IUPUI Center for Young Children – STEM Preschool aged 4-5

CYC's STEM teachers

- Vikki Tucher

- Jennifer Bohannon

About our STEM program

- STEM program began in August of 2015. STEM stands for science, technology, engineering, and math.

- We currently enroll 24 kids in each STEM room, all 4 and 5 year olds.

- Our STEM preschool experience provides a setting in which children can wonder, solve, learn and grow.   Using inquiry, scientific method and the engineering design process we explore many science areas.   Our STEM classes have studied the human body, astronomy, simple machines and other high interest topics. All scientists need to read, write, tinker and document learning, therefore; art, reading, writing and play time is naturally included throughout the day providing a holistic learning experience.   The curriculum follows Indiana Early Learning Foundations and is taught in a constructivist manner using project approach, inquiry and active exploration.
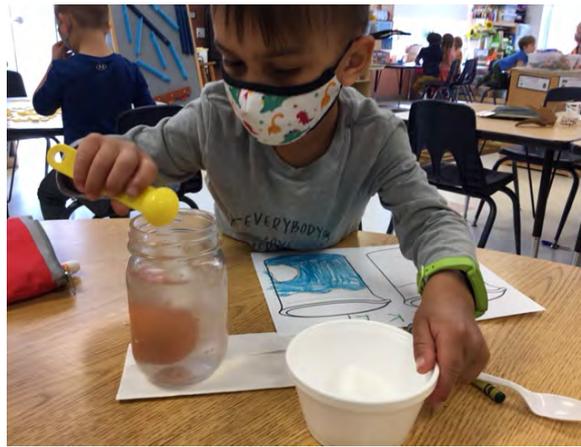
New for the Fall of 2021!

Super Kids Reading Curriculum

Science

- Experimenting
- Questions
- Scientific Method
- Inquiry
- Hands-On
- Trial and Error
- Messy
- Worth Repeating
- Fun!

Saltwater Density Experiment

Blubber Experiment

Dissecting Owl Pellets

Volcano Experiments

We spent 8 weeks learning about the various human body systems. The medical science lab lent us plastinated organs that we got to investigate, measure, and explore.

Brain Surgery!

We created a hospital where our surgeons could practice!

Performing CPR

A local butcher gave us a cow heart. We dissected it and showed the kids how large it was, where the valves are located, and what the inside looked like.

Hands on investigation of how the earth orbits the sun.

Balloon Rockets
How far will our rocket travel?
How many breaths? (decide)
How many feet? (predict, test and measure)

How did craters get on the moon? What happens when a crater is made?

Technology

- Any tool that helps us learn about the world or make our lives easier
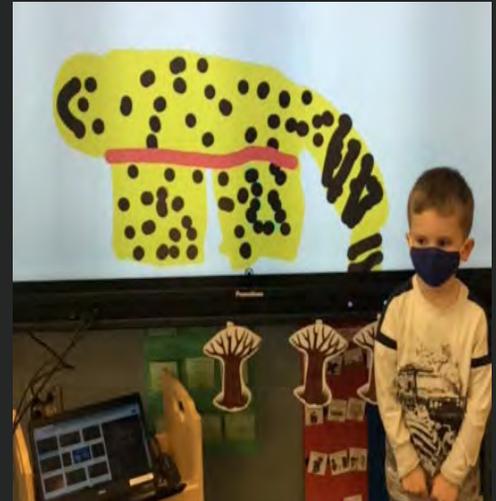- High-Tech/ Electronic
- Low- Tech/ Non- Electronic

Technology: Low Tech and High Tech

We made solar ovens and made S'mores!

This child is using a screwdriver while learning about the simple machine-lever and wedge.

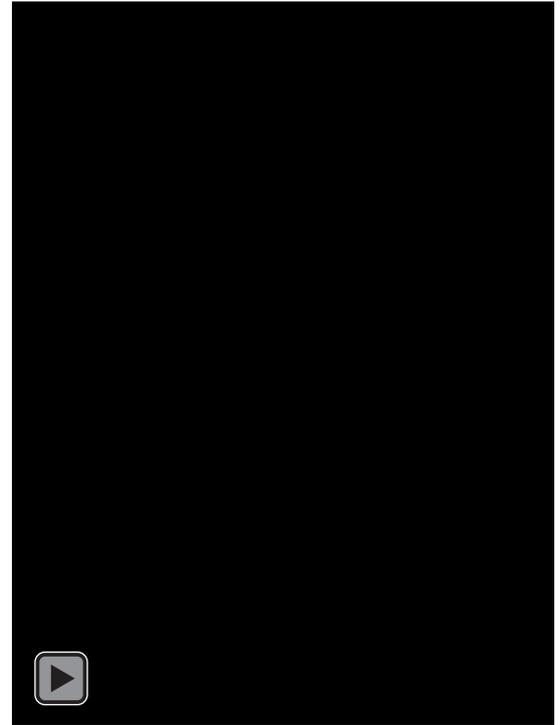We used pipes to create irrigation systems for our farmer/gardening unit.

