#### Dear Educator,

Imagine going back in time 66 million years to the Cretaceous period — when flying giants soared in the air, reptiles patrolled the coast, and dinosaurs ruled the land. From May 23-27,

Apple TV+ is bringing Prehistoric Planet to life with dazzling scientifically sound graphics, new knowledge, and even music using fossils as instruments.

You can captivate your students' attention and support learning skills with these free educational materials from **Apple TV+** in partnership with curriculum specialists Young Minds Inspired. Students will use criticalthinking skills including inferring, synthesizing, and questioning as they work in teams to test their knowledge about dinosaurs, research, and collaborate to create class displays. The program's easy-to-implement standards-based lesson materials are designed for grades 3-6 and support national STEM and ELA standards.

We hope that you will share this program with other teachers. Please let us know your thoughts on this program at ymiclassroom. com/feedbackprehistoricplanet. We look forward to hearing from you.

Sincerely,

Dr. Dominic Kinslev Editor in Chief Young Minds Inspired

#### estions? Contact YMI toll-free at 1-800-859-8005 or by email at feedback@ymiclassroom.com.

# \*tv+ PREHISTORIC PLANET

#### **About Prehistoric Planet**

For a five-night documentary event beginning May 23, Apple TV+ will release the groundbreaking **Prehistoric Planet** series. Experience the wonders of our world like never before in this epic docuseries from Jon Favreau and the producers of Planet **Earth**. Travel back 66 million years to when majestic dinosaurs and extraordinary creatures roamed the lands, seas, and skies.

#### **Target Audience**

Grades 3-6

#### **Program Components**

Visit ymiclassroom.com/preshistoricplanet for materials to accompany this teacher's guide, includina:

- 3 reproducible activities
- A reproducible family letter
- A digital guiz
- Educational standards
- Episode guide

#### What Students Will Learn with These Activities

- How dinosaurs and prehistoric creatures survived and thrived in various habitats during the Cretaceous period
- How to infer purpose of animal characteristics and how they impact animal behavior
- How to revise misconceptions of science knowledge and incorporate new learning
- How to take field notes to document new learning
- How to synthesize new learning in collaborative class projects

#### How to Use the Program

Make photocopies of the student reproducible sheets and support students as they complete the activities and classroom discussions using this teaching guide. An online digital guiz is also available for students to use individually or in teams. Send home the family letter to extend the learning fun.

#### Activity 1 Why Live Here?

In this critical-thinking activity, students will infer why animals lived in different habitats. Begin the activity with a class discussion about what students need to survive where they live. How might their lives be different if they lived somewhere colder/warmer, etc.?

Next, distribute the activity sheet. Students will learn about two dinosaurs—Tyrannosaurus rex and, Velociraptor—and a flying reptile that lived among dinosaurs called *Quetzalcoatlus*. Discuss with students why those creatures may have lived in their habitats. Encourage students to use the hint box at the bottom of the activity sheet for ideas representing their adaptations. For an extra challenge, have students pick one creature and describe how they would have to adapt to live in a different habitat or if their habitat changed.

**Answers:** *Tyrannosaurus rex*—Coast; *Velociraptor*— Desert; Quetzalcoatlus—Freshwater. Answers about adaptations will vary. Possibilities include: T-rex—worked together, able to swim; Velociraptor—small size allowed them to attack quickly and quietly; Quetzalcoatluslarge wings, able to fly long distances.



### Activity 2 The Cretaceous World

In this collaborative activity, students will work in small groups to research dinosaurs to make a class mural representing the Cretaceous period. Begin by asking students what they already know and want to know about the Cretaceous period. Together, fill in a class chart with three columns: What We Think We Know, What We Want to Know, and What We Learned. Students can write their own thoughts and class discussion notes on the chart on the student activity sheet.

Next, divide student into groups. Each student group can use library books, internet resources (such as the Natural History Museum website), and information they may learn from the series to fill in their research chart. Encourage students to use the research question prompts for support.

To synthesize thinking and share learning, have students create drawings of dinosaurs in the Cretaceous world based on their research to add to a class mural on butcher paper. This mural can be posted in the classroom, hallway, or library to celebrate World Dinosaur Day on June 1.

