

GRADES K-2

TIME

One class period, 40-50 minutes

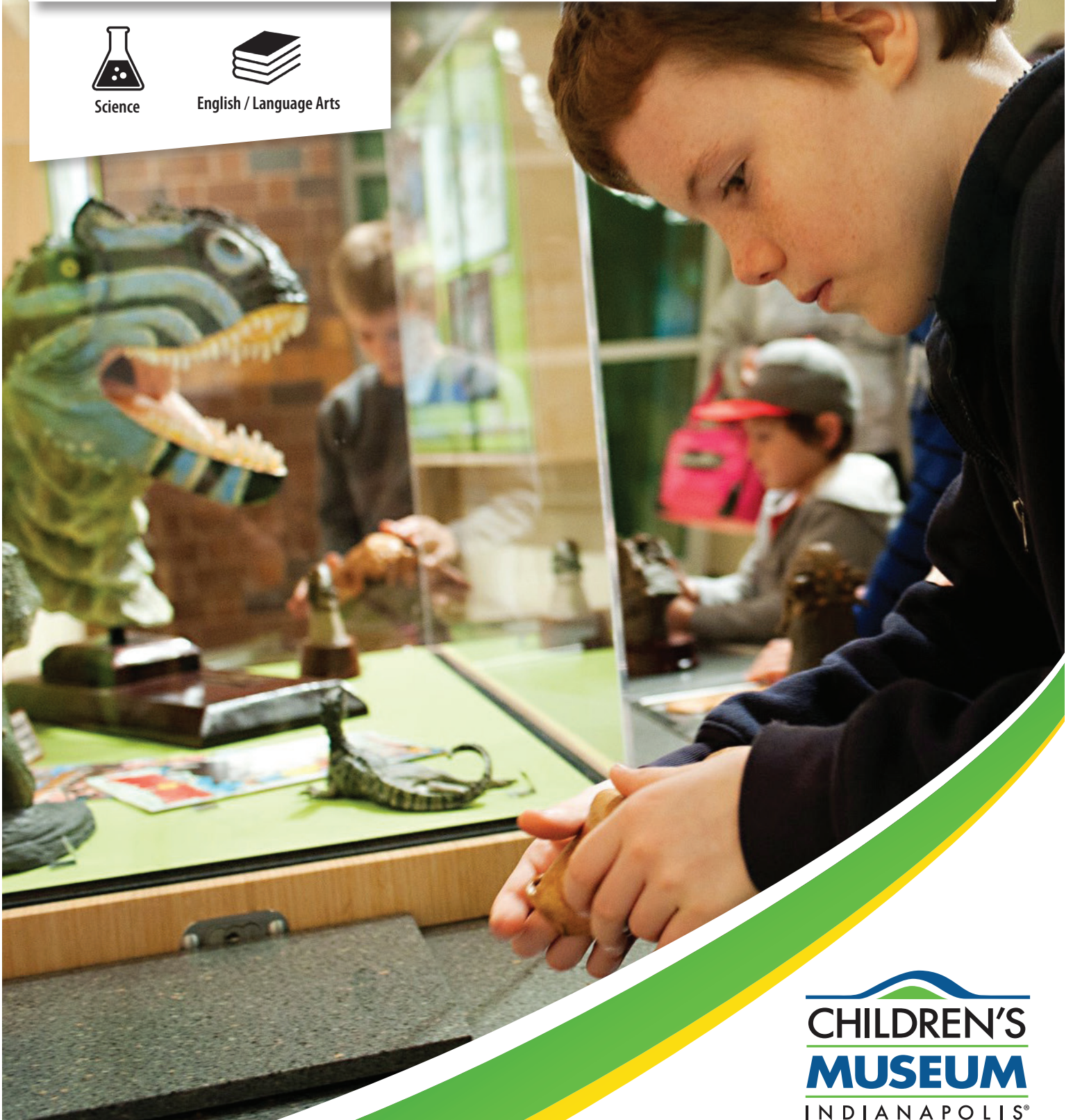
WHAT'S IN A DINOSAUR'S NAME?



Science



English / Language Arts



WHAT'S IN A DINOSAUR'S NAME?

The Children's Museum's lessons are designed to weave creative space experiences and museum education together. All lessons are interdisciplinary and can be used as individual creative space experiences or in combination to create a cohesive unit. Lessons are optimized when used in connection with museum field trips.

