



# Nature-Watch Activity Kit

## Food Chain

### Food Chain Kit Contents

Item:	Kit Size		
	1	25	100
Food Chain Tube Sets (includes 2 caps/set)	1	25	100
Food Chain Art Sheet	1	25	100
Glue	0	1	2
Instructor Manual	1	1	1

*This page includes the Next Generation Science Standards (NGSS) mapping for this kit and a Science, Technology, Engineering, and Math (STEM) chart (on back) to use in adapting and extending this activity to other subject areas. The NGSS mapping and STEM chart are brought to you by Resource Area For Teaching (RAFT) in partnership with Nature-Watch.*

*Nature-Watch and Resource Area For Teaching (RAFT) are both dedicated to providing the best in hands-on experiential teaching resources for educators and their students.*

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[www.raft.net](http://www.raft.net)

### Next Generation Science Standards Alignment

K-LS1-1;

Use observations to describe patterns of what plants and animals (including humans) need to survive.

K-ESS3-1:

Use a model to represent the relationship between the needs of different plants and animals (including humans) and the places they live.

2-LS2-2:

Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.

3-LS4-4;

Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.

5-PS3-1:

Use a model to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun.

5-LS2-1:

Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.

MS-LS2-1:

Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.

MS-LS2-3:

Develop a model to describe the cycling of matter and flow of energy among living and non-living parts of an ecosystem.

**See Back for STEM Chart**

## Science

- Label each member of food chain with trophic levels and percent of sun's energy
- Describe the movement of matter through an ecosystem using the model
- Describe how changes in the habitat of each organism in the model might affect the organism in terms of food availability

## Technology

- Create a flow chart using software that shows how different consumers might function in dispersing seeds or pollinating plants
- Design a slide presentation explaining how to use the model to analyze resource availability and its effects on populations

## Food Chain Model

## Engineering

- Design and build a larger model that includes more consumers at each trophic level
- Brainstorm with a team different ways to improve the model to include more information about a real, local ecosystem where the students live

## Math

- Measure the sizes of each part of the model in terms of diameter and height. Calculate new dimensions that are relative to the amount of energy each organism receives from the sun
- Read texts describing how food is chemically converted to energy and represent the information graphically