### Activity 3 **Dinosaur Detectives**

In this creative movement activity, students will discover dinosaur behavior from the Cretaceous world. Begin the activity by completing the true/false quiz on the student activity sheet as a class or by having students work with partners. Explain scientists are always learning new information and some record them in field journals or with notetaking. Share the answers and explanations with the students, allowing them to change their answers and add field notes of new learning.

Next, group students into teams. Taking turns, students choose one dinosaur and act out its behavior or physical characteristics. Have students work with their teams to identify the dinosaur. As an extension, students can create their own Cretaceous world dinosaur.

#### **Answers:**

- 1. *True*: Mosasaurs had an incredible ability to see in the dark. They only hunted at night.
- True: Estuaries are areas where freshwater rivers and oceans meet. Many dinosaurs enjoyed the best of both worlds in estuaries and used them to hunt for food.
- 3. False: Based on how birds drink today, sauropods most likely put their whole mouth in the water, sucked the water up, and used special muscles to push the water up their long necks.
- 4. False: T-rex hunted with their families and were great parents.
- 5. *True*: Dragonflies have been around for nearly 200 million years. They lived in Ice Worlds in reeds around rivers where baby *Ornithomimus* hatched.
- 6. *True: Troodontids* are related to modern hawks. Modern hawks use sticks to spread fires to flush out small mammals and insects to make them easier to find. Scientists believe that *Troodontids* were as clever as hawks, so they may have used tools, too!
- 7. False: Giant turtles, crabs, starfish, jellyfish, and some early birds that we know today lived alongside the dinosaurs.
- 8. False: During the Cretaceous period, warm temperatures meant violent storms and extreme seasons. Dinosaurs had to be able to handle any kind of weather, or move long distances when things got too harsh.

#### Check Out the Digital Quiz!

Your students can test their knowledge about dinosaurs with an interactive quiz at ymiclassroom.com/video/apple/.

#### Resources

**Prehistoric Planet:** apple.co/-PrehistoricPlanet **YMI program site:** Ymiclassroom.com/prehistoricplanet







## Why Live Here?

Dinosaurs had many ways their bodies and behavior helped them survive the Cretaceous period. By this period, dinosaurs had already been alive and evolving for 150 million years. Reptiles also lived among the dinosaurs. Looking carefully at their bodies gives clues to their lives and habitats.

**Observe** the dinosaurs and flying reptile. What do their bodies look like? What might their body have allowed them to do?

**Infer** the habitat of the dinosaurs and flying reptile.

**Match** the habitat to the creature that lived there. Draw a line to connect them.

**List** two adaptations that helped each creature survive its habitat. *Hint!* Use the fast facts box for help.

#### **Prehistoric Creature**





Velociraptor



Quetzalcoatlus

#### **Habitat**



Coas



Freshwater



Desert

#### **Adaptations**

Tyrannosaurus rex

1	
1.	

2				
/				

Velociraptor

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Quetzalcoatlus

-	1			

2			

#### **Fast Facts**

- *Tyrannosaurus rex*: The *T-rex* was big, and big hearted. They were caring parents, good partners, and worked together to hunt. They were also powerful swimmers. Their big feet helped them walk on sandy beaches.
- *Velociraptor:* Cunning, quick, and deadly, these desert-dwellers also lived in other places, too. They were as small as a turkey and covered in feathers.
- Quetzalcoatlus: This flying reptile was the size of a giraffe. Its wings stretched as wide as a small plane. It could fly from one continent to another.

#### **Cretaceous Challenge!**

Choose one of the dinosaurs or the flying reptile above, or another dinosaur you love. Imagine their habitat changed. What would they have to do to adapt? How could their body or activities evolve? Use the back of this paper to draw a picture of your dinosaur with changes. Add labels to show your thinking.

**Families:** Apple TV+'s new five-part documentary series premieres on May 23. Watch **Prehistoric Planet** to see your favorite dinosaurs and discover some new ones as they interact in amazing ways!





### The Cretaceous World

Sixty-six million years ago there were no humans. Dinosaurs ruled! Scientists work tirelessly to discover the secrets and clues dinosaurs left behind about their magnificent lives. New ideas and discoveries are being made all the time. Research with your class to become Cretaceous Era Experts!