Dinosaurs are a special group of animals with interesting names that often are long and hard to pronounce. Students are empowered when they can pronounce these multisyllabic names and know what they mean. Dinosaurs are named for unique body parts or behaviors, for the location where they were found, or after a person. This makes for some fun and confusion!

Edmontosaurus was originally found in a layer of rock near Edmonton, Canada, and thus named after this location. So, an *Edmontosaurus* is the dinosaur from Edmonton. Ask students if they can guess where you might travel to dig up an *Argentinosaurus*. They should be able to tell you Argentina.

Other dinosaurs are named after famous people or for the lucky person who found them. Who do you think the dinosaur *Jenghizkhanosaurus* was named after? The answer is Genghis Khan. All living things, including dinosaurs, are referred to as *Genus species* in technical usage, e.g. *Stegosaurus unguates*, which is called "binomial nomenclature." The genus and species names can be created using different methods.

FOCUS QUESTIONS

- How is a dinosaur named?
- What does the name mean?
- Can new dinosaur names be created?
- Can words be broken into parts that have meaning?

INDIANA ACADEMIC STANDARDS

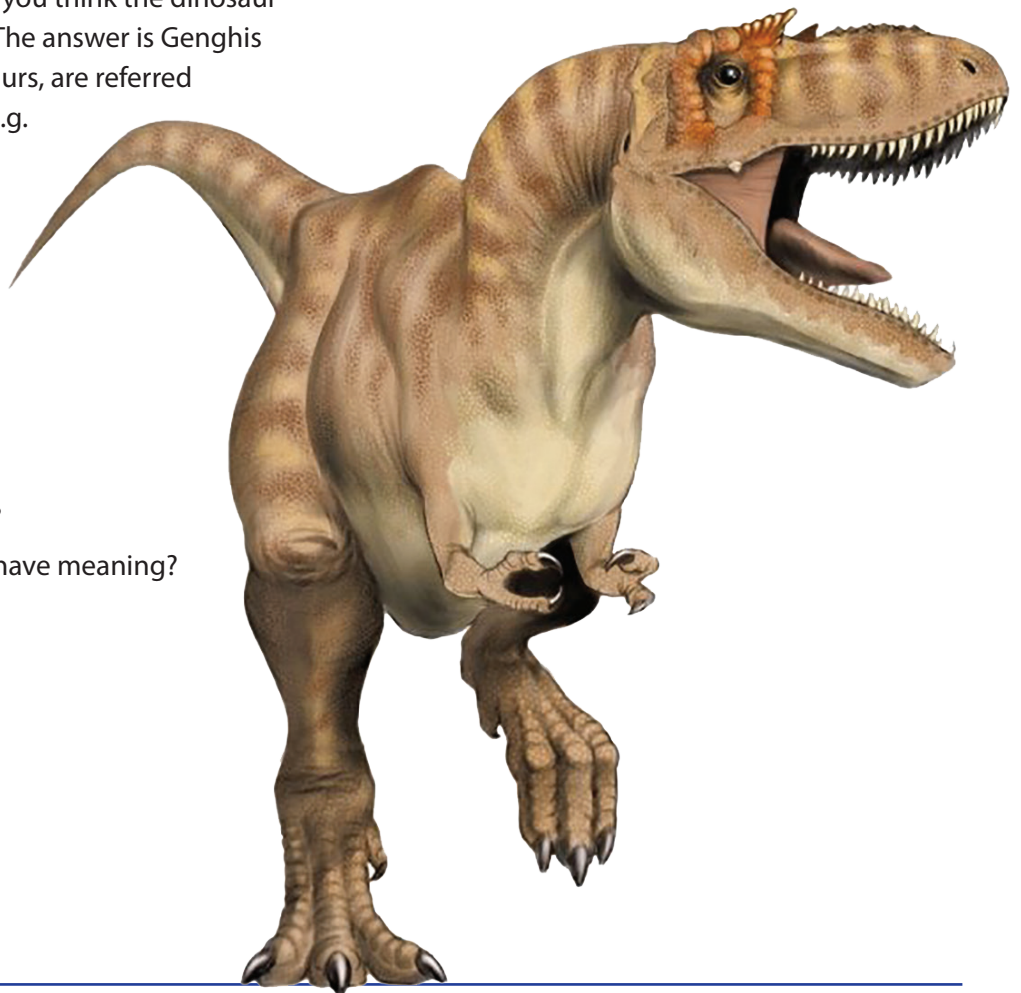
Science: SEPS.2, SEPS.8, 3.ESS.4, 3.LS.1, 4.LS.3

