use worksheets to record observations of fossils, models, and other information as they explore what *Tyrannosaurus rex* may have looked like at three different ages.

TIME	40 minutes
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| PREPARATION | <ul style="list-style-type: none">• Familiarize yourself with the student worksheet, answer key, notes to educator, and the map of the exhibition.• Decide how students will explore the exhibition using the worksheets. For example, students can explore all three locations with each student completing their own worksheet; or they can explore the exhibition with each student responsible for one of three locations. In either case, students should be in pairs or small groups, accompanied by chaperones who will prompt and facilitate their discussions and help them complete their worksheets. |
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| PROCEDURE | <ol style="list-style-type: none">1. Explain the goal of the Museum visit to students. They will explore:<ul style="list-style-type: none">○ fossils that show that <i>Tyrannosaurus rex</i> hatchlings were small and adults were really big2. Distribute and review the worksheet and map with students. Clarify the information they should collect, and where. |
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Back in the Classroom

Students process and share what they've learned at the Museum about *Tyrannosaurus rex* as it grew from a small hatchling to a large adult.

TIME	40 minutes
PREPARATION	<ul style="list-style-type: none"> ● Review the answer key to worksheets. ● Plan how you will help students surface, analyze and interpret, and share information gathered at the Museum.
PROCEDURE	<ol style="list-style-type: none"> 1. As a class or in small groups, students share and discuss the information they collected on their worksheets. Their findings can be recorded on a three-column chart (one column per <i>T. rex</i> life stage: baby, juvenile, adult). 2. Students can then compare and contrast how <i>T. rex</i>'s body changed as it grew. 3. Students revisit the list of questions they generated before their Museum trip to see which questions have been answered and which unanswered ones they would like to investigate further. 4. Each student or group can share their findings with the class. Ideas include: <ul style="list-style-type: none"> ● make a poster ● create a comic strip ● write a script and act it out ● write a story <p>Ideas for further exploration:</p> <ul style="list-style-type: none"> ● Students investigate their unanswered questions through research. ● Students compare what they learned about <i>T. rex</i> with another animals' growth and life stages, e.g. humans'. ● This exhibition was created by a team of scientists, exhibition designers, science writers, and artists (model makers, graphic designers, interactive designers). Students investigate career paths that may interest them.

Student Worksheets

NAME: _____

ANSWER KEY & NOTES TO EDUCATORS

Welcome to the American Museum of Natural History!

When you think of *Tyrannosaurus rex*, you may think of a huge and ferocious predator. But what was this animal like when it was younger?

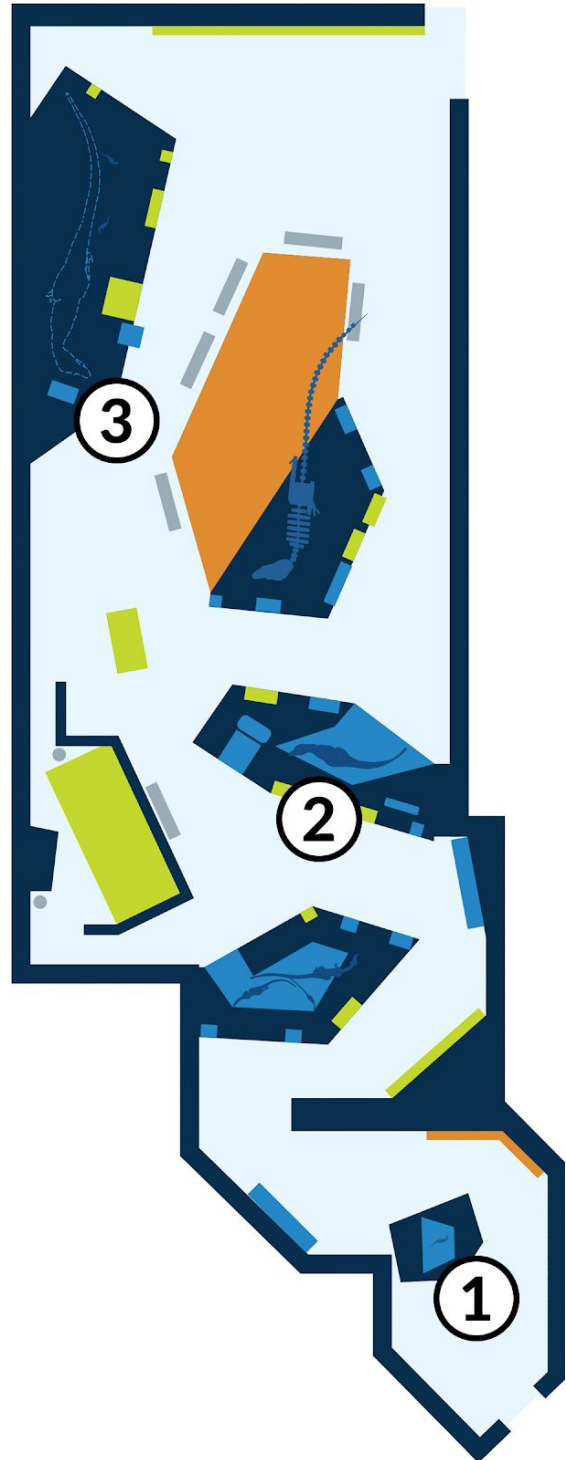
At the Museum today, you'll see what *T. rex* may have looked like at different ages.