**Document** what you already know about dinosaurs.

Brainstorm what you would like to know.

**Research** new learning. *Hint:* Feeling stuck? Pick a dinosaur you like and use the questions below to take a deep dive into their world.

**Share** your new learning.



What We Think We Know	What We Want to Know	What We Learned

**Questions to consider about dinosaurs:** 

Where did they live?

How did their bodies help them survive?

What did their home look like?

What would happen if their world changed?

Why did they live there?

What did they look like?

What did they eat?

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## Dinosaur Detectives

Dinosaurs in movies aren't always accurate. And some of the things dinosaurs did in reality can sound like fiction. From flying dinosaurs to dinosaurs who could swim to long necks to giant feet, test your dino details!

**Read** the choices. Which seems right? **Circle** true or false. **Share** your answers.

**Document** new learning with Field Notes.



<ol> <li>True or False? Mosasaurs were lizards that lived in the ocean and only hunted at night. Field Note:         <ul> <li>True or False? Plesiosaurs hunted and had their babies in freshwater rivers, but also lived in the ocean.</li> </ul> </li> <li>True or False? Plesiosaurs hunted and had their babies in freshwater rivers, but also lived in the ocean.</li> <li>True or False? Long-necked sauropods used just their tongues to drink water.</li> <li>Field Note:         <ul> <li>True or False? Trex always had to have their space. They hunted and lived alone.</li> <li>Field Note:             <ul> <li>True or False? Dragonflies lived in ice worlds with dinosaurs.</li> <li>Field Note:</li></ul></li></ul></li></ol>	
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# \*tv+ PREHISTORIC PLANET

#### Dear Families,

Get ready to go back in time 66 million years to the Cretaceous period when flying giants soared in the air, reptiles patrolled the coast, and dinosaurs ruled the land. New discoveries are teaching us more than ever about how these amazing creatures survived and thrived, and even interacted in surprising ways. From May 23-27, **Apple TV+** is bringing **Prehistoric Planet** to life for a five-night television documentary event with dazzling scientifically sound graphics, new knowledge, and even music using fossils as instruments—you'll see dinosaurs like never before!

Your child is learning about dinosaurs and the creatures that lived alongside them with curriculum materials created by Apple TV+ in collaboration with curriculum specialists at Young Minds Inspired. You can continue the learning and excitement at home—each episode of **Prehistoric Planet** makes a great family activity to watch together and discuss.



#### **Explore Prehistoric Planet**

The series explores dinosaurs in their habitats, including:

**Episode 1:** Coasts—A pregnant *Tuarangisaurus* is in distress—and her young calf can sense it—as she travels waters that are home to the ocean's deadliest predators.

**Episode 2:** Deserts—Above the deserts of North Africa, aerial combat ensues as male *Barbaridactylus* pterosaurs fight for the attention of females below.

**Episode 3:** Freshwater—With its feathered body and duck bill, the eight-ton *Deinocheirus* wades through an Asian wetland in search of relief from pesky biting flies.

**Episode 4:** Ice Worlds—Within the snow-covered forest, a tense standoff develops between ancient rivals, *Pachyrhinosaurus* and *Nanuqsaurus*.

**Episode 5:** Forests—A journey through an underground cave in North America turns perilous when a young *Triceratops* is separated from its mother.

Keep finding dinosaur facts as a family with these fun activities:

- Go to the **Prehistoric Planet** show page on Apple TV+ to watch videos and hear more from the experts on how this story came to life. See apple.co/-PrehistoricPlanet to learn more.
- Create a list of interesting facts and questions while watching **Prehistoric Planet** to research together.
- After each episode, make dinosaur fact cards to play a family quiz game.
- Visit a local natural history museum, an outdoor dinosaur fossil exhibit, or a virtual museum and identify as many dinosaurs as you can.
- Visit a local library for books on dinosaurs and their habitats. Local librarians can help your family get set up with library cards and e-reader and audio public library accounts to read anywhere on the go. Become science investigators together.

Check out the
Prehistoric Planet
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starting May 23!

