

# Slides Mr. Jacobson prepared for launching the Compy Attack! lesson



## Act 1



This is a behind-the-scenes clip that describes how special effects were created for a scene from *The Lost World: Jurassic Park II*. The dinosaurs you see here are based on *procompsognathids*, or compys. What do you notice? What do you wonder about?

*(likely responses: they're small, were they real, how quickly do they move, could they really eat a person, etc.)*

*If it doesn't explicitly come out, pose the question: How tall do you think the typical compy is? What information would we need to find out?*

Compsognathus (dinosaur image) created by Nobu Tamura, <http://spinops.blogspot.com>. CC BY 2.5 <https://creativecommons.org/licenses/by/2.5/>

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## Act 1

What is the typical size of a compy dinosaur?  
(Were they *really* the size in the movie, or was that just for effect?)

- What information and tools would you need to make a decision?

The heights were determined by studying the fossil remains of the compys.

Height (cm)	Number of Compys	Relative Frequency
26	1	0.002
27	5	0.008
28	12	0.018
29	22	0.033
30	40	0.061
31	60	0.091
32	90	0.136
33	100	0.152
34	100	0.152
35	90	0.136
36	60	0.091
37	40	0.061
38	22	0.033
39	12	0.018
40	5	0.008
41	1	0.002
Total	660	1.00

## Act 2

How tall is a typical compy?

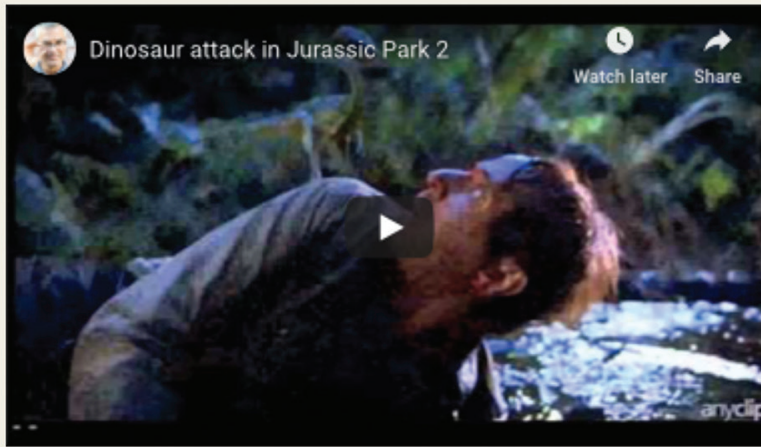
Use the statistical tools you have at your disposal to make a determination.

Present the fossil data on compys.

Anticipated strategies:

- Create histogram (fairly straightforward based on the data)
- Find mean and standard deviation
- Find the median
- Take the modal values as typical (33–34 cm)
- Identify the boundary values for  $\pm 1SD$ ,  $\pm 2SD$  of the mean
- Take into consideration the shape of the distribution – it is skewed? Is the mean the right measure to use? (draw a normal curve)

## Act 3



Present your group's findings.  
Were compys accurately portrayed in the movie?

Discuss what a reasonable typical value for the height of a compy might be. Show final produced clip, discuss whether what's shown on the screen accurately represents the creatures (31–36cm seems typical and the clip seems to accurately portray that typical size) <https://www.youtube.com/watch?v=uPQwNE4OsIE>

*Source:* Adapted from Lesson 9: Using a Curve to Model a Data Distribution, Eureka Math. Copyright © 2016 by Great Minds. All rights reserved. Act 1 image source: THE LOST WORLD: JURASSIC PARK Compy Attack (Youtube) via Stan Winston School. Act 3 image *Source:* Dinosaur attack in Jurassic Park 2 (Youtube) via Richard Stenger.