

The Story of Dinosaurs

The Story of Dinosaurs

ASHLEY BURKETT

Contents

Introduction	1
Part I. <u>Week 1: Welcome</u>	
Part II. <u>Week 2: Warm or Cold-blooded?</u>	
Part III. <u>Week 3: All About the Stegosaurus</u>	
Part IV. <u>Week 4: Dino Parents</u>	
Part V. <u>Week 5: How to Outrun a T-rex</u>	
Part VI. <u>Week 6: Flight and Feathers</u>	
Part VII. <u>Week 7: Dinosaur Extinction</u>	
Part VIII. <u>Optional: Hollywood's Dinosaurs</u>	
Part IX. <u>Week 8</u>	
Part X. <u>Week 8: Finals Week</u>	
Appendix	77

This is where you can write your introduction.

PART I

WEEK 1: WELCOME

Welcome to the Story of Dinosaurs!!!



Getting Started in this Course – Week 1

Online Obligations: This is a mostly asynchronous course, but you will have to turn in certain things in by a specific date. Meetings such as office hours or optional synchronous tutorials/lectures will be conducted through Microsoft Teams [channel link]. All OSU students have access to Teams through their OSU email account. I've added you all to the channel! If you want to set up any online office hours or group chats feel free to do so on this channel.

Course Information: Syllabus can be found [[here](#)]. Please review this document to be sure you understand the obligations of this course. ***Please complete all work for that week by midnight [Sunday].***

Details: Watch the video below for information on how to get

started in this course. You follow along to the powerpoint here:
[1a_Course Expectations](#)



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here: <https://open.library.okstate.edu/thestoryofdinosauers/?p=3#oembed-1>

Learn a little about me in the video at the
bottom of the page!



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here: <https://open.library.okstate.edu/thestoryofdinosauers/?p=3#oembed-2>

Video Introductions!

In this class, we will be communicating a lot through short video posts. To do this we will be using **Canvas Discussion Board!** Your

assignment this week is to create a 30-second video introducing yourself here: [link to discussion board?]



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here: <https://open.library.okstate.edu/thestoryofdinosaurs/?p=3#video-3-1>

First Things First!

Each week you will begin by taking a pre-quiz where your answers will not be counted against you if they are incorrect. If you complete the quiz you will receive full credit. Take **Weekly Quiz 1a** before you move on.

Weekly Quiz 1a



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online here:

[https://open.library.okstate.edu/
theoryofdinosauers/?p=3#h5p-3](https://open.library.okstate.edu/theoryofdinosauers/?p=3#h5p-3)

Something that is unique to the first week of this class is the **Entry Survey**. This will be used to measure how much you know and if you change any of your perceptions through the completion of this course. there are no right or wrong answers to this 100pt survey. Once you complete it you will receive the full 100pts.



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Next, we will move on to the content for the week. This class will be conducted in a mostly asynchronous format. You will be

interacting with the material and your classmates mostly through video messages.

To work our way through the content you will watch lecture videos of me and other resources from all around the internet. As you scroll through the home page watch the videos and fill in the **Notes with Gaps**. It is highly recommended that you fill out the Notes with Gaps as you are able to use **ONLY** those on **ANY** tests in this class! Here are the [[Week 1 Notes with Gaps](#)] for the first week and the PowerPoint for the first video [[1b Scientific Method powerpoint](#)].

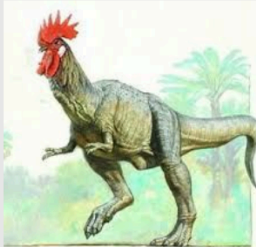
To start, let's discuss the **Scientific Method** a bit:



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here: <https://open.library.okstate.edu/thestoryofdinosaurs/?p=3#oembed-3>

What is a Dinosaur?



These images are meant to be humorous, but have you ever

really taken a good look at a bird's feet? Every time I do I see dinosaurs!

BUT

What makes a dinosaur a dinosaur? Let's have a look at a few models to see if you can find any common characteristics.



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Take the *Dinosaur? Yes or No?* survey here before going down to the lecture video below.

Dinosaur? Yes or No?



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<https://open.library.okstate.edu/thestoryofdinosauers/?p=3#h5p-16>

So, how did the survey go? As you go on with the Lecture Videos, be sure to fill out your [Week 1 Notes with Gaps] and follow along on the Power Point [What is a Dino pp].

[Embed Poll Everywhere window asking ‘what terms can be used to define a dinosaur? (2-3 words only)]



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theoryofdinosaur/?p=3#oembed-6](https://open.library.okstate.edu/theoryofdinosaur/?p=3#oembed-6)

So, now that you know a little bit about the grouping of dinosaurs based on their hip structures, color the 3 hip bones in the dinosaur schematics in your **Notes with Gaps**. use that information to group the dinosaurs in the [Exploring dinosaur Phylogeny] activity.



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[create hotspot activity for question 13 on NewQuiz L2]



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Candy Cladistics

This exercise is intended to get you to think about how things are grouped. So, go to your kitchen and get some food items. it would be good to ensure that at least some have shared characteristics. I'm going to use candy in the video, but you can use whatever you want. Gather your items and follow along with the video, when you are done take a photo of your food cladogram and submit it here: [Food Cladogram]



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here: <https://open.library.okstate.edu/thestoryofdinosauers/?p=3#oembed-8>

Wrap-up Candy Cladistics



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Look Here!



Did you complete all of the assignments on Canvas?

1. Create a 30 second video introducing yourself! [Introduce Yourself}
2. [Weekly Quiz 1a] – The first thing you will do every week is to complete the pre-quiz. You will get full credit for participating.
3. [Entry Survey]- 100 points and is participation based.
4. [Dinosaur? Yes or No?] survey
5. [Exploring Dinosaur Phylogeny] Activity
6. [Food Cladogram]
7. [Weekly Quiz 1b] – At the end of every week, you will complete a graded quiz based on the week's topic. This will be graded based on your answers. This quiz is open for you to take as many times as you want

Please note: there are ~2 extra exercises in this week because it is the first week. Later weeks won't be quite as packed. All assignments can also be found here: [Week 1 Intro to Course and Principles]

Links

- Previous Week – None
- Next Week – [Week 2 – Warm or Cold-Blooded?]

