



The Night Life



Target Audience: Education: Grade(s): 2nd-5th

Primary Disciplines: Science

Program Description: The Night Life investigates the habits and adaptations of nocturnal animals. During this program, we will identify nocturnal animals, discuss nocturnal animal adaptations, and even have up-close encounters with some of our nocturnal education animal ambassadors.

Program Format:

1. Introduction to and definition of 'Nocturnal.'
2. Knowledge Application: Nocturnal Animal Identification
3. Investigation: Nocturnal Animal Adaptations
4. Connection: Meet Nocturnal Animal Ambassadors

Objectives:

Upon completion of this program, participants should be able to:

1. Define the term "Nocturnal."
2. List at least five nocturnal species.
3. Describe at least three nocturnal animal adaptations.

Vocabulary:

1. Nocturnal- active at night
2. Diurnal- active during the day
3. Adaptation- part of an animal that helps it survive and function within it's environment
4. Bioluminescence-the production of light by living organisms
5. Echolocation- the location of objects by reflected sound, in particular that used by animals such as dolphins and bats

Duration: 30 minutes

Standards Alignment:

Next Generation Science Standards:

- 2-LS4-1 Biological Evolution: Unity and Diversity
 - Make observations of plants and animals to compare the diversity of life in different habitats.
- 3-LS4-3 Biological Evolution: Unity and Diversity

- Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.
- 4-LS1-1 From Molecules to Organisms: Structures and Processes
 - Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.
- 4-LS1-2 From Molecules to Organisms: Structures and Processes
 - Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways.

Pre/Post Activity Suggestions:

- **Night in the Forest**
 - **Resources:**
 - Classroom Space
 - Access to Light Switch
 - **Procedure:**
 - Tell students to choose a nocturnal animal that would live in the forest (owl, bat, mouse, mountain lion, etc.).
 - Station a teacher/assistant by the light switch- they will be in charge of creating night (lights off) and day (lights on).
 - Let the students know that the classroom is now a forest, and if the lights are on, that means that it is daytime in the forest. Nocturnal animals sleep during the day, so any time that the lights are on, the students must freeze in place (“sleeping”).
 - When the lights are turned out, night has fallen, and students are free to move around the room freely until the lights come back on again.
 - Encourage students to move carefully in the dark, to avoid any accidents or collisions.
 - The teacher/assistant in charge of the light switch can flip the lights as quickly or slowly as you’d like.
 - Variation 1: If your students do well with competition, you may also have students be ‘out’ if they fail to freeze in place fast enough. Do this every round until you have a winner.
- **Echolocation Experimentation!**
 - **Resources:**
 - Classroom Space
 - Bat Plush/Toy/Symbol
 - Insect Plush/Toy/Symbol
 - **Procedure:**
 - Remind students that one of the adaptations that helps bat survive is their use of echolocation (figuring out where something is by listening to where sound is coming from).
 - Have the students gather in a standing circle. Let the students know that they will be taking turns being the “Bat” or the “Insect”.
 - The “Bat” student should be blindfolded, placed in the center of the circle, and handed the Bat Plush.

- Choose a student to be the “Insect.” The student who is the “Insect” must stand still, and remain in their spot in the circle at all times.
- Have the “Bat” begin the process by making a beeping/squeaking sound. Every time the “Bat” makes a sound, the “Insect” must respond by making the same sound right away.
- The “Bat” should be able to follow the responding sounds of the “Insect” within the circle. The “Bat” can gently use their Bat Plush to tap the Insect Plush (held by the “Insect”) to symbolize that they have eaten the insect.
- Other students may take turns as bat or insect.
- Variation for older students: Have students line up in different patterns (trees, rocks, etc.), and challenge the blindfolded “Bat” to walk from one end of the line to the other without bumping into the students. As the “Bat” makes squeaks/beeps, students must also respond right away. This symbolizes the sound bouncing off of objects (as well as insects) which assists bats in flight.

- **Night & Day Craft**

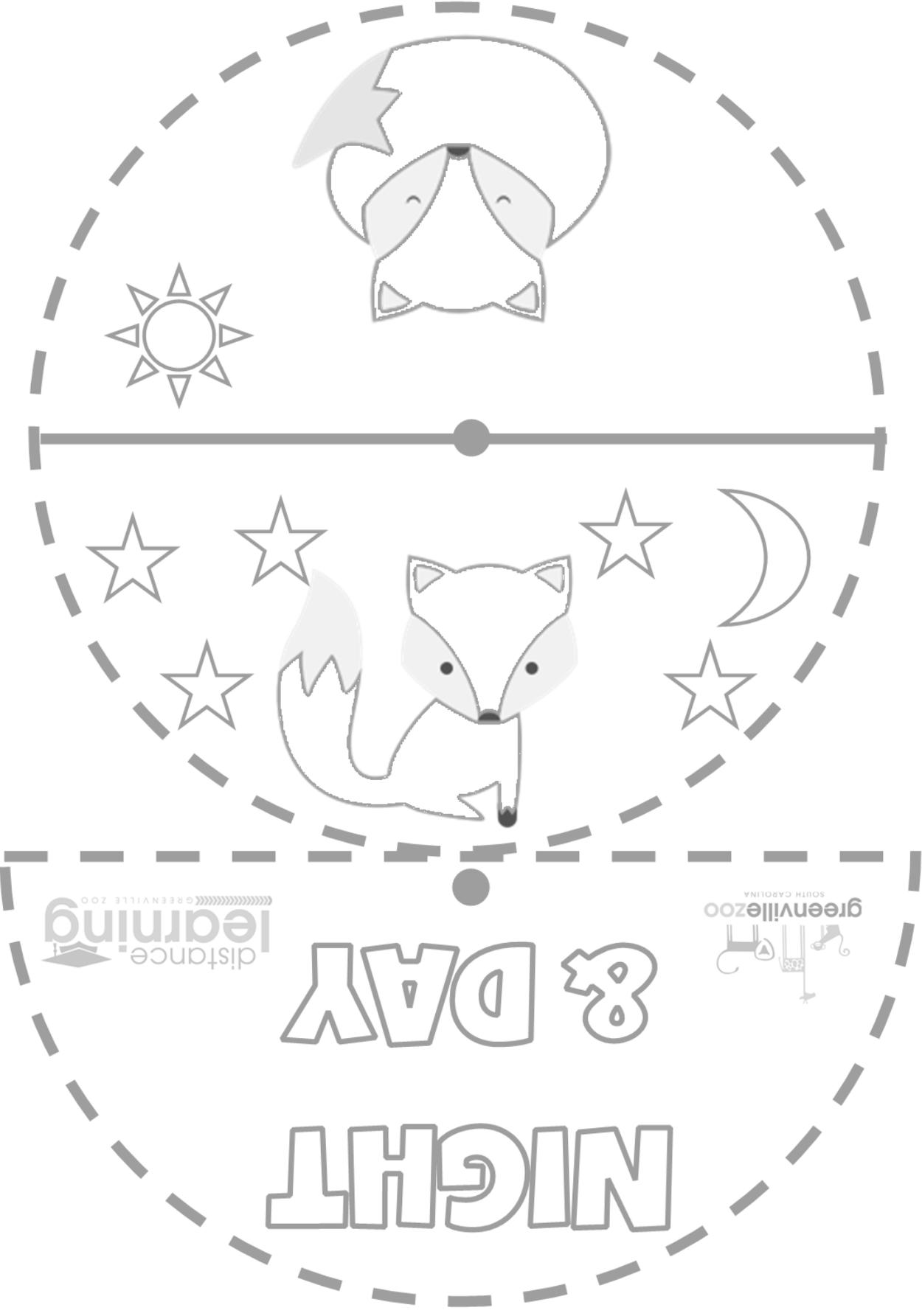
- **Resources:**

- Night & Day Template (See Below)
- Crayons/Coloring Pages
- Scissors
- Paper Fasteners
- Hole Punch

- **Procedure:**

- Depending on the age of the students, provide them with the full template or the pre-cut template pieces. (Cuts should be made on the dotted lines).
- Have students color their templates; ideally having the sleeping fox in daytime and the active fox in nighttime.
- After students have colored their pieces, have them cut out the pieces along the dotted line (if needed).
- Punch a hole (using the hole punch) in the small gray circle on the half-circle piece (“Night & Day”).
- Place the half-circle on top of the full circle, and push a paper fastener through the top hole and the small grey circle on the full circle. The fastener should be pushed through the decorated side, with the tines coming out of the back of the full circle on the bottom.
- Flatten the tines and give your circle a spin!





NIGHT & DAY

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