Insectarium Group Visit Activity - CSI:Insectarium!
Teacher Instructions

Welcome to the Audubon Insectarium! We're so glad you have chosen our newest facility as a field trip for your students. At Audubon we are committed to providing an outstanding, entertaining learning experience to all of our visitors, and to that end, we have provided your group with an activity that will enhance their knowledge of insects and make their visit more engaging. Below are the instructions for this activity. Again, thank you for choosing to visit us today, and we hope you enjoy your visit to the Insectarium!

1. In order to complete the activity, your group will need to be divided into 4 teams. Each team will be given a different activity/mystery to solve. The questions for each version of the activity are the same, they are just in a different order depending on where the team begins their visit in the facility.

2. The 4 versions are distinguished by having a different insect image in the upper right hand corner of the first page (dragonfly, spider, beetle, butterfly). Please distribute the activities evenly between the teams so that each team has the same number of students per group.

3. Each team should read their mystery description and follow the instructions on where they are to begin their investigation. Each investigation will have a different solve for their mystery.

4. An answer key for teachers and chaperones is also included in this packet so group leaders can help guide the investigation and check answers.

5. Upon completion of your visit, review mysteries and answers with the entire group back at school – the students will probably enjoy hearing about the other mysteries. As an extension, each group could ask the other groups to try to solve their mystery first before they give the correct answer, based on their evidence gathered at the Insectarium.
CSI: Insectarium

Congratulations! You and your investigative team have been hired to solve a mystery involving one of the species found inside the Insectarium. As you tour the exhibits use this evidence collection survey to gather important information and clues that will help you and your team solve the...

Mystery of the Alien Pods!

Something keeps leaving strange pods on the plants in Mrs. Gainey's garden. At the same time, small green beings are eating up her garden. Are these visitors from another planet sent to take over the world, or is something closer to home to blame?

Begin your team’s investigation in the Prehistoric Wonders area of the Insectarium

Prehistoric Wonders

In what era did insects first appear on earth? Paleozoic

What species is considered the “missing link” between arthropods (insects) and annelids (worms)? Velvet Worm

Field Camp

Name 3 tools for collecting bugs? Weatherproof notebook, head lamp, magnifying glass, field bag, field notes, field collecting bag, aspirator, forceps, glassine envelopes, point punch, vials, loupe, collapsible cage

Identify 2 species that have been collected on the sheet? Green Darner, Oleander Hawk Moth, Golden Jewel bug, Madagascan Moon Moth, Peanut Head Bug, Harlequin Beetle, Katydid, Cicada

Diversity

Insects outweigh humans by how much? 50 to 1

Life Underground

Name 2 insects that live underground and explain how they help the soil. Worms, mites, ants, beetles, spiders - worms, mites, ants, and beetles all help to clean up debris and cultivate the soil. Spiders and other predators help keep pest populations down. Without these bugs, soils would not stay healthy, plants would die, and humans would live in piles of debris and trash.

Insects of New Orleans

What are the two types of mosquitoes found in the New Orleans area? Aedes aegypti and biteless “tox” mosquitoes (Toxochiynchites amboinensis)

What disease is the “bad” mosquito famous for spreading in New Orleans? Yellow fever
Who is “Nature’s clean-up crew”? **Flies**

**Bug Appetit**
Ask the Staff Entomologist what are the benefits of eating bugs? **Bugs are a low fat and high in protein. They are a cheap and plentiful food source.**
Try eating a bug (bonus points!)

**Termite Gallery**
How many termites are on exhibit in the gallery? **Over 25,000**
Why do termites eat wood? **Wood is a plentiful food source. It is also defenseless against termites, and since not many other animals eat wood, there is no competition for food.**
Name two methods that are used to fight termites. **Pressure treated wood used in building houses, treat soils with chemicals, and bait sytems**

**Boudreaux’s Bait Shop/ Louisiana Swamp**
Name 3 insects that are found in the Louisiana Swamp. **Patent Leather Beetle, Ox Beetle, Brown Recluse Spider, North American Millipede, Velvet Ants, Lubber Grasshoppers, Bumblebees, Honey Bees, Cuban Cockroach, Black Widow Spider, Golden Silk Spider, Dragonfly, Whirligig, Predaceous Diving Beetle, Giant Water Bug.**

**Hall of Fame**
Which species is considered the rarest butterfly species in the world? **Queen Alexander’s Birdwing**
Why is it so endangered? **High demand from collectors and habitat destruction have diminished their numbers in the wild**
Ask a staff person how much it is worth? (hint: go the Metamorphosis Lab for help). $7500 a piece, $15,000 for the pair.