Announcements

- **Be sure to create your Introduction Video!**



Dr. Ashley Burkett
Assistant Professor of Geology

ashley.burkett@okstate.edu

Hello all! I am excited to have you in this class! I appreciate all feedback from content and delivery to typos and broken links. Please feel free to contact me via email, Canvas, phone, or office hours! I would love to hear from you.



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can view them online here:

[https://open.library.okstate.edu/
the-story-of-dinosaurs/?p=3#oembed-10](https://open.library.okstate.edu/the-story-of-dinosaurs/?p=3#oembed-10)

A Little About Me

I am a paleontologist specializing in single-celled invertebrates, that make a shell about the size of a grain of sand, called foraminifera. These organisms are still around in modern oceans today and have existed since the first hard parts appeared in the fossil record about 500 million years ago. They also were around and experienced some major changes in their shell morphologies while dinosaurs were roaming the earth! Because I study these marine organisms I get to go to sea once or twice a year to collect samples. I love being at sea and am very passionate about foraminifera!

This is my second year as a faculty member in the Boone Pickens School of Geology. In addition to this course, I teach GEOL 1224: Evolution of the Earth, and GEOL 3103: Paleontology.

PART I

WEEK 2: WARM OR COLD-BLOODED?



This Week – Begin [suggested dates]

Start with [Weekly Quiz 3a]



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[https://open.library.okstate.edu/
theoryofdinosaurs/?p=22#h5p-5](https://open.library.okstate.edu/theoryofdinosaurs/?p=22#h5p-5)

Hey all! This week, we will be working in groups. I know this can be challenging given our varying distance and time commitments, but let's give it a try! First, check out which group you are in by clicking on People in the menu on the left. Then click on Dinosaur Metabolism group and see which one you are in. You can then "Visit the Group Homepage" to see where and how you will interact with your group. Keep in mind that you will have to connect with your group early in the week, ask each other questions and exchange information midweek, and then produce a final product by the end of the week. In addition to that task this week, you will need to get the background information through the lecture videos below.

I would suggest that **at the beginning of the week** [suggest dates] you identify what each group member will do, and identify a means you will use to communicate. If you want you can set up video chat through the Conferences option in the left-hand menu. You can also use the Discussion or Collaboration options.

Midweek [suggest dates] you should all have read and discussed the paper with other members of your group (or at least clarified questions or points of interest through something like a discussion board). You should have a plan of how you will work together to identify the questions, shoot, and post a video as its own thread through the discussion board: [LINK Discussion Board Dinosaur Metabolism]

The videos are **due by [insert date]** (around noon) you need to shoot and post the video on Flipgrid on behalf of your group. At the beginning of next week you will all individually view and comment on videos on the discussion board: [LINK Discussion Board Dinosaur Metabolism]

I will grade group-work participation through viewing your

discussion boards and information exchange and (possibly) an anonymous survey of your group members.

On your own (each person) should view the videos between **Friday night and Sunday**, comment on 2 videos then complete the Complete your assessment on the survey here: [LINK Dinosaur Metabolism]



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If you have ANY QUESTIONS please contact Dr. B.



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here: [https://open.library.okstate.edu/
thestoryofdinosauers/?p=22#oembed-1](https://open.library.okstate.edu/thestoryofdinosauers/?p=22#oembed-1)

What is Metabolism?

Let's put this argument to the test this week! When I was a kid, dinosaurs did not have feathers. It was also certain if they were warm-blooded or cold-blooded. We now have a bit more evidence to go off of, so let's heat things up (or cool them down . . . depending on which side of the argument you are on).

So, you can find the [[Notes with Gaps](#)] for this week and [[Power](#)

[Point here](#)]. what are some ways that animals fuel their bodies? Watch the videos below on how reptiles and birds regulate their body temperatures. Let's find out!

https://docs.google.com/presentation/d/e/2PACX-1vQ1Y7TMLx6IzkQEx013tXatU1S9i74s914wgxPLmWfARHkgyivOfZP56F37kJIswHZc_GndW32tzB1A/embed?start=false&loop=false&delayms=3000



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here: <https://open.library.okstate.edu/thestoryofdinosaurs/?p=22#oembed-2>

How to Read a Scientific Article

To dive into the dinosaur literature in the most efficient way possible we will be splitting up into groups, reading a scientific paper, and reporting our findings. Before we get that far, let's review how to interpret a scientific article. Check out the video below:



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here: <https://open.library.okstate.edu/thestoryofdinosaurs/?p=22#oembed-3>

Group Readings

To find your group assignment go to People>Groups>Dinosaur Metabolism. Once you have done that you can communicate with your group on your personal group page by clicking on the appropriate link below. You can post to the message board to communicate who reports on each question. Then post your video of your reading findings to [LINK Discussion Board Dinosaur Metabolism] and comment on 2 other groups' video. Each group only needs one video but you can post in parts if needed, just make sure the labeling is clear (include part 1 of 2, or whatever, in the video title).

1. Sauropod Gigantism [LINK]
2. T-rex Skull Morphology [LINK]
3. Evidence for Mesothermy [LINK]
4. Shortfalls of Mesothermy [LINK]
5. Biomechanics [LINK]

After your group has met or exchanged information, create a Flipgrid video with your findings. Once everyone has posted, review the videos and comment on at least 2 videos (with a response video). You will be graded on your group participation [LINK Dinosaur Metabolism Group Work] and your reading findings here: [LINK Discussion Board Dinosaur Metabolism].

Review All Groups on Discussion Board

Make sure you have gone to the discussion board and commented on at least 2 videos. What is your conclusion about how dinosaurs regulated their body temperature? Complete your assessment on the survey here: [LINK Dinosaur Metabolism]



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After you are done, complete the [LINK Weekly Quiz 3b]



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Wrap up!



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here: <https://open.library.okstate.edu/the-story-of-dinosaurs/?p=22#oembed-5>

Look Here!



Complete on Canvas

1. [LINK Weekly Quiz 3a]
2. Reading Activity – People>Groups>Dinosaur Metabolism [LINK Dinosaur Metabolism Group Work]

- Video of your reading findings [[LINK Discussion Board Dinosaur Metabolism](#)]
 - Reply to 2 posted videos and complete [[LINK to Dinosaur Metabolism](#)]
3. [Weekly Quiz 3b]

Links

Previous Week – [[Week 1 – Welcome!](#)]

Next Week – [[Week 3 – Stegosaurus](#)]

Announcements

None

PART I

WEEK 3: ALL ABOUT THE STEGOSAURUS



Let Me Introduce: Stegosaurus!

First, get in your [LINK Weekly Quiz 6a pre-quiz].





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<https://open.library.okstate.edu/the-story-of-dinosaurs/?p=24#h5p-6>

Who doesn't love the Stegosaurus? So many unanswered questions. Was it unintelligent given its tiny brain cavity? What's with the plates? Did they live together or apart? Most importantly, how epic were their battles with T. rex?



This week we will answer, or at least try to figure out, answers to all these burning questions about one of the most iconic dinosaurs ever. Plus everyone loves Spike in The Land Before Time. Here are the [Notes with Gaps] and the [PowerPoint] for the week. This week is all about Stegosaurus! Let's dive into the details.



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here: <https://open.library.okstate.edu/the-story-of-dinosaurs/?p=24#oembed-1>

Now let's get into the basics of the features Stegosaurus has!



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here: <https://open.library.okstate.edu/the-story-of-dinosaurs/?p=24#oembed-2>

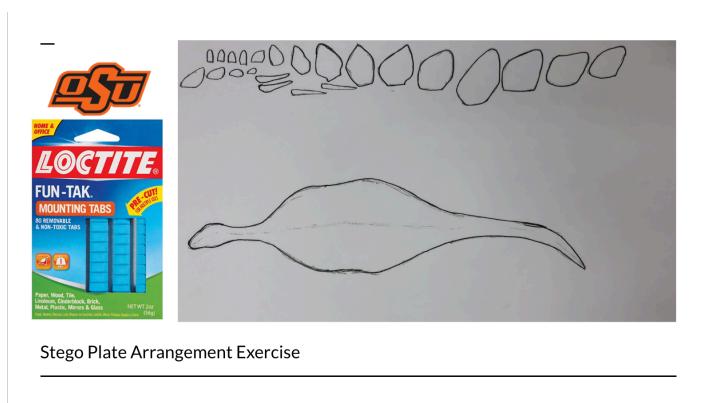
[INSERT lecture video, plates?]

Before you continue, print out the Stegosaur Plates exercise, cut out the plates and spikes, and arrange them in the top view of the Stegosaurus.

How will you arrange the plates? Are they in 2 parallel lines or staggered? Remember, you have to make them all fit! This model is to scale! Once you have completed putting your plates on (with glue, sticky tac, or tape) take a picture and upload it here: [LINK Stegosaurus Plate Arrangement]

[LINK Stegasaurus Plate Arrangement Video]

1. For this assignment, print out the [Stegosaur Plates](#) exercise. This is also available in your Notes with Gaps.



The large round shape below the plates is a top view of the Stegosaurus. Imagine you were in a (non-flowering) tree looking down as it walked by on the ground below you. How would the plates and spikes be arranged? Hint: Try using the sticky tack wrapped around the bottom of the plates to stick them perpendicular to the cut out shape of the dinosaur. The line down the middle of the dinosaur outline is about where its backbone should be.

2. Cut out the plates and spike and arrange them in the top view of the Stegosaurus.
 - How will you arrange the plates?
 - Are they in 2 parallel lines or staggered? Remember you have to make them all fit! This model is to scale!
 3. Once you have completed putting your plates on (with glue, sticky tac, or tape) take a picture and upload it here: [LINK to upload site]
-

What's with the Plates?

There are 4 main proposed uses of the plates. in this video I will review those uses. Which proposal grabs your attention the most? You can use this video to help you generate your “stegosaurus experiment” for the weekly assignment.

[INSERT [Stegosaurus_Plates.mp4](#)]

What Do YOU Think? Design an EXPERIMENT!

[INSERT [Stegosaurus_StegoAssignment.mp4](#)]

So, what you will do this week for the hands-on activity you will be designing a scientific experiment to assess the uses of the Stegosaurus' plates! You have a couple options, the experiment you design could be field-based (e.g., go into the field and look for a certain fossil structure) or lab-based (where you “build” and design

something in the lab to test) experimentation. Check out this video for more info:

To submit your experiment you can either submit a video of you explaining your experiment or submit a written report. To obtain full credit your submission should include:

Part 1: EVERYONE

1. Identification of which “proposed uses of the plates” idea you are testing.
2. A stated hypothesis your experiment will test (see the Week 1 Scientific Hypothesis video [here \(Links to an external site.\)](#) to remind yourself of how to construct this).
3. What you expect the results of the experiment to be.

Part 2A: Field Paleontologist- If you do the field-based experiment be sure to include:

1. What you are going to look for in the fossil record
2. The likelihood that you will be able to find it
3. Potential dig site location

Part 2B: Lab Paleontologist- If you do the lab-based experiment be sure to include:

1. What will you **build** to test your hypothesis?
2. What variables or parameters that you will be measuring?
3. Likely outcomes of your experiment.
4. How you would modify it based on the results?

Submit your experimental designs here: [LINK Stegosaurus Experimental Designs]

Weekly Wrap-Up!



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here: <https://open.library.okstate.edu/thestoryofdinosauers/?p=24#video-24-1>



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here: <https://open.library.okstate.edu/thestoryofdinosauers/?p=24#video-24-2>

Look Here!



Complete on Canvas [INSERT Links]:

1. [Weekly Quiz 6a]
 2. [Stegosaurus Plate Arrangement]
 3. [Stegosaurus Experimental Designs]
 4. [Weekly Quiz 6b]
-

Links

- Previous Week – [Week 2 Dinosaur Metabolism]
- Next Week – [Week 4 Dino Parents]

Announcements

- From Tuesday to Thursday of this week I will be in Black Mesa in the panhandle of Oklahoma checking out some dinosaur track sites for my birthday! I will do my best to check my email often, but may be out of service at times.

PART I

WEEK 4: DINO PARENTS

Dinosaur Parenting

First, get in your Weekly Quiz 7a.