These stops are highlighted in the worksheets:

STOP 1: *T. rex* Baby (age 1)

STOP 2: Juvenile *T. rex* (age 4)

STOP 3: Adult *T. rex* (age 20)



STOP 1: *T. rex* Baby (age 1)

1. Look at the model of the one-year-old *T. rex*. Talk to your partner about what you notice. Then, draw a picture of what you see. Label the different parts of your drawing.

Note to Educator: The model of the one-year-old *T. rex* is the first object students will encounter when they enter the exhibition.

Students may notice and label its:

- downy feathers covering the body
- tiny sharp teeth
- large eyes
- long tail

STOP 2: Juvenile *T. rex* (age 4)

2. Look at the model of the four-year-old *T. rex*. Talk to your partner about what you notice. Then, draw a picture of what you see. Label the different parts of your drawing.

Students may notice and label its:

- feathers all over the top of its body
- long, bladelike teeth
- muscular legs

Talk to your partner: How is this four-year-old *T. rex* different from the one-year-old *T. rex* you observed before? Write notes below.

Answers include:

- It is much larger.
- It has fewer feathers underneath its body and on its face.

STOP 3: Adult *T. rex* (age 20)

3. Look at the model of the twenty-year-old *T. rex*. Talk to your partner about what you notice. Then, draw a picture of what you see. Label the different parts of your drawing.

Students may notice and label its:

- feathers only on its head and neck
- more-robust teeth
- giant, heavy body
- comparatively tiny arms with two fingers

Student Worksheets

NAME: _____

Welcome to the American Museum of Natural History!

When you think of *Tyrannosaurus rex*, you may think of a huge and ferocious predator. But what was this animal like when it was younger?

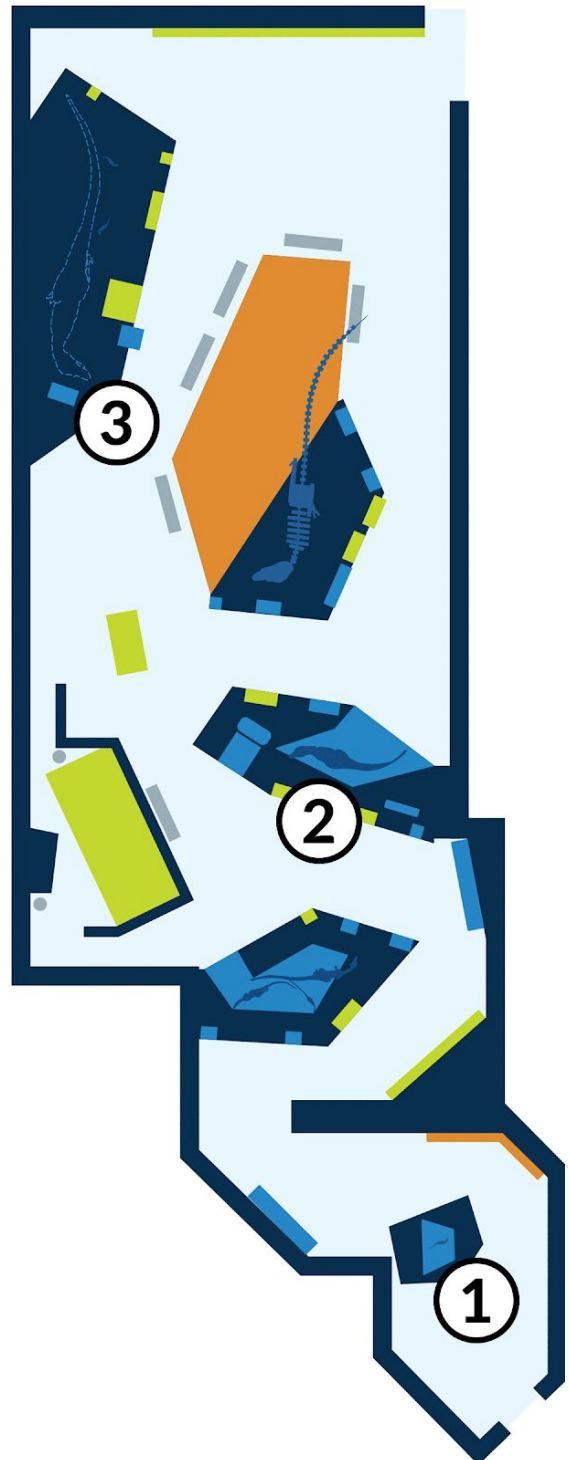
At the Museum today, you'll see what *T. rex* may have looked like at different ages.

