

Dilophosaurus Lesson Plan

Lesson Summary

In this episode of Sketch and Coffee Live at 5:30am Texas time, Blade sketches a toy Dilophosaurus and dives into the science and pop culture around this early Jurassic predator. The discussion covers how Jurassic Park got many facts wrong, including the frill, venom, and size, while nailing the jaw notch detail. Blade shares how paleontologists believe the dinosaur's twin crests might've resonated like a goose's sinuses, speculates on group hunting behavior, and points out that this dino actually lived during the Jurassic—unlike most in the movie named after it.

Watch the episode here: <https://www.youtube.com/live/8Rsm8vgoz-0?si=ij4QSbgwpfu8pnqj>

Lesson Plan

Objective:

Students will explore the paleontological facts about Dilophosaurus and critically examine how media portrayals like Jurassic Park differ from the fossil record.

Standards:

- NGSS MS-LS4-1: Analyze and interpret data for patterns in the fossil record
- NGSS MS-ESS1-4: Construct a scientific explanation based on evidence
- TEKS 7.12D: Identify evidence that supports evolution

Materials:

- Transcript summary and Fun Facts
- YouTube episode (optional viewing)
- Student worksheet
- Internet access for source review (optional)

Procedure:

1. Begin with a brief discussion: "What do you know about the Dilophosaurus?"
2. Read through the Transcript Summary aloud or in pairs.
3. Review the 9 Fun Facts together.
4. Distribute worksheet. Students work individually or in small groups.
5. Watch the livestream segment discussing the jaw notch and crest speculation.
6. Class share-out: one favorite theory or misconception per group.

Assessment:

Students will be assessed based on their worksheet answers and ability to distinguish between scientific fact and fiction.

Extension:

Research another dinosaur featured in Jurassic Park and compare its real-life characteristics to its portrayal in the movie.

Rubric (4-point scale)

Criteria	4 - Excellent	3 - Good	2 - Needs Improvement	1 - Incomplete
Understanding of Dilophosaurus facts	Clear, accurate	Minor factual errors	Major misunderstandings	No understanding
Crest Function Analysis	Insightful, evidence-based	Some evidence	Minimal evidence	Unsupported
JP Comparison	Clear, thoughtful contrast	Some contrast	Vague/inaccurate	None
Reflection	Creative, well-explained	Some explanation	Brief or off-topic	Missing

9 Fun Facts About Dilophosaurus

1. Dilophosaurus lived around 193 million years ago in the Early Jurassic.

It was one of the first large predatory dinosaurs, roaming North America long before iconic creatures like T. rex or Velociraptor showed up. <https://www.sci.news/paleontology/dilophosaurus-wetherilli-08620.html>

2. It had twin head crests, possibly for display or species recognition.

These bony crests weren't strong enough for combat. They may have been used like a peacock's tail—flashing color or shape to attract mates or intimidate rivals. <https://encyclopedia.pub/entry/29646>

3. CT scans suggest the skull had air chambers, maybe for sound or thermoregulation.

Internal cavities in the skull and crests may have helped the animal regulate heat—or acted as resonators to amplify vocalizations like honks or bellows. <https://encyclopedia.pub/entry/29646>

4. There's still debate about whether it hunted solo or in groups.

Some researchers think Dilophosaurus may have hunted with others, while others believe it scavenged or ambushed prey alone. There's not enough evidence to say for sure. <https://encyclopedia.pub/entry/29646>

5. It was about 20 feet long and nearly 1,000 pounds.

Despite what Hollywood showed, real Dilophosaurus was about the size of a car—not a compact lap dinosaur. <https://www.sci.news/paleontology/dilophosaurus-wetherilli-08620.html>

6. The notch in the jaw may have helped catch slippery prey.

That kink in its upper jaw wasn't a deformity—it might've acted like a fishhook, helping it grip small, wriggly animals. 

<https://www.sci.news/paleontology/dilophosaurus-wetherilli-08620.html>

7. The frill and venom spit in Jurassic Park are completely fictional.

Dilophosaurus had no frill, no venom sacs, and no spitting ability. The movie added those features to make it more terrifying and memorable.



<https://whendinosaurroamedamerica.fandom.com/wiki/Dilophosaurus>

8. It's one of the few dinosaurs in Jurassic Park that actually lived in the Jurassic.

Most dinosaurs in the movie—like Triceratops, Velociraptor, and T. rex—were from the Cretaceous. Dilophosaurus actually earns its spot in the title.  <https://www.dinoreserve.com/blog/dilophosaurus/>

9. It was discovered in Arizona in the 1940s.

The first bones were found by Navajo Jesse Williams near Tuba City.

Paleontologist Samuel Welles officially named the species in 1970. 

<https://www.smithsonianmag.com/science-nature/dilophosaurus-an-early-jurassic-icon-57431583/>

Student Worksheet

Name / Date:

Review:

What time period did Dilophosaurus live in? How is this different from most of the dinosaurs in Jurassic Park?

Discussion:

Why do paleontologists argue about the function of the twin crests on Dilophosaurus?

Data Analysis:

Based on the Fun Facts, what evidence suggests the crests might have been used for sound?

Reflection:

What's your favorite speculative idea about Dilophosaurus? (Real or made-up!) Explain why.