**Metamorphosis**
Name the two types of metamorphosis and explain how they are different. **Complete – has 4 stages: Egg, Larva, Pupa, Adult; Incomplete – has 3 stages: Egg, Nymph, Adult**
What are the life cycle stages of a butterfly? **Egg, Caterpillar, Pupa, Butterfly**

**Butterflies in Flight**
Why is it so important that the butterflies stay in the exhibit? **Most of the butterflies in the exhibit are not from LA or the US, and it could be bad for local habitats and local butterflies if the butterflies are released into the area.**
Why can’t we touch any of the butterflies? **Butterflies are very fragile, and can be easily damaged by even the softest touch.**
(Hint: ask the staff at the entrance about these questions)

The culprit in the Mystery of the Alien Pods is **Butterflies**
The museum piece in the Mystery of the Museum Theft is **Queen Alexandra’s Birdwing**
The culprit in the Mystery of the Hollow House is **Termites**
The insect used in the Mystery of the Deadly Disease is **The Aedes aegypti mosquito**
CSI: Insectarium

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Mystery of the Museum Theft!
Your investigative team has received word that some thieves are planning to steal the rarest and most valuable item from the Insectarium. It is your team’s job to discover what this item is and prevent the bandits from stealing it. Good luck!

Begin your team’s investigation in the Metamorphosis Lab area of the Insectarium

Metamorphosis
Name the two types of metamorphosis and explain how they are different.


What are the life cycle stages of a butterfly?


Butterflies in Flight
Why is it so important that the butterflies stay in the exhibit?


Why can’t we touch any of the butterflies?


(Hint: ask the staff at the entrance about these questions)

Prehistoric Wonders
In what era did insects first appear on earth?

What species is considered the “missing link” between arthropods (insects) and annelids (worms)?

Field Camp
Name 3 tools for collecting bugs?

Identify 2 species that have been collected on the sheet?

Diversity
Insects outweigh humans by how much?
Life Underground
Name 2 insects that live underground and explain how they help the soil.

Insects of New Orleans
What are the two types of mosquitoes found in the New Orleans area?
What disease is the “bad” mosquito famous for spreading in New Orleans?
Who is “Nature’s clean-up crew”?

Bug Appetit
Ask the Staff Entomologist what are the benefits of eating bugs?
Try eating a bug (bonus points!)

Termite Gallery
How many termites are on exhibit in the gallery?
Why do termites eat wood?
Name two methods that are used to fight termites.

Boudreaux’s Bait Shop/ Louisiana Swamp
Name 3 insects that are found in the Louisiana Swamp.

Hall of Fame
Which species is considered the rarest butterfly species in the world?
Why is it so endangered?
Ask a staff person how much it is worth? (hint: go the Metamorphosis Lab for help).

The evidence collecting section of your investigation is now complete. Go back and review your data, and determine which what rare item the thieves are after. Write your answer to the mystery below.
The Museum piece in the Mystery of the Museum Theft is
CSI: Insectarium

Congratulations! You and your investigative team have been hired to solve a mystery involving one of the species found inside the Insectarium. As you tour the exhibits use this evidence collection survey to gather important information and clues that will help you and your team solve the...

Mystery of the Deadly Disease!

Your investigative team has received word that some villains are planning to unleash a deadly disease in the City of New Orleans. Their goal is to cause chaos and panic in the city. The disease they are trying to release is yellow fever, and they are using an insect to spread the disease. It is your team’s job to discover which insect is being used and prevent the scoundrels from succeeding in their plan. Good luck!

Begin your team’s investigation in the Bug Appetit area of the Insectarium

**Bug Appetit**

Ask the Staff Entomologist what are the benefits of eating bugs?

Try eating a bug (bonus points!)

**Termite Gallery**

How many termites are on exhibit in the gallery?

Why do termites eat wood?

Name two methods that are used to fight termites.

**Boudreaux’s Bait Shop/ Louisiana Swamp**

Name 3 insects that are found in the Louisiana Swamp.

**Hall of Fame**

Which species is considered the rarest butterfly species in the world?

Why is it so endangered?

Ask a staff person how much it is worth? (hint: go the Metamorphosis Lab for help).
Metamorphosis
Name the two types of metamorphosis and explain how they are different.

What are the life cycle stages of a butterfly?

Butterflies in Flight
Why is it so important that the butterflies stay in the exhibit?

Why can’t we touch any of the butterflies?

(Hint: ask the staff at the entrance about these questions)

Prehistoric Wonders
In what era did insects first appear on earth?

What species is considered the “missing link” between arthropods (insects) and annelids (worms)?

Field Camp
Name 3 tools for collecting bugs?

Identify 2 species that have been collected on the sheet?

Diversity
Insects outweigh humans by how much?