This child made a Cheetah on the SMART board.

IUPUI

Engineering

- Design
- Engineer
- Create
- Improve Creations
- Engineering Design Process
- Blocks, Lego's, Magna-Tiles, Wood Builders, Recyclables, Marble Run, Playstix, and so much more!
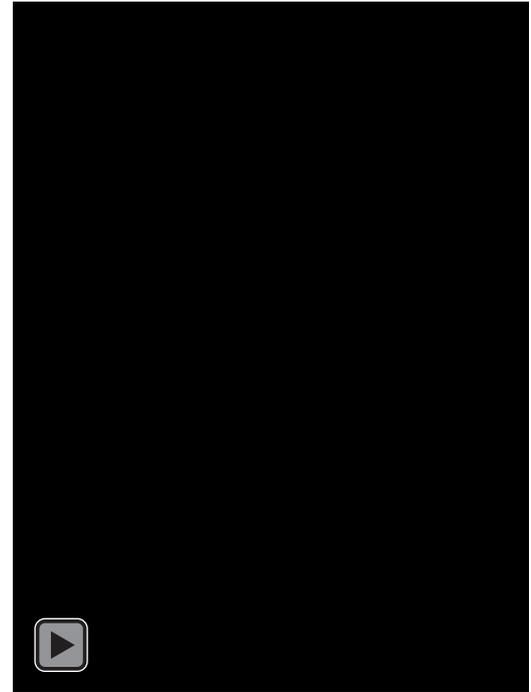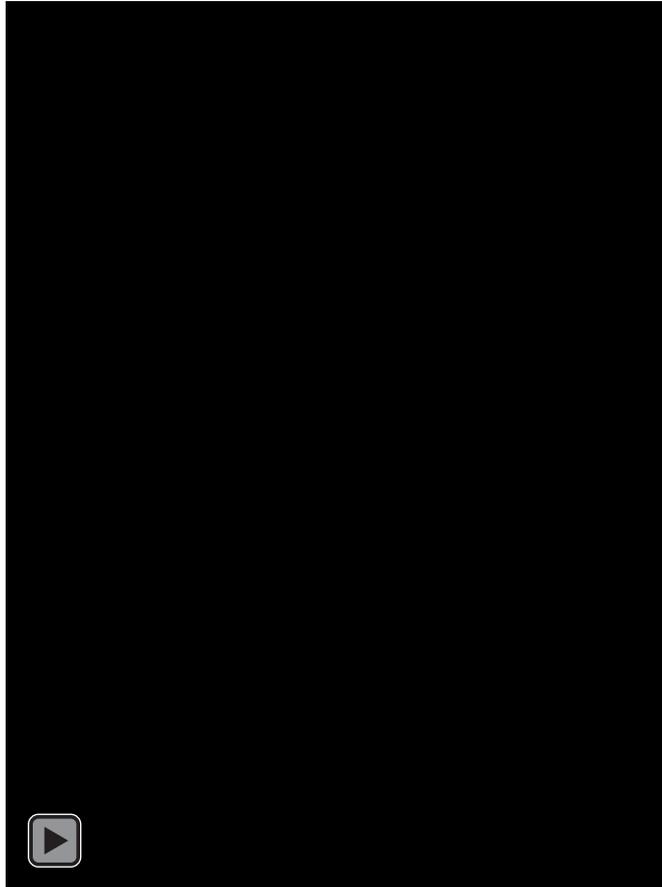- Maker- Space

This child designed and engineered a log cabin during our nature unit. (Video)

This child designed and engineered an antelope in Maker Space during our habitat unit. (video)

This child had to design and engineer a way for his gorilla to get from the rainforest floor to the emergent layer WITHOUT climbing a tree. (video)

Challenge: Design and Engineer a bed or chair that is "just right" for Goldilocks.

