

Tiny Tots! Jr Mad Scientist

Theme #4: Bugs

Raising Butterflies! Silkworms

Order them a week before the theme starts

Check on them and record their growth every session

The kit should include the caterpillars in a cup, a carrying mesh habitat for when they bloom, and sugar feed for when they are fully grown.

Day 1: Act like a Bee

Time: 1 hour (about 45 minutes for activities)

Group Size: 1-15 toddlers (1 toddler requires 1 parent)

Grade Levels: pre-school/kindergarten (age 2-4)

Location: Sahm/allotted facility

Overview of Activity

The 4 sets of activities for this theme focus on insects, bugs and all kinds of critters. While relating them to our crawlers in the ocean, we will focus on some very popular terrestrial insects such as butterflies and we will be raising them from caterpillars throughout the theme until they are fully grown butterflies. While we grow butterflies, we are also going to be doing other insect activities such as learning about bees, worms, and how to handle insects.

Learning Focus

1.2 Indicate greater knowledge of body parts and processes (e.g., eating, sleeping, breathing, walking) in humans and other animals.

Introduction

5 min Introduction to the program includes

- Welcoming the Jr naturalists with a **song** and setting the mood for learning!
- Toddler friendly songs
- Announcing the activities! /Whiteboard
- Two activities, with Storytime in between or one large activity with Storytime

Activity #1 Bee antennas

- 10-minute run time

Materials:

- Pom poms
- Cotton balls
- Pipe cleaners
- Paper headband
- Glue
- Tape
- Wing cutouts

To start the class, Introduce our classroom project with our caterpillars. Then have the tiny tots make their own headbands and color their wings to become worker bees. Instructor will help with stapling while the kids focus on the coloring and what a bee does, the dancing, the hives all of it.

Storytime- Anything bee related

Activity #2 Nectar collectors!

- 15-minute run time

Materials:

- various containers
- Flowers/real or fake
- Pipettes
- Ice cube trays
- Food coloring
- Flower watercolor page

Explaining pollination and nectar collection to make honey, the kids will have to scavenge and find flowers in the room with their proboscis or tongue and use pipettes to collect nectar(watercolor) to bring back and they can use it to paint their flower on paper.

Extended play!

To finish out the hour, Jr Naturalists can engage in extended play time to play more of the activities or play in the playscape or use the provided toys.

Day 2 Worms

Time: 1 hour (about 45 minutes for activities)

Group Size: 1-15 toddlers (1 toddler requires 1 parent)

Grade Levels: pre-school/kindergarten (age 2-4)

Location: Sahm/ allotted facility

Overview of Activity

Day 2 will focus on Worms and how worms in the ocean and on land are very important and have almost a keystone role in the ecosystem. Worms at the bottom of the ocean eat bacteria to continue the food chain as first consumers, and worms on land are great scavengers and decomposers closing out the food chain.

Learning Focus

1.4 Indicate knowledge of the difference between animate and inanimate objects, providing greater detail, and recognize that living things (humans, animals, and plants) undergo biological processes such as growth, illness, healing, and dying.

Introduction

5 min Introduction to the program includes

- Welcoming the Jr naturalists with a **song** and setting the mood for learning!
- Toddler friendly songs
- Announcing the activities! / Whiteboard
- Two activities, with Storytime in between

Activity #1 Grow worms

- 10-minute run time

Materials:

- Straws
- Markers
- Toilet paper
- Water
- Pipettes
- Food coloring
- Tube worm specimen jars

Some worms are small, some worms are big, depending on species and growth, but craft worms will always grow. You scrunch toilet paper on a straw, and let the kids color them with markers (they must be washable markers). Once they are ready keep them scrunched and then add water and watch the worms grow! Make as many as you'd like and show our tube worm specimens.

Storytime- The hungry caterpillar

- 10-minute run time

Activity #2 Worm collection

- 10-minute run time

Materials:

- Bucket
- Macro lenses
- Bin for worms
- Trowel
- Worm coloring sheets

Observe some live worms and play with some soil! Before class take a walk down to baby beach or the native plant garden and grab both a soil sample but also a worm sample for the kids to play in the soil and observe the worms in the soil. Do not let the kids hurt or interact with the worms incorrectly.