Life Underground
Name 2 insects that live underground and explain how they help the soil.

Insects of New Orleans
What are the two types of mosquitoes found in the New Orleans area?

What disease is the “bad” mosquito famous for spreading in New Orleans?

Who is “Nature’s clean-up crew”?

The evidence collecting section of your investigation is now complete. Go back and review your data, and determine which insect the bandits will use to spread yellow fever. Write your answer to the mystery below.

The insect in the Mystery of the Dangerous Disease is
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Mystery of the Hollow House!

A local home owner keeps finding collections of mysterious mud tunnels around the outside of his home. Also, he keeps hearing what sounds like quiet chewing in the walls of the house. Is the house haunted by a hungry ghost, is a monster tunneling its way in, or is something else to blame?

Begin your team's investigation in the Boudreaux's Bait Shop area of the Insectarium

Boudreaux's Bait Shop/ Louisiana Swamp

Name 3 insects that are found in the Louisiana Swamp.

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Hall of Fame

Which species is considered the rarest butterfly species in the world?

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Why is it so endangered?

_______________________________

Ask a staff person how much it is worth? (hint: go the Metamorphosis Lab for help).

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Metamorphosis

Name the two types of metamorphosis and explain how they are different.

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What are the life cycle stages of a butterfly?

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Butterflies in Flight

Why is it so important that the butterflies stay in the exhibit?

_______________________________

Why can't we touch any of the butterflies?

_______________________________

(Hint: ask the staff at the entrance about these questions)
Prehistoric Wonders
In what era did insects first appear on earth? ____________________________
What species is considered the “missing link” between arthropods (insects) and annelids (worms)? ____________________________

Field Camp
Name 3 tools for collecting bugs? ____________________________
Identify 2 species that have been collected on the sheet? ____________________________

Diversity
Insects outweigh humans by how much? ____________________________

Life Underground
Name 2 insects that live underground and explain how they help the soil. ____________________________

Insects of New Orleans
What are the two types of mosquitoes found in the New Orleans area? ____________________________
What disease is the “bad” mosquito famous for spreading in New Orleans? ____________________________
Who is “Nature’s clean-up crew”? ____________________________

Bug Appetit
Ask the Staff Entomologist what are the benefits of eating bugs? ____________________________
Try eating a bug (bonus points!)

Termite Gallery
How many termites are on exhibit in the gallery? ____________________________
Why do termites eat wood? ____________________________
Name two methods that are used to fight termites. ____________________________

The evidence collecting section of your investigation is now complete. Go back and review your data, and determine which suspect is responsible for the Hollow House Mystery. Write your answer to the mystery below.

The culprit in the Mystery of the Hollow House is ____________________________
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Something keeps leaving strange pods on the plants in Mrs. Gainey’s garden. At the same time, small green beings are eating up her garden. Are these visitors from another planet sent to take over the world, or is something closer to home to blame?

Begin your team’s investigation in the Prehistoric Wonders area of the Insectarium

Prehistoric Wonders
In what era did insects first appear on earth? __________________________________________
What species is considered the "missing link" between arthropods (insects) and annelids (worms)? __________________________________________

Field Camp
Name 3 tools for collecting bugs? __________________________________________

Identify 2 species that have been collected on the sheet? __________________________________________

Diversity
Insects outweigh humans by how much? __________________________________________

Life Underground
Name 2 insects that live underground and explain how they help the soil. __________________________________________

Insects of New Orleans
What are the two types of mosquitoes found in the New Orleans area? __________________________________________

What disease is the "bad" mosquito famous for spreading in New Orleans? __________________________________________

Who is "Nature’s clean-up crew"? __________________________________________
Bug Appetit
Ask the Staff Entomologist what are the benefits of eating bugs?

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Termite Gallery
How many termites are on exhibit in the gallery?

Why do termites eat wood?

Name two methods that are used to fight termites.

Boudreaux's Bait Shop/ Louisiana Swamp
Name 3 insects that are found in the Louisiana Swamp.

Hall of Fame
Which species is considered the rarest butterfly species in the world?

Why is it so endangered?

Ask a staff person how much it is worth? (hint: go the Metamorphosis Lab for help).

Metamorphosis
Name the two types of metamorphosis and explain how they are different.

What are the life cycle stages of a butterfly?

Butterflies in Flight
Why is it so important that the butterflies stay in the exhibit?

Why can't we touch any of the butterflies?

(Hint: ask the staff at the entrance about these questions)

The evidence collecting section of your investigation is now complete. Go back and review your data, and determine which suspect is responsible for the Alien Pod Mystery. Write your answer to the mystery below.

The culprit in the Mystery of the Alien Pods is