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<https://open.library.okstate.edu/theoryofdinosaur/?p=26#h5p-7>

Let's be honest, when you think about a Mama T-rex it doesn't make your heart all warm and fuzzing feeling does it? It probably shouldn't, as the t-rex could fit your entire torso in its mouth in one bite! BUT! Despite that terrifying thought, more evidence is showing that many Dinosaurs were actually great parents! Those that laid eggs and bounced may surprise you. Grab your [[Notes with Gaps](#)] and [[Power Point for Week 4](#)] and let's explore.

[INSERT Dinosaur [Parenting Part 1](#)]

Crocodile Parenting

[INSERT [Dinosaur parenting_How Crocs Parent](#)]



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here: <https://open.library.okstate.edu/thestoryofdinosauers/?p=26#oembed-1>



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here: <https://open.library.okstate.edu/thestoryofdinosauers/?p=26#oembed-2>

Bird Parenting

[INSERT [Dinosaur Parenting_How Birds Parent.mp4](#)]



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here: <https://open.library.okstate.edu/thestoryofdinosaurs/?p=26#oembed-4>

<https://youtube.com/watch?v=WLQ2s1UGn2c>

Relating this to Dinosaur and Reproductive Strategies

In this section we will cover some of the different reproductive strategies employed by different animals. This relates to dinosaurs because we can use some of this information when we examine fossilized dinosaur nests.

[INSERT [Dinosaur Parenting Relating to Dinosaurs](#)]

Evidence of Dinosaur Parenting

Select a dinosaur and do your own research on evidence of parenting. Keep in mind, that choosing a dinosaur (like Stegosaurus) where there is little to no evidence might make for a difficult research subject. Try to do a quick search prior to selecting your dinosaur!

Select a dinosaur species you would like to investigate what evidence we have of their parenting abilities. answer the questions

listed and submit a written or video report of your findings: [LINK to [Dinosaur Parenting Research project](#)]

Dinosaur Parents

What **EVIDENCE** is there?

In the lecture videos for the week, we spent a lot of time looking at the modern analogues of crocodiles and birds to see how they employ various parenting strategies. Now, you will investigate the dinosaur fossil **EVIDENCE**. You have the freedom to choose any dinosaur you would like, but you have to be able to report something about dinosaur parenting. I suggest you look at dinosaurs with nests preserved.



Discovered Dinosaur Nests

- Only the following dinosaurs have preserved intact dinosaur nests:
 - *Troodon* from L. Cretaceous in Montana
 - Unidentified theriziosaurs from L. Cretaceous of Mongolia which may have formed nesting colonies.
 - Titanosaur sauropods from L. Cretaceous in Argentina and Spain.
 - Prosauropod *Massospondylus* from the E. Jurassic in S. Africa
 - Ceratopsian *Psittacosaurus* from E. Cret in China and *Protoceratops* from L. Cret in Mongolia (although not nests, but hatchlings, tightly packed in a small space)

Check out Google Scholar and reputable scientific journalism sources (such as LiveScience.com) to gather data regarding your

dinosaur. Please do not cite Wikipedia (but feel free to use it as an annotated bibliography).

You may submit your findings in the form of a video or submit a written report. To obtain full credit your submission should include:

Be sure to include in your report:

1. What is the dinosaur starring in your reading?
2. What is parenting strategy?
 - K or R Selection?
 - What is the evidence
3. What additional evidence is needed to be sure?
4. Do you think this applies to all or only some dinosaurs? Why/Why not?

Keep in mind to cite things correctly as your written report will be run through Turnitin.

Finishing up

Finally, finish up with your Weekly quiz 7b.



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here: <https://open.library.okstate.edu/thestoryofdinosaurs/?p=26#video-26-1>

Look Here!



Complete on Canvas

1. Pre-Quiz [Weekly Quiz 7a]
2. Hands-On Activity- [Dinosaur Parenting Research Project]
3. Post-Quiz [Weekly Quiz 7b]

Links

- [Previous Week \[Week 3 -Stegosaurus\]](#)
- [Next Week \[Week 5 – How to Outrun a T-Rex\]](#)

Announcements

- None

PART I

WEEK 5: HOW TO OUTRUN A T-REX



The Time Traveler's Guide: How to Outrun a T-Rex!

First off, don't forget the Weekly Quiz 8a!



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[https://open.library.okstate.edu/
thestoryofdinosauars/?p=28#h5p-9](https://open.library.okstate.edu/thestoryofdinosauars/?p=28#h5p-9)



An interactive H5P element has been excluded from this version of the text. You can view it online here:

[https://open.library.okstate.edu/
thestoryofdinosauars/?p=28#h5p-10](https://open.library.okstate.edu/thestoryofdinosauars/?p=28#h5p-10)



One or more interactive elements has been excluded from this version of the text. You can view them online here: [https://open.library.okstate.edu/
thestoryofdinosauars/?p=28#video-28-1](https://open.library.okstate.edu/thestoryofdinosauars/?p=28#video-28-1)

Yes, this is how we will introduce this topic for the week. **It is awesome!** By the end of the week, you will know if scenes like this one and the original are accurate and why/why not.



One or more interactive elements has been excluded from this version of the text. You can view them online here: [https://open.library.okstate.edu/
thestoryofdinosauars/?p=28#oembed-1](https://open.library.okstate.edu/thestoryofdinosauars/?p=28#oembed-1)



One or more interactive elements has been excluded from this version of the text. You can view them online

here: <https://open.library.okstate.edu/the-story-of-dinosaurs/?p=28#oembed-2>

Here are your [Notes with Gaps](#) and [PowerPoint](#) for this week.

[INSERT [Dinosaur Tracks JP.mp4](#)]

First, How Dinosaurs Make Tracks

Some dinosaurs, like people, walk primarily on two feet, but others walk on all fours. So what do dinosaur tracks look like? Well, it depends on the dinosaur. In this section, we will focus on the trackways of 2 types of dinosaurs: Bipedal and Quadrupedal.

[INSERT [Dinosaur Tracks Tracks Part 1.mp4](#)]

[INSERT [Dinosaur Tracks Tracks Part 2.mp4](#)]

Next, Let's Look at Some T-rex Tracks

With great difficulty, I set up some T-rex tracks for you to examine. Check out the video below and complete the first part of [Can You Outrun a T-rex?]

