

LESSON 3:

DESIGN-A-DINO

SUPPLIES

MAIN BIN

- Paper Plates (20)
- Cardboard Tubes (20)
- Googly Eyes (50)

PENCIL BOX

- Markers
- Glue Sticks
- Scissors


BIG FOLDER

- Construction Paper (100)

OBJECTIVES

- Students will learn that dinosaurs had different features that helped them survive in their environments.
- Students will use creativity and problem-solving skills to design and build their own dinosaur using everyday materials.

INTRODUCTION

 3-5 min

Long ago, before people, cars, and cities, the world was filled with dinosaurs! Some were big and scary like the T. Rex, while others were gentle giants like the Brachiosaurus. Dinosaurs had special body parts to help them live, like sharp teeth for hunting, long necks for reaching far away food, horns for protection, and strong legs for running. Today, you'll be a dinosaur designer! You can work to replicate a real dinosaur or invent a brand new species of dinosaur! Don't forget to think like a paleontologist! A paleontologist is a scientist who studies fossils (like dinosaur bones) to learn about ancient life on Earth. Consider how your dinosaur's body and its features help it to live, move, and eat!

HOOK 5 min

How can the shapes and features of different dinosaurs help us understand how they lived millions of years ago?.


- Tyrannosaurus Rex was a large meat eater with powerful jaws and sharp teeth
- Triceratops was a plant-eater with three horns and a protective frill
- Brachiosaurus was a tall, long-necked herbivore that fed on high plants
- Stegosaurus was a herbivore with back plates and a spiked tail called a thagomizer

Ask students:

- What do you notice about their shapes and sizes? Which dinosaurs had long necks? Which had spikes or horns?



DISCUSSION

 3-5 min

Before starting the dinosaur building activity, gather the students and have a conversation about what makes each dinosaur unique.

Ask students:

- What body parts help a dinosaur eat, move, or stay safe?
- How can sharp teeth, long necks, strong legs, spikes, or tails could serve different purposes.
- What would your dinosaur need if it lived in the water? What if it needed to reach tall trees?

Next, prompt students to think about balance and structure:

- How will you make sure your dinosaur can stand or balance?

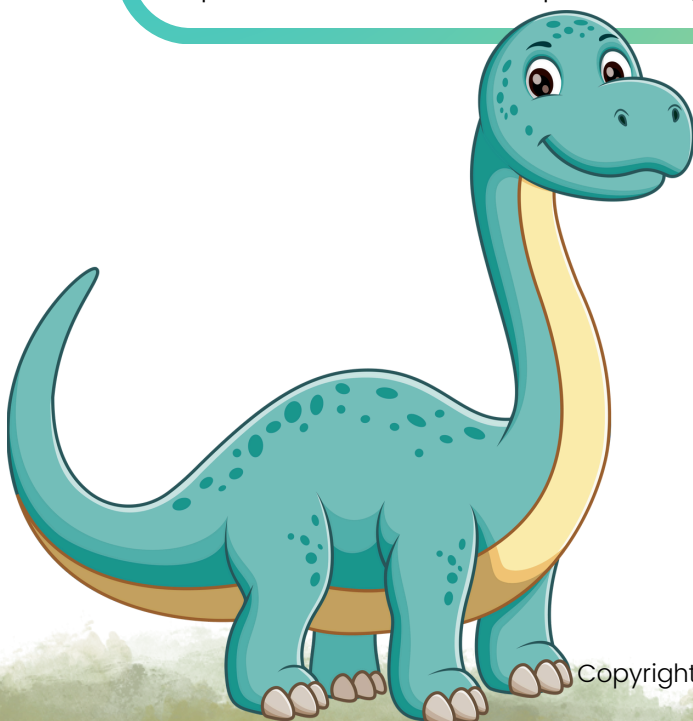
Encourage students to imagine how long legs, wide feet, or a heavy tail might help stabilize their dinosaur. Emphasize that there are no wrong answers — this is a chance to be creative and think like both paleontologists and engineers. Encourage students to share their ideas with the group so everyone can get inspiration before they start building. This discussion sets the stage for problem-solving, creativity, and hands-on exploration in the upcoming activity.

DINO FACT!

- Dinosaurs came in many shapes and sizes. Some were small, like the 12 inch long Parvicursor, and some were very large, like the 122 foot long Patagotitan.
- Some dinosaurs were herbivores that ate plants, some were carnivores that ate meat, and others were omnivores that ate both.
- Birds are modern relatives of dinosaurs.
- Some dinosaurs had feathers, while others had scales, plates, or horns. There are at least 700 species of dinosaurs with paleontologists making new discoveries every day!