Astronaut

Moon Buggy

Wheel and Axle
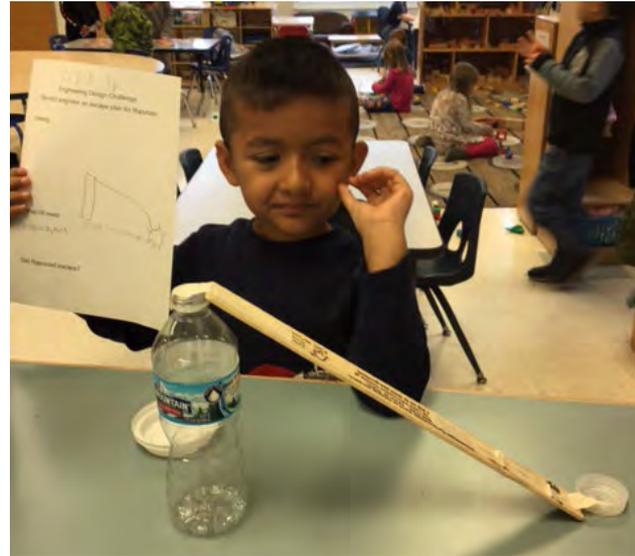
Computer

Challenge: Design and Engineer an escape plan for Rapunzel.
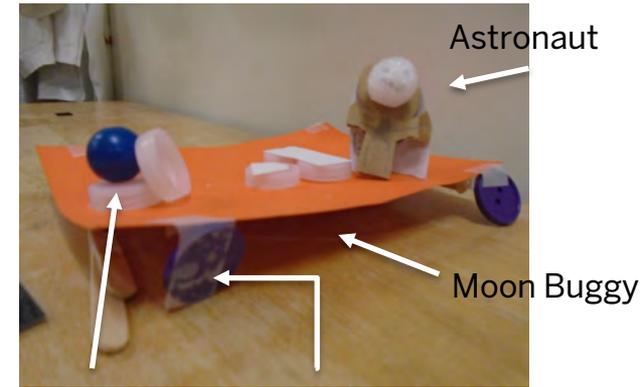
Mathematics

How tall is the Kapok tree?

- Counting
- Sorting
- Patterns
- Measurement
- Constructing and Deconstructing Numbers
- Comparing
- Classifying

This child is graphing colored dinosaurs

Math is hands-on, fun, interactive, and engaging!

Projects

Betty "I learned...that butterflies drink nectar. The metamorphosis of a butterfly is first they're an egg. Second a caterpillar and then they go in a chrysalis or cocoon. Then they become a butterfly. Butterflies have four wings. They eat fruit."
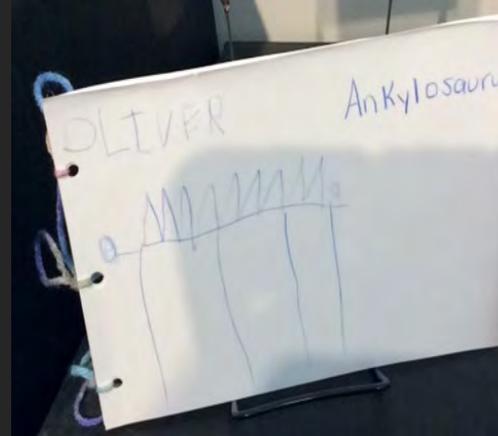

Children research the topic of their choice at the end of a large unit. Then they choose the project they want to complete. For example, at the end of a habitat unit one child chose to do a butterfly drawing on rainbow paper. Another child chose to write a book on an Ankylosaurus at the end of our dinosaur unit.

Oliver "I learned... grasshoppers hop. And they usually have big legs to hop better. They have black spots on the legs. They are green and can blend in that called protecting. They have antenna. It's an insect because it has six legs."

This child sewed a snake during our habitat unit!

OLIVER Ankylosaurus

Oliver

"I made a spider named Biter. Flies think he's not venomous, just shiny but he tricks them. he hides his venomousness with his blue body color. He lives in the forest in a cobweb."

Traditional Activities

Dramatic Play as a restaurant during our cooking unit

Do you only study science topics?

Not always, directly. However, almost everything has some sort of science related area! For example, during our unit on fairy tales we used engineering skills to figure out how to get Rapunzel out of the tower.

Do you still do traditional preschool activities?

Yes! We still read stories, have unstructured play time, art activities, and more.

Do you still nap, even though it's Pre-K?

The two STEM rooms nap for 1 hour. All other rooms in our building nap for 2 hours.

How do you assess my child? Do you have parent/teacher conferences?

We assess children in a variety of ways. We conduct monthly assessments in our STEM rooms so we know exactly where your child is academically and what we need to work on. We also use anecdotal notes to guide instruction so we can differentiate lessons with the children. We have conferences twice a year in which we share with you the progress your child is making.

Contact Information

Waitlist application:
https://childcare.iupui.edu/enrollment.html

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