In the lecture videos I went over how animals with 2 vs 4 legs make different tracks. T-rex is a bipedal dinosaur, meaning it will only leave a maximum of 2 footprints for each set of steps it takes.

Watch the video here about the 3 various speeds at which T-rex tracks suggest they move.

[INSERT [Dinosaur Tracks Trex tracks 2.0](#)]

Plug the information in the activity below into the equations in the [T-rex Track Ways spreadsheet](#). Use the information in Column G to determine how quickly the T-rex is moving in each track set. Record your answers.

T-rex Track Set	Track Color	Footprint Length in cm	Estimated Hip Height = Col C x 4	Measured Stride Length (S) in cm	Relative Stride Length (RSL) = Col E / D	Speed 2.0=Walk 2.0-2.9=Trot >2.9=Run
Station 1	Red		0		#DIV/0!	
Station 2	Yellow		0		#DIV/0!	
Station 3	Green		0		#DIV/0!	



An interactive H5P element has been excluded from this version of the text. You can view it online here:

<https://open.library.okstate.edu/thestoryofdinosauers/?p=28#h5p-25>

Could You Outrun a T-rex?

Finally, you will need to determine your walking and running speed to compare with T-rex. Check out the video below and complete the second part of [Can You Outrun a T-rex?]

[insert lecture video]

Part 2: Can you outrun it?



The gif above is from the original Jurassic Park movie. In this film they use a Jeep to easily outrun the T-rex. By the end of this exercise you will be able to gauge the reality of this scenario. You will also be able to determine if you could outrun the T-rex with your own 2 feet.

[INSERT [Dinosaur Tracks-How fast can you move](#)]

To complete this exercise you will need:

- a tape measure
- a long flat place where you can mark distances (like a sidewalk)
- a way to mark a start and end point (like chalk or flags)

Instructions:

1. Measure out 5m (~16.4ft)
2. Mark the start and finish lines of your 5m (~16.4ft)
3. Walk the 5m (~16.4ft) length and count every time your lead foot (the one you took your first step with) hits the ground.
Note: you should only be counting either your right foot or

your left. Do not count them both.

- Record the number of times your lead foot hit the ground.
- Run the 5m (~16.4ft) length and count every time your lead foot (the one you took your first step with) hits the ground. Note: you should only be counting either your right foot or your left. Do not count them both.
- Record the number of times your lead foot hit the ground.
- Use the Stride Length formula to determine your stride length for walking and running.
- Plug your stride length into the equation to calculate your speeds in MPH.
- Compare these with the speeds T-rex can walk and run (based on the information provided above) using [LINK [Can You Outrun a T-rex](#)].

Your Speed	Your Foot Length (cm)	Hip Height =Col D	Number of steps in 5m (16.4ft)	Stride =Col E	$g^{-0.5}$	$s^{1.67} = \text{Col I}^{-1.67}$	$h^{-1.17} = \text{Col H}^{-1.17}$	Speed m/s =0.25
Walking		0		#DIV/0!	0.3194	#DIV/0!	#DIV/0!	#DIV/0!
Running		0		#DIV/0!	0.3194	#DIV/0!	#DIV/0!	#DIV/0!
T-rex Walk		0		212.5	0.3194	7703.5236539939	#DIV/0!	#DIV/0!
T-rex Run		0		800	0.3194	70495.318701987	#DIV/0!	#DIV/0!

What is the result? Can you outrun a T-rex when it is walking? Jogging? Running?



An interactive H5P element has been excluded from this version of the text. You can view it online here:

[https://open.library.okstate.edu/
thestoryofdinosauars/?p=28#h5p-26](https://open.library.okstate.edu/thestoryofdinosauars/?p=28#h5p-26)



An interactive H5P element has been excluded from this version of the text. You can view it online here:

[https://open.library.okstate.edu/
thestoryofdinosauars/?p=28#h5p-27](https://open.library.okstate.edu/thestoryofdinosauars/?p=28#h5p-27)



An interactive H5P element has been excluded from this version of the text. You can view it online here:

[https://open.library.okstate.edu/
thestoryofdinosauars/?p=28#h5p-28](https://open.library.okstate.edu/thestoryofdinosauars/?p=28#h5p-28)



An interactive H5P element has been excluded from this version of the text. You can view it online here:

[https://open.library.okstate.edu/
thestoryofdinosauars/?p=28#h5p-29](https://open.library.okstate.edu/thestoryofdinosauars/?p=28#h5p-29)

Finally, finish up with Weekly Quiz 8b!



An interactive H5P element has been excluded from this version of the text. You can view it online here:

<https://open.library.okstate.edu/thestoryofdinosauers/?p=28#h5p-30>



An interactive H5P element has been excluded from this version of the text. You can view it online here:

<https://open.library.okstate.edu/thestoryofdinosauers/?p=28#h5p-31>

Dino Tracks I Recently Visited!

For my birthday I went to Black Mesa in the northwestern portion of Oklahoma. there was a small set of Sauropod dino tracks there, but just over the border in New Mexico were some really great tracks. Check out the video I made of our trip.

[INSERT [Dino Tracks_Vacay Footage](#)]

Look Here!



Complete on Canvas:

1. [Weekly Quiz 8a]
2. [Can You Outrun a T-rex]
3. [Weekly Quiz 8b]

Links

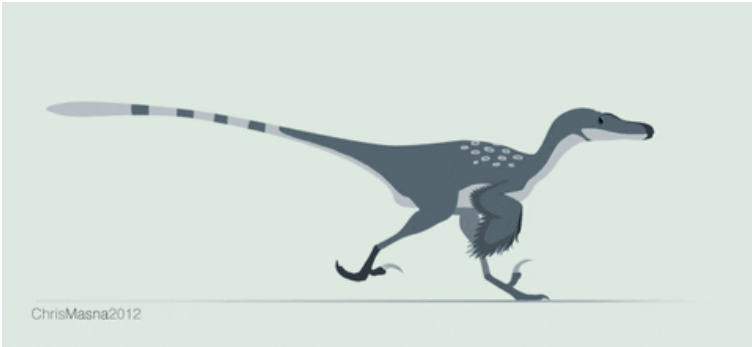
- Previous Week – [Week 4-Dino Parents]
- Next Week – [Week 6- Flight]

Announcements

- None

PART I

WEEK 6: FLIGHT AND FEATHERS



First off...

Weekly Quiz 9a! Also, don't forget this week that your [\[Writing Assignment 1 of 2\]](#) is due. This is a mostly short answer quiz where I would like you to expound upon your understanding of the material (consider it your Mid-Term). You may use your Notes with Gaps, but no other materials.



An interactive H5P element has been excluded from this version of the text. You can view it online here:

[https://open.library.okstate.edu/
the-story-of-dinosaurs/?p=30#h5p-11](https://open.library.okstate.edu/the-story-of-dinosaurs/?p=30#h5p-11)

Dino Feathers?

Why would dinosaurs have feathers? Did all dinosaurs have feathers? Can you imagine a fluffy T-rex? Here are your [[Notes with Gaps](#)] and [[Power Points](#)] for the week.



Feathers serve a variety of purposes in modern birds. therefore it is reasonable to assume that they may have served a different purpose in dinosaurs as well. Maybe T. rex didn't fly, but it's possible it had these soft downy feathers!

[INSERT [Feathers_Types of Feathers.mp4](#)]



One or more interactive elements has been excluded from this version of the text. You can view them online

here: <https://open.library.okstate.edu/thestoryofdinosaurs/?p=30#oembed-1>

[INSERT [Dinosaur Feathers.mp4](#)]



One or more interactive elements has been excluded from this version of the text. You can view them online

here: <https://open.library.okstate.edu/thestoryofdinosaurs/?p=30#oembed-2>

[INSERT [Feathers Feathered Dino Colors](#)]

On the Origins of Feathers

Step 1: Watch me

[INSERT [First Dinos Lecture](#)]

Step 2: Watch this video



One or more interactive elements has been excluded from this version of the text. You can view them online

here: <https://open.library.okstate.edu/thestoryofdinosaurs/?p=30#oembed-3>

Step 3: Watch me again!

[INSERT [Second part of First Lecture](#)]

Step 4: Watch the video at the link below!

<https://www.britannica.com/video/183278/discussion-dinosaur-fossils>

Step 5: Watch this video!



One or more interactive elements has been excluded from this version of the text. You can view them online

here: <https://open.library.okstate.edu/the-story-of-dinosaurs/?p=30#oembed-4>

Step 7: Remember the online assignments for the week.

T. rex Feathers

Now that you know all about feathers in modern birds and a lot of

what we know about dinosaur feathers, let's look at a hot dinosaur controversy! Was T. rex FEATHERED?!

Complete [Dino Feathers!](#)

Finally, [Weekly Quiz 9b](#).

Look Here!



Complete on Canvas:

1. [Weekly Quiz 9a]
 2. Assignment
 3. [Writing Assignment 1 of 2]
 4. [Weekly Quiz 9b]
-

Links

- Previous Week – [8 Week 5- How to Outrun a T-rex!](#)
- Next Week – [8 Week 7- Dinosaur Extinction](#)

Announcements

PART I

WEEK 7: DINOSAUR EXTINCTION



The Extinction of the Dinosaurs

This week we will be looking at the extinction of the dinosaurs! But before we dive in, complete [Week 14a Quiz!](#)

Dinosaur Doom

The first thing I would like you to do is to complete the Dinosaur Doom activity on Infiniscope. I enrolled all of you through Infiniscope through your OkState email. You should have received

an email from **Smart Sparrow** with the title **Your Adaptive Lesson is Ready**. Here is a link to the lesson: <https://aelp.smartsparrow.com/v/rk7suq9d/mvwveffk> (Links to an external site.). This activity is a virtual field trip where you will examine the sedimentary record above and below the K/T extinction event. I think you will all gain a lot from this exercise (I know I did!). This activity took me about 2 hours to work my way through. This exercise does take a lot of bandwidth, so if you run into issues, let me know. I do know that there is an option to watch YouTube videos outside of the exercise (which seems to run a bit faster). You will be completing the questions (which will be recorded on the activity itself and provide a report to me). For your convenience, I included all these questions on the [Notes with Gaps for Week 7](#).

[INSERT [Both Extinction Parts.mp4](#)]

So, what was it like during the actual impact?

Video 1 of 2:



One or more interactive elements has been excluded from this version of the text. You can view them online

here: <https://open.library.okstate.edu/thestoryofdinosaurus/?p=32#oembed-1>

Video 2 of 2:

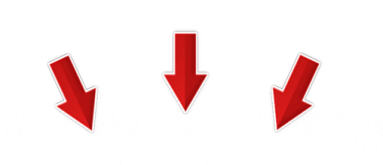


One or more interactive elements has been excluded from this version of the text. You can view them online

here: <https://open.library.okstate.edu/thestoryofdinosaurus/?p=32#oembed-2>

Don't Forget . . . [Week 14b Quiz!](#)

Look Here!



Complete on Canvas:

1. [Week 14a Quiz](#)
2. Dino Doom- Dinosaur Doom activity on Infiniscope. I enrolled all of you through Infiniscope through your OkState email. You should have received an email from **Smart Sparrow** with the title **Your Adaptive Lesson is Ready**.
3. [Week 14b Quiz](#)

Extra Material

In my lectures this week, we discussed mass extinction and I mentioned the largest mass extinction event in the earth's history (the Permo-Triassic). While looking for interesting and engaging videos for the class I ran into this video on CuriosityStream. Since I know you all have access I thought it would be worth sharing: How long does it take to recover from mass extinctions?

<https://curiositystream.com/video/2954/recovering-from-extinction> (Links to an external site.)

Note: This is an OPTIONAL activity.

Links

- Previous Week- [8_Week 6- Flight and Feathers](#)
- Next Week – [8_Week 8- Jurassic Park](#) and [8_Week 8- Finals Week](#)

Announcements

- None

PART I

OPTIONAL: HOLLYWOOD'S DINOSAURS



Optional BONUS Activity: Jurassic Park

First of all, this week is OPTIONAL! If you don't want to complete this or don't have access to the Original Jurassic Park Movie you DO NOT have to complete this. BUT it is a good bonus point opportunity and many have found completing this exercise a great learning and entertaining experience!

For details go to the [Jurassic Park Movie Quiz](#). You will also need the [Notes with Gap](#) for Week 8 and the [PowerPoint](#).