TIP

If students are struggling, have them brainstorm what a dinosaur might look like, sketch it together, and then help them build it.



MOVEMENT BREAK

Before students start building, have a fun “Dino Moves” activity to get them energized and thinking like dinosaurs! Call out different dinosaur actions and have students move around the room:

Stomp like a T. rex – take big, heavy steps.

Stretch your neck like a Brachiosaurus – reach up high as if eating leaves from tall trees.

Swing your tail like a Stegosaurus – twist and sway gently from side to side.

Flap your arms like a Pterodactyl – pretend to glide through the air.

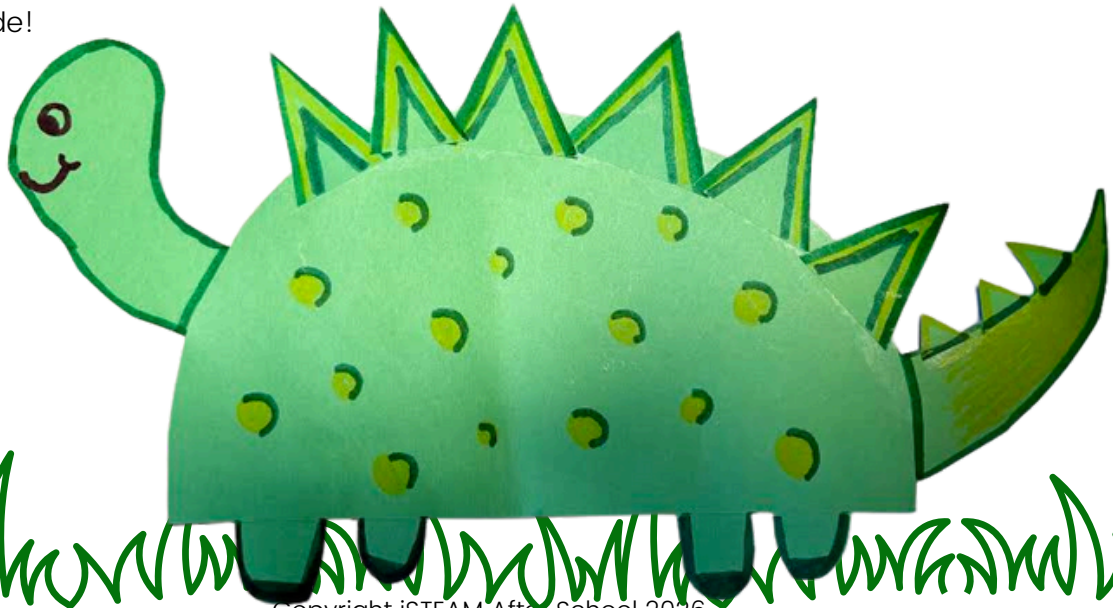
Creep quietly like a Velociraptor – tiptoe and sneak around.

End the break with a big **ROAR** together!


ACTIVITY

🕒 40-45 min




1. Plan your dinosaur. Ask student to think about what type of dinosaur they would like to build
2. Build the Body. First, pass out the following items:
 - Paper Plate
 - Cardboard Tubes
 - Construction paper
 - Glue Sticks, markers, Scissors
3. Assist students in building their dinosaurs, encouraging them to cut out spikes, legs, and teeth from the materials provided.
4. Add details! Examples include spikes, horns, wings, tails, eyes.
5. Have a dinosaur march! Ask the students to “march” the dinosaurs around the room and show off what they have made!






OBSERVE & EXPLAIN

 2-4 min

Bring the group together to think like paleontologists – scientists who study dinosaurs! Guide students to reflect on their activity using the following points:

- Structure and Function
 - Explanation: Students observed how different body parts help dinosaurs move, eat, or protect themselves.
 - Ask students:
 -  What body parts does your dinosaur have?
 -  How do these parts help it survive?
 -  Why do you think some dinosaurs have long necks or sharp teeth?

- Engineering Design
 - Explanation: Students used materials to create a balanced, standing dinosaur model, experimenting with stability and support.
 - Ask students:
 -  What did you do to make your dinosaur stand up?
 -  Did you have to change anything to make it stronger or more balanced?
 -  Which material worked best for legs, tails, or spikes?



Exit Ticket



Each student shares one quick fact about the dinosaur that they made today:

- “My dinosaur is called _____.”
- “It eats _____.”
- “Its special feature is _____.”