These stops are highlighted in the worksheets:

STOP 1: *T. rex* Baby (age 1)

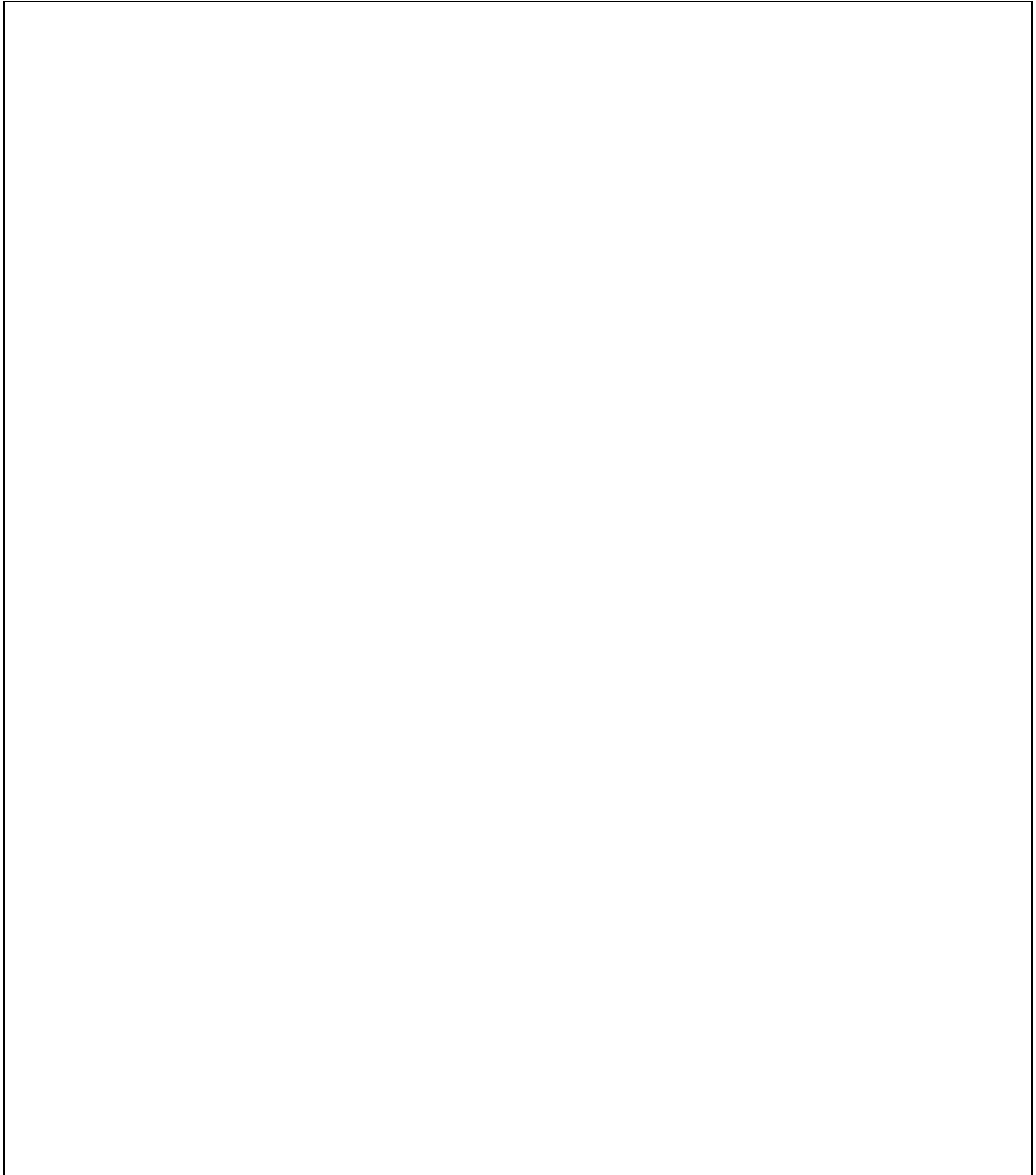
STOP 2: Juvenile *T. rex* (age 4)

STOP 3: Adult *T. rex* (age 20)



STOP 1: T. rex Baby (age 1)

4. Look at the model of the one-year-old *T. rex*. Talk to your partner about what you notice. Then, draw a picture of what you see. Label the different parts of your drawing.



STOP 2: Juvenile *T. rex* (age 4)

5. Look at the model of the four-year-old *T. rex*. Talk to your partner about what you notice. Then, draw a picture of what you see. Label the different parts of your drawing.



Talk to your partner: How is this four-year-old *T. rex* different from the one-year-old *T. rex* you observed before? Write notes below.

STOP 3: Adult *T. rex* (age 20)

6. Look at the model of the twenty-year-old *T. rex*. Talk to your partner about what you notice. Then, draw a picture of what you see. Label the different parts of your drawing.