Optional BONUS Activity: SSI (x2)

There are two Student Surveys of Instruction. One is through the University and can be found in the column to the left titled [Course Evaluations \(SSI\)](#) (this is the Canvas for Survey link). It can also be found in your school email. The surveys will open on any Internet-connected device (computer, tablet, or smartphone). The survey system will close to all students on **Friday, July 31, 2020 at 11:00PM**.

Once you have completed that please email or message me a screenshot of the completed survey page. You will get 10 BONUS POINTS for this survey.

The other is for me and can be found here: [Course Evaluation_Burkett](#). You will get 10 BONUS POINTS for this survey.

If you don't watch Jurassic Park, check this out!

After watching the Jurassic Park movie check out a couple of these articles and videos about dinosaurs in movies (and some specifically, Jurassic Park):

- Check out some of the other movies this paleontologist offers his opinion on: <https://www.youtube.com/watch?v=UiOImNcvqi8>



One or more interactive elements has been excluded from this version of the text. You can view them online

here: <https://open.library.okstate.edu/the-story-of-dinosaurs/?p=157#oembed-1>

- Article interviewing Jack Horner about the dinosaurs of Jurassic World: <http://scienceandfilm.org/articles/2718/science-on-screen-interview-with-jack-horner-jurassic-world> (Links to an external site.)

Influence of Pop Culture on Science

Despite the inaccuracies in Jurassic Park, it was one of the first movies to bring dinosaurs to life for the general public. It also was one of the first movies to focus on 'dinosaurs as animals and not monsters'. After the movie Jurassic Park came out, a great deal more funding became available for dinosaur research! That is why there have been so many huge leaps in dinosaur discoveries since the 1990's. You will also need the [Notes with Gap](#) (minus the JP Movie Notes) for Week 8 and the [PowerPoint](#).

[INSERT [Influence of Popculture.mp4](#)]

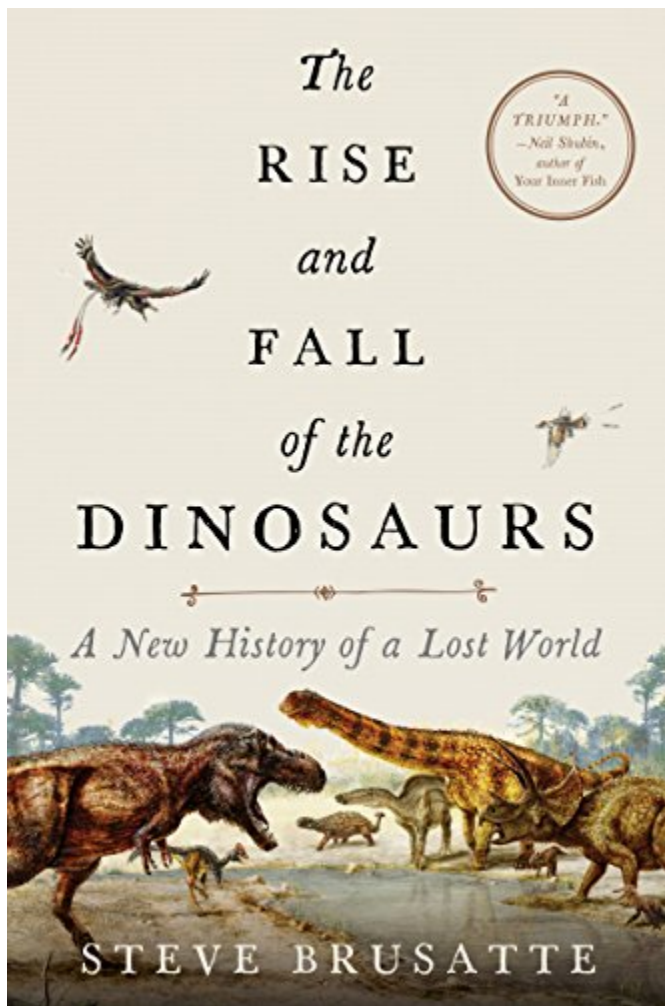
Don't believe me? It's TRUE! Read the two articles below to help you with the Post Weekly Quiz:

Who pays for Dinosaur Research
Article: <https://www.smithsonianmag.com/science-nature/who-pays-for-dino-research-66263095/> (Links to an external site.)

Jurassic Park and the dinosaur explosion: <https://www.abc.net.au/news/science/2019-08-24/jurassic-park-and-explosion-of-new-dinosaur-fossils/11428892> (Links to an external site.)

If you want to read more about the history of dinosaur exploration

and how it has changed in the last few decades I would suggest the book:



If you don't feel like reading the entire book you can check out the interview by the author, Steve Brusatte,

here: <https://www.theverge.com/2018/6/23/17483340/jurassic-park-world-steve-brusatte-the-rise-and-fall-of-the-dinosaurs-book-interview-paleontology>

Required End of the Semester Activities

- The two remaining items are required for you to finish off the semester. First is the [Exit Survey](#). Like the Entry Survey at the beginning of the semester you will receive full credit for completing it.
 - The other assignment is the [Writing Assignment 2 of 2](#). This is a no internet written answer exam. The only item you MAY use are your Notes with Gaps.
-

Look Here!



Did You Complete These on Canvas?

1. OPTIONAL!!! If you want BONUS POINTS you can watch Jurassic Park and complete this quiz: [Jurassic Park Movie Quiz](#)

2. OPTIONAL!!! BONUS POINTS [Course Evaluations \(SSI\)](#).
 3. OPTIONAL!!! BONUS POINTS [Course Evaluation](#) [Burkett](#).
 4. **Required** [Writing Assignment 2 of 2](#).
 5. **Required** [Exit Survey](#).
-

Links

- Previous Week – [8_Week 7- Dinosaur Extinction](#)
- [8_Week 8- Finals Week](#)

Announcements

- Please complete the SSI, take a screenshot and send it to me for 5 bonus points!
- Thanks for a great summer semester! It's been great to work with all of you!

PART I

WEEK 8



Optional BONUS Activity – Jurassic Park

First of all, this week is OPTIONAL! If you don't want to complete this or don't have access to the Original Jurassic Park Movie you DO NOT have to complete this. BUT it is a good bonus point opportunity and many have found completing this exercise a great learning and entertaining experience!

