

VIRTUAL CLUB PELICAN

Project Title: Lagoon Life at Night

Theme: Adaptations

Age Range: 7-12 years

PROJECT INTRODUCTION: Students will create a work of art inspired by the scientific method of observing nocturnal animal behavior at the Batiquitos Lagoon by photo monitoring. Students will choose a nocturnal lagoon animal image of their choice from the below examples and use a black crayon etching technique to experiment with impression and texture in art.



PROJECT MATERIALS:

- White Drawing Paper: size 4.5"X 6"
- White Paper (8.5"X 11"- for practice drawing)
- Drawing Pencil
- Black Crayon
- Etching Tool: Stylus

PROMPT QUESTIONS:

1. Why do you think it is important to study animal behavior?
2. How do you think researchers study animals that only come out at night?
3. What art elements do you notice in the nighttime photos taken of animals?

DISCUSSION (discuss or read):

What is Adaptation?

Adaptation is the evolutionary process where an organism becomes better suited to its habitat and environment. This process takes place over many generations. It is one of the basic phenomena of biology. All organisms have adaptations that help them survive and thrive. Some adaptations are behavioral. Behavioral adaptations are the things animals do to survive. For example, bird calls and migration are behavioral adaptations.

What is Animal Behavior?

Animal Behavior is the scientific study of nature in the wild and ways in which animals interact with each other, with other living beings, and with the environment. Some animal behaviors are learned; they must be taught how to do it. Other animal behaviors are instinctual; they are born knowing how to do it.

Over time, animals that are better adapted to their environment survive and breed. Animals that are not well adapted to an environment may not survive. The characteristics and animal behaviors that do not help the species survive slowly disappear while those that help a species survive in an environment are passed on to

future generations.

How do we study animal behavior?

Scientists are drawn to the study of animal behavior for a variety of reasons ranging from research on feeding behavior and habitat selection to mating behavior and social organizations. One of the methods scientists utilize to study animal behavior is observation. In utilizing the observational method, the researcher physically watches the subject in the study without manipulating any variables in its environment.

One way scientists observe and study nocturnal animals is by photo-monitoring (also known as camera traps), a method by which a camera armed with infrared sensors is placed in the field to remotely capture time-lapsed images and video whenever the devices sense motion. This gives scientists the ability to accurately survey and monitor native animals in their habitats which aids in their survival and contributes significantly to academic research.

It can be difficult for wildlife biologists, researchers, and park rangers to keep up with emerging threats to wildlife. Accurately documenting their presence and estimating changes in their population remains a challenge. Many of these species are nocturnal, travel great distances, have complex behavior, and avoid humans. Using photo-monitoring, researchers can collect baseline population data often where only guesses were possible before.

Equally important, photo-monitoring is being used to raise conservation awareness worldwide. Photo-monitoring provides a window into a world that was previously only accessible to researchers or individuals with intimate knowledge of that species or habitat.

ART PROJECT KEY TERMS:

Behavioral Adaptation is the action an animal takes to survive in their environments.

Photo-Monitoring is the practice of using photographs taken at a specific site to monitor conditions or change.

Nocturnal means occurring, or active at night.

Impression is an artist's interpretation and rendition or representation of an object or a scene.

Visual Texture is the way something looks like it feels, an implied sense of texture that the artist creates using various artistic elements such as line, shape, and color in a work of art.

Composition is the placement or arrangement of the visual elements in a work of art.

ART MAKING PROCESS:

STEP 1:

Imagine you were out at the lagoon at nighttime:

- What animals do you think you would see?
- What lagoon animals do you think are nocturnal?

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- If you were a scientist studying animal behavior using photo monitoring as a resource to capture animal nightlife, what do you think you would notice?

Take a moment to observe the night photos attached (Fig. A):

- What do you see?
- What stands out?
- Where is the light coming from? How do you know?
- How are the photos similar? How are they different?

STEP 2:

You will be creating a work of art inspired by the black and white nighttime photo monitoring pictures taken to study animal behavior. Think about a nocturnal animal you want to work with. Begin with one piece of paper and pencil to do a practice drawing of your animal. It can be up close, just showing its head, or it can be of its whole body, while showing some plants in the background. Consider the composition of your drawing, where are you placing objects and how do they balance? Think specifically about how you will demonstrate texture in your animal by using lines. Practice in the other squares until you are happy with your animal. Remember that your artwork will be only black and white. (Fig. 1)

STEP 3:

Once you are happy with the rough draft of your animal drawing, make sure your work surface is covered with a large piece of scratch paper. With your smaller piece of white paper, use your black crayon to cover the entire piece of paper, so the whole paper has a thick layer of solid black crayon on it and no white is showing through. (Fig. 2)

STEP 4:

Using the wooden stylus (carving tool), and referring to your practice drawing, scratch the design of your animal into the black crayon. Your scrapes will be somewhat grey as you etch lines and shapes into the black crayon surface. The etched areas signify where light is hitting images in your photo (it is the opposite of drawing your animal with your pencil!). Remember you are creating your impression of a nighttime photograph. Try using different etching tools if you would like. Experiment with creating different types of thin and thicker lines and areas, to suggest different texture and amount of light interpreted. (Fig. 3) Tips: If you are not happy with one of your etchings, simply use your black crayon and color over it and try again. Be sure to shake your shavings from your paper as you work so they don't smear on your drawing.

STEP 5:

When you are done with your etching, shake any excess black crayon shavings into the trash. Place a piece of waxed paper or plastic over your crayon drawing and gently rub to secure the black crayon and give the artwork a polished look.

STEP 6:

OPTION: With paper from home, you can create several small etchings of your animal with different angles to capture more photos monitoring more movements of your animal. Mount them together as a series! (Fig. 4)

POST PROMPT QUESTIONS (reflect and share):

1. How did you like working with this etching technique?
2. What is your animal thinking of and doing out at night?
3. What do you think a scientist would learn about your animal from your work of art?

LESSON PLAN

ART PROJECT STEP BY STEP EXAMPLE:



FIG. 1

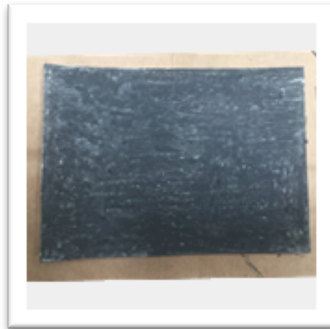


FIG. 2



FIG. 3

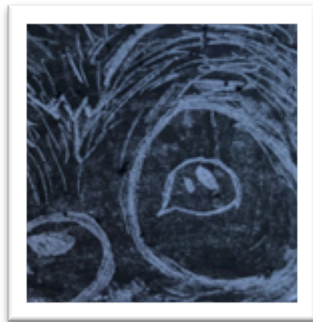


FIG. 4

LESSON PLAN

Fig. A: Nocturnal Lagoon Animals Examples:



Raccoon



Bobcat



Squirrel



Rabbit

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Coyote



Skunk

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Owl