English/Language Arts: 3.RF.4.5, 3.RF.4.6, 3.RV.3.2, 4.RF.4.6, 4.RV.3.2, 5.RF.5.6, 5.RV.3.2

OBJECTIVES

Participants will:

- Identify three different ways dinosaurs are named
- Dissect dinosaur names to identify the root words
- Explain how names can be formed by using root words



Creating a Dinosaur Name

PROCEDURES

Part One: Scientific Names

1. Ask students to name a favorite dinosaur and make a list of their responses. Share with students that they will be exploring how dinosaurs are named, and what their names mean. Ask them if they know the meaning for the name Triceratops. Explain that Triceratops means “three-horned face.” Write the name and the word parts on the board, tri (three) - cerat (horned)- ops (head).
2. Explain to students that scientists usually name dinosaurs in three different ways. Display the following information:

Dinosaur Name

- (1) body part or behavior
- (2) where found
- (3) person – finder or famous

The *Triceratops horridus* is named after body parts. The *Diplodocus carnegii* is named after Andrew Carnegie, the 19th/early 20th century millionaire who funded the expedition that discovered the dinosaur. *Edmontosaurus annectens* is named for Edmonton, Canada, where it was found. Sometimes, dinosaurs can be named using a combination of the methods.

3. Display the following words and their meanings (see below for more Greek and Latin roots):

uni – one tri – three cerat – horn
bi – two quad – four rhino – nose

Q: How many horns does a “Quadceratops” have?

A: Since “quad” means four, the answer is four horns.

Ask students how many horns a “Quadceratops” might have. Since “quad” means four, the answer is four horns. Ask students to make as many different types of combinations of the words on the board as they can.

4. Invite students to draw a picture of the head of their new dinosaur. That shows the correct number of body parts for the name. Ask them to write sentences to describe their dinosaur.

Part Two: Create a Dinosaur Name

1. Print the list of Greek and Latin roots on page 4 and give each student a copy. For younger students, provide a smaller list of words, focusing on sight words such as numbers or simple body parts.
2. Have students choose three of the roots to create the genus name of their dinosaur and write it down.
3. To create their species name, have them use either a place or a person. For example, a four-horned dinosaur found in Indianapolis might be named *Quadceratops indianapoliensis*.
4. Finally, have their students draw a picture of the dinosaur they created, following the description they generated when creating the genus name. Students can also create their dinosaur is to use clay to make a 3D model of their dinosaur.
5. A fun twist on this activity is to run it backwards: have the students draw a new dinosaur, and then use the Greek and Latin roots list to give it an accurate and descriptive name.



GREEK/LATIN ROOT LIST

Aero – air
Alpha – first
Anato – duck
Ankylo – fused
Aqua – water
Archae – ancient
Avi – bird
Bi – two
Brachio – arm
Bronto – thunder
Cardio – heart
Celer – fast
Centri – one hundred
Cephale – head
Cerat – horned
Corpus – body
Cycl – circle
Dactyl – finger/toe
Dec/Deca – ten
Deino – terrible
Derma – skin
Di – two
Dino – terrible
Diplo – double
Ella – small
Exo – outside
Gnathus – jaw
Gravi – heavy
Hemi – half
Hemo – blood
Herb – plant
Hydra – water
Ichthy – fish
Lat – wide
Macro – large
Mani – hand
Mega – large
Meso – middle
Micro – small
Milli – thousand

Mono – single
Multi – many
Nano – tiny
Nect – swim
Noct – night
Nonus – nine
Nycho – claw
Oct – eight
Opter – wing
Onith – bird
Ortho – straight
Ovi – egg
Pachy – thick
Pelt – shield
Penta – five
Plate – flat
Plo – armored
Pod – foot
Poly – many
Pseudo – false
Pter – wing
Quad – four
Quint – five
Raptor – thief
Rex – king
Robust – strong

Saur – lizard
Scler – hard
Semi – half
Sept – seven
Sex – six
Sinu – curve
Sol – sun
Spher – ball
Steg – roofed
Steno – narrow
Styra – spiked
Terr – earth
Therm – heat
Tort – twist
Tri – three
Tyranno – tyrant
Ultra – beyond
Undul – wavy
Veloci – fast
Ventr – belly
Vibr – to shake
Xeno – strange

