

SPECTACULAR SPIDERS



Illinois Extension
UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

OBJECTIVES

- LEARN THE PARTS OF A SPIDER.
- LEARN HOW THEY BUILD THEIR WEBS.

MATERIALS

1 PINECONE
4 PIPE CLEANERS
8 GOOGLY EYES
GLUE STICK
PIECE OF CARDSTOCK
COPY PAPER
PENCIL

GUIDING QUESTIONS

1. WHAT MAKES A SPIDER A SPIDER?
2. HOW DO THEY MAKE THEIR WEBS?

CONCEPTS

- SPIDERS ARE DIFFERENT FROM INSECTS.
- MOST SPIDERS DO NOT SPIN WEBS BUT THEY ALL PRODUCE SILK.
- SPIDERS USUALLY HAVE 8 EYES BUT ACTUALLY DON'T SEE VERY WELL.

FACTS

- SPIDERS HAVE TWO BODY SECTIONS, A CEPHALOTHORAX WHERE ALL 8 LEGS ATTACH AND AN ABDOMEN.
- THEY ALSO HAVE 2 "MINI LEGS" ON THE FRONT CALLED PALPS THAT HELP THEM HOLD ONTO PREY.
- MOST SPIDERS HAVE 8 EYES, THOUGH SOME HAVE 6 OR FEWER.
- EVEN WITH ALL THOSE EYES, SPIDERS HAVE POOR EYESIGHT AND RELY ON TOUCH, VIBRATION AND TASTE TO GET AROUND.
- SPIDERS MAKE SILK IN SPECIAL ORGANS CALLED SPINNERETS.
- FOR ITS WEIGHT, SPIDER SILK IS ACTUALLY STRONGER THAN STEEL.



INTEREST APPROACH-ENGAGEMENT

ASK:

- WHAT DO YOU THINK SPIDERS NEED TO LIVE?
- WHY DO YOU THINK SPIDERS HAVE SO MANY EYES?
- WHAT ROLL DO YOU THINK THEY PLAY IN THE ENVIRONMENT? THEY EAT A LOT OF THE INSECTS.

Illinois
Master
Naturalist



ACTIVITY 1: EXPLORE A GARDEN OR PARK AND LOOK FOR SPIDERS IN THEIR WEBS

- FALL IS A GREAT TIME TO SEE ORB WEAVER SPIDERS. THEY ARE THE ONES THAT BUILD THE BIG SPIRAL WEBS.
- TAKE YOUR NATURE JOURNAL OUT AND RECORD WHAT YOU FIND. