

# Creeks & Critters



This activity is part of the **Water Protection** theme.

## What's the purpose of this activity?

To study a natural aquatic environment and identify the various elements of an ecosystem – including flora and fauna. To demonstrate that small creeks and streams in the forest provide a clean, fresh source of water that various plants and wildlife species need to survive.

## Key Messages:

- Ability to identify food chains, categorizing different plants and animals, including humans as carnivores, herbivores or omnivores
- Understand food chains as a system in which energy from the sun is transferred to other organisms
- Small creeks and streams in the forest provide a fresh source of water that various plants and wildlife species need to survive.

## Materials:

- Creek Model
  - Model requires electricity and should be covered/sheltered from the elements if not placed indoors
  - Make sure the pump is unplugged at the end of the day!
- Pail/bucket
- Wildlife Props (permanently attached to model)
  - Deer Antler
  - Wild Turkey Feather
  - Bull Frog
  - Spotted Salamander
  - Beaver Tracks
  - Snapping Turtle
  - Fox Skull
  - Plants
  - Fish Eggs
- Optional extra Wildlife Props:
  - Wolf Track
  - Mink Skull
  - Moose Jaw
  - Raccoon Tracks

- Laminated Posters:
  - Who uses a creek?
  - Why would these critters be around the creek?
  - Can you follow one food chain?
  - Food Chains & Trophic Levels?
- Laminated Trophic Level Labels (**to be used if facilitator available**)
  - Primary Producer
  - Herbivore
  - Carnivore
  - Omnivore

## Set Up:

1. Use pail to place water in the bottom pond and plug in the pump. Ensure the water is circulating properly through the model.
2. If any extra wildlife props, place throughout the display/model.

## Self-Led Version:

1. Student supervisors will prompt students through the use of questions and graphics found on posted posters.

## Facilitated Version ...What will I be doing?

Explain to the students the importance of small creeks and streams in providing water for wildlife.

- Ask the students if they have ever encountered creeks and streams when walking through the forest?
- These are great areas to view wildlife or see signs of them!
  - Because streams and creeks provide water, food and shelter for many wildlife species!
- Emphasize that even the smallest of flowing creeks are important habitat for wildlife and should be protected.

As a group, have students identify the wildlife signs in the model.

Ask the students if they know what a trophic level is?

- Introduce and the differences.
- Trophic levels are the different feeding position in a food chain.
  - Primary producers (plants) → produce their own food using photosynthesis
  - Herbivores → eat only plants for food/energy
  - Carnivores → eat other animals (only meat) for food/energy
  - Omnivores → eat both plants and animals for food/energy

Hand out laminated trophic level labels to students and have them place them by the appropriate props on the model

- Go over each placement as a group and ask why the that label there.
  - Deer Antler (herbivore – eats browse, leaves of trees)
  - Wild Turkey Feather (herbivore – eats mast)
  - Bull Frog (insectivore – eats insects; carnivore)
  - Spotted Salamander (eats insects, worms, etc.; carnivore)
  - Beaver Tracks (herbivore – eats leaves, branches and bark)
  - Snapping Turtle (omnivore, scavenger – eats fish, birds, carrion, plant material)
  - Fox Skull (Carnivore – eats small rodents)
  - Plants (Primary Producers – produce their own food)
  - Fish Eggs (the little fish inside the egg feed on the egg yolk )
    - What do they act like?
    - Not primary producers but they are at the bottom of the food chain and act as primary producers
  - Optional extra Wildlife Props:
    - Wolf Track (Carnivore)
    - Mink Skull (carnivore)
    - Moose Jaw (herbivore)
    - Raccoon Tracks (Omnivore)

Many plants and animals depend on small creeks and streams! These smaller flowing water systems are very important in providing fresh, clean water and habitat for wildlife.

Debrief ... Ask students ...

1. What is a trophic Level?
  - Trophic levels are different feeding

positions in a food chain.

- Primary Producers (plants)
  - Herbivore (eat plants)
    - Have students name some other herbivores
  - Carnivore (eat meat)
    - Have students name some other carnivores
    - Not all carnivores are animals! Some plants eat "meat". Example, pitcher plant and sundew!
  - Omnivore (eat both plants and meat)
    - Have students name some other omnivores
- 1<sup>st</sup> trophic level = Primary Producers
  - 2<sup>nd</sup> trophic level = Herbivores
  - 3<sup>rd</sup> trophic level = Carnivores
  - 4<sup>th</sup> trophic level = Omnivores

2. Why are food chains important?

- A food chain is the flow of energy from one organism to the next.
- A food chain is the system in which energy from the sun is transferred to other organisms.
- The sun's energy is absorbed by plants (Primary Producers) and used in the process of photosynthesis to make their own food.
- All life on Earth is directly or indirectly reliant on primary production.
- Plants are responsible for this production and form the base of the food chain.
- Food chains usually start with a primary producer and end with a carnivore

3. What trophic level do you think humans are in?

- Humans can be classified under both the herbivore and carnivore groups but would best fit under the omnivore group as most humans eat both plants and animals!

## Clean Up procedures

- Place laminated trophic level labels back into volunteer folder along with activity description and take back to volunteer sign in/sign out area
- Account for all props and associated parts
- Place them all into appropriate containers
- Unplug pump
- At end of day, empty water out of model and pat dry
- Let activity model dry fully overnight.