Extended play!

To finish out the hour, tiny tots can engage in extended play time to play more of the activities or play in the playscape or use the provided toys.

Day 3 Butterfly Day

Time: 1 hour (about 45 minutes for activities)

Group Size: 1-15 toddlers (1 toddler requires one parent)

Grade Levels: pre-school/kindergarten (ages 2-4)

Location: Sahm/ allotted facility

Overview of Activity

A focus on butterflies, true bugs, beetles and creativity through crafts.

Learning Focus

2.1 Demonstrate an increased awareness that objects and materials can change in various ways. Explore and describe in greater detail changes in objects and materials (rearrangement of parts; change in color, shape, texture, form, and temperature).

Introduction

5 min Introduction to the program includes

- Welcoming the Jr naturalists with a **song** and setting the mood for learning!
- Toddler friendly songs
- Announcing the activities! / Whiteboard
- Two activities, with Storytime in between

Activity #1 Bug Box/parts of a butterfly

- 10-minute run time

Materials:

- Andys collection box
- Parts of a butterfly felt board
- Paper butterfly

Butterflies are what we are raising in class so as we watch them grow, we are going to learn about the different parts of a butterfly. Everyone is going to get their own set of butterfly parts and put it together, on a felt board. Then talk about the different kinds of bugs and butterflies and moths Andy has provided in the bug box and have the kids be curious.

Storytime- 10-minute run time

Activity #2 Butterfly Handprint craft

- 15-minute run time

Materials:

- Pipe cleaners
- Large legal paper or construction paper
- Paint
- Toilet paper tubes
- Hands!

This craft is all about creativity making butterflies from their hands. They will use their own hands and make the wings with their painted hands and then color the rest of the craft to look like a butterfly. You can include 3D parts such as antenna or toilet paper tube body parts.

Extended play!

To finish out the hour, tiny tots can engage in extended play time to play more of the activities or play in the playscape or use the provided toys.

Day 4 Ants/ Collection Day!

Time: 1 hour (about 45 minutes for activities)

Group Size: 1-15 toddlers (1 toddler requires 1 parent)

Grade Levels: pre-school/kindergarten (2-4)

Location: Sahm/ allotted facility

Overview of Activity

Day 4 focuses on Ants and any type of **SAFE** bug collection. Make a clear distinction that we are looking for safe bugs such as worms, beetles, ants, or isopods. **NO wasps, bees, or anything that stings.** Parents can help and make sure tots are staying away from those bugs, but we will safely collect, observe under microscope and draw what we find.

Learning Focus

1.1 Identify characteristics of a greater variety of animals and plants and demonstrate an increased ability to categorize them.

Introduction

5 min Introduction to the program includes

- Welcoming the Jr naturalists with a **song** and setting the mood for learning!
- Toddler friendly songs
- Announcing the activities! / Whiteboard
- Two activities, with Storytime in between

Activity #1 Collection

- 15-minute run time

Materials:

- Nets
- Slides
- Petri dishes
- Collection boxes with netting

The Tiny tots will be let out in the native plant garden and look for any kind of safe bug to bring back and observe under a microscope. Recommended bugs to find are ants, beetles, fly's, moths and pill bugs or isopods.

Storytime-10-minute run time

Activity #2 observation

– 15-minute run time

Materials:

- Big construction paper/ legal size blank paper
- Crayons/ colored pencils

Observing the insects under the microscope is going to be a little time consuming once you have your specimen, bring it back to a microscope and draw what you see. You can name the species and if the kids want even to name the insect itself. They can be as creative as they want to be, and once everyone is done, we go out and release them back outside.

If our Butterflies are fully grown, we can walk the class down to the native plant garden or baby beach and have a release and wish them on a safe journey into the wild!

Extended play!

To finish out the hour, tiny tots can engage in extended play time to play more of the activities or play in the playscape or use the provided toys.