

CUB SCOUTS: Ecosystems

Activity Snapshot

Activity	Time allotment	Intent	Method	Example questions and phrases
Night Hike I – Food chains	45 minutes	Intro to trophic levels: Identifying producers thru secondary consumers	Observation Exhibit Interpretation Storytelling	What does this animal need to survive? What does this animal do for the environment? What challenges do these animals face in the wild?
Ambassador Animals	20 minutes 10 min. buffer	Connect with animals by experiencing them up-close (possible touching)	Meet & Greet Observation	Tell me what you know/notice about this animal.
Ecosystem Jenga!	30-45 minutes 5 min. cleanup	Think about connections between species and habitats: abiotic and biotic factors	Interactive game	What is one thing we can do to help marine ecosystems?
Night Hike II – Food webs & conservation	30 minutes	Discuss secondary and tertiary consumers Conservation projects related to carnivores (ex: Niassa Carnivore Project)	Observation Discussion Storytelling	How do carnivore populations affect an ecosystem? What are some ways carnivores might interact with human populations? Humans with wildlife? How can we help protect wildlife and also keep people safe?
Oh Deer! Game	15-20 minutes	Introduce survival needs/ecosystem resources: food, water, shelter, and space	Interactive game	What happens if one of these resources disappears? How might an ecosystem change as animal populations increase?
Good Buddies!	20-30 minutes	Learn about the interactions of living things	A symbiosis matching game	Why might these species live together? What advantages (i.e. access to food or shelter) might this species provide to others? What would happen if one of the “buddies” wasn’t there?

Oh Deer! Game

This activity is a simulation game where participants become “deer” or a prey animal of their choice and learn about components of habitat essential to survival. The game can also highlight how populations increase or decrease over time and limiting factors that influence these changes.

Begin by asking and discussing what the essential components of habitat are: food, water, shelter, and space. For this game, we will assume that the deer have enough space to survive so we can focus on food, water, and shelter. Go over the symbols used in the game for each need:

Food—hands over stomach

Water—drinking an imaginary glass of water

Shelter—holding hands together over head to form a triangle

Count off participants in fours. Group one will be the deer and the other three groups will become the habitat needs. Using a designated area (grassy area or BEC Hall), line the deer up on one side and resources opposite across the space facing away from each other. Participants that are resources can begin each round identifying which symbol they want to hold up. Deer will then choose which resource they need. All participants will hold their symbol above their head at the beginning of each round. Once everyone is decided, count down from 3 and one deer can turn around and race to find their resource. Each participant that found their resource can take that person back to the deer starting line. This is to represent the deer’s successfully meeting its needs and reproducing as a result. Any deer that fails to find its food, water, or shelter dies and becomes part of the habitat. The next round they then become a resource and move to the other line. If more than one deer reaches a resource, the participant who gets there first survives. Habitat resources/components stay on their line until a deer comes to get them. The habitat resource can change its component choice (food, water, shelter) from round to round.

Good Buddies Game

Elements of any ecological system live in an intricate web of interdependence. When two species of organisms live in close association with each other, their relationship is called “symbiotic.” In a symbiotic relationship, at least one of the organisms directly benefits from its close association with the other organism. This interactive matching game will help introduce scouts to the three major types of symbiotic relationships: commensalism, mutualism, and parasitism.

Commensalism: one species derives food or shelter from another species without seriously harming that organism or providing benefits in return.

Mutualism: a reciprocal relationship—two different species both benefit and are dependent upon the relationship.

Parasitism: one species (parasite) nourishes itself to the detriment of the other species (host).

Begin by asking if anyone can think of a species that directly benefits from another (can give example of milkweed and monarch butterflies as an example). Explain that we are going to play a game where each person will receive a card with an animal or plant on it. Each of these species has a “buddy” or another organism that it has a special relationship with. Their job will be to go around and discuss their animal with other participant to find their buddy and determine what type of relationship they have. Please feel free to mingle with guests and help guide discussion between participants.

- 1) Does one animal seek shelter or get food from the other without providing anything in return?
- 2) Do both animals benefit and depend on each other for survival?
- 3) Does one species nourish itself to the detriment or harm of the other?

Once everyone has paired up, you can go around the room and share/discuss. Be sure to review the definitions given and decide as a group if the classification of each pair is correct. Ask the group to determine which interactions are cooperative (they help each other) or competitive (they can hurt each other). Wrap up the activity by reminding everyone that symbiotic relationships are just one example of how elements of an ecosystem depend on each other. Encourage them to keep an eye out for other examples at home and in their communities.