For details go to the [Jurassic Park Movie Quiz]. You will also need the [Notes with Gaps] for Week 8 and the [PowerPoint].

Optional BONUS Activity-SSI (x2)

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Evaluations (SSI)]. Once you have completed that please email or message me a screenshot of the completed survey page. You will get 10 BONUS POINTS for this survey.

The other is for me and can be found here: [course Evaluation Burkett]. You will get 10 BONUS POINTS for this survey.

If you don't watch JP check this out!

After watching the Jurassic Park movie check out a couple of these articles and videos about Dinosaurs in Movies and some specifically about Jurassic Park:

- Check out some of the other movies this paleontologist offers his opinion on –



One or more interactive elements has been excluded from this version of the text. You can view them online

here: <https://open.library.okstate.edu/the-story-of-dinosaurs/?p=34>

- Article interviewing Jack Horner about the dinosaurs of Jurassic Park – <https://www.history.com/news/jurassic-park-dinosaur-special-effects>

Despite the inaccuracies in Jurassic Park, it was one of the first movies to bring dinosaurs to life for the general public. It also was one of the first movies to focus on dinosaurs as animals and not monsters. After the movie Jurassic Park came out, a great deal more funding became available for dinosaur research! That is why there have been so many huge leaps in dinosaur discoveries since the

1990d. You will also need the [Notes with Gaps] (minus the JP Movie Notes) for Week 8 and the [PowerPoint}.

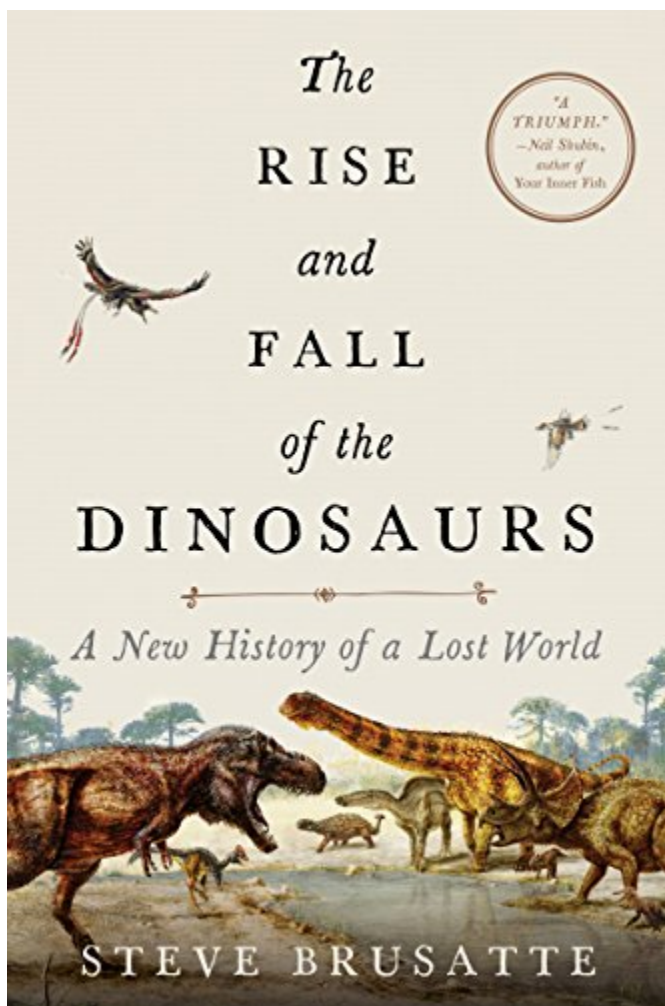
[insert lecture video]

Don't believe me? It's TRUE! Read the two articles below to help you with the Post Weekly Quiz:

Who pays for Dinosaur Research Article:
<https://www.smithsonianmag.com/science-nature/who-pays-for-dino-research-66263095/>

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- The other assignment is the [Writing Assignment 2 of 2]. This is a no internet written answer exam. The only item you MAY use are your Notes with Gaps.

Did you Complete these on Canvas?

1. OPTIONAL!!! If you want BONUS POINTS you can watch Jurassic Park and complete this quiz: [Jurassic Park Movie Quiz}
2. OPTIONAL!!! BONUS POINTS [Course Evaluations (SSI)]
3. OPTIONAL!!! BONUS POINTS [Course Evaluation Burkett]
4. **Required** [Writing Assignment 2 of 2]
5. **Required** [Exit Survey]

Links

- Previous Week – [Week 7 – Dinosaur Extinction]
- Week 8 – Finals Week

Announcements

- Please complete the SSI, take a screenshot and send it to me for 5 bonus points.

- Thanks for a great summer semester! It's been great to work with all of you!
-

PART I

WEEK 8: FINALS WEEK

They're here! Finals have arrived!

This Week in Dinos

FINALS!!! Everyone stay calm, please DO NOT panic!!!



Weekly Schedule

[INSERT [Finals week.mp4](#)]

- Complete on Canvas:
 - Survey for the Course through OSU and Canvas- extra 5pts when you screenshot the confirmation page for this course and email it to me. **Submit your screenshot here: [OSU SSI Survey](#) or in my email Closes Friday, July 31, 2020 at 11:00PM.**
 - [Course Evaluation_Burkett](#) **Due Friday, July 31st at Midnight**
 - [Exit Survey](#) **Due Friday, July 31st at Midnight**
 - [Writing Assignment 2 of 2](#) **-Due Friday, July 31st at Midnight**

Be sure to check out all of the opportunities OSU has to help you get through finals week in a healthy and happy way!



One or more interactive elements has been excluded from this version of the text. You can view them online

here: <https://open.library.okstate.edu/the-story-of-dinosaurs/?p=164#oembed-1>

If you need help or a friendly ear please do not hesitate to reach out to me or someone else you feel comfortable with. College is stressful and finals can put a lot of added pressure on everyone.

Links

- None

Announcements

- **Thank you** for a wonderful semester! It was a pleasure to have you all in class. I appreciate all of your insights, attention, and efforts during this course. **If you enjoyed this class please tell your friends about it. It will be offered again as a 16 week in-person course in Fall 2020 under the course title GEOL 1003: The Story of Dinosaurs.**

This is where you can add appendices or other back matter.