



Activity 301A
Food Chains & Webs

Spider Venom

Objective Create a model that demonstrates the effect of a spider's venom on its prey.

What You Need 1 clear cup or glass
Sugar cubes
Container of very warm water

Safety Follow your parent's or teacher's rules for safety.
Wipe up and dry any spills immediately.

Directions 1. An insect's skeleton is on the outside of its body. This exoskeleton is very hard, like a sugar cube.

A spider cannot eat the exoskeleton and must find a way to get to the "juicy insides."

The spider paralyzes its prey with venom by puncturing the skeleton with its fangs. Then it forces digestive juices into the skeleton. Later it will "suck out" its food.

2. See how the spider sucks out the food. Place a sugar cube in a clear glass. Add a small amount of warm water. What happens?

The water dissolves the sugar cube just as the spider venom does the insect's body. The internal organs of the spider go from a solid to a liquid very quickly.

The spider "sucks-out" or "drinks" the food without any chewing required.

3. Would you like to eat like a spider? How would your diet change if you had no teeth?

Go Further 1. Some people say that spiders are like vampires. They suck blood. Is this a true statement? Why or why not?

2. Spiders use venom for more than eating. Investigate how venom is used and its effect on other living things.

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3. Learn how two common poisonous spiders in Virginia use venom.

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Spider Math 1. A Tarantula ate 3 grasshoppers in one week. How many grasshoppers would you predict the Tarantula will eat in one month?

2. A scientist collected 1,347 spiders. What is the value of the 3 in this number?

Spider Literature 1. Read the book, **The Lady and the Spider**, Faith McNulty.
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2. Read the book, **Black Widows**, by Peter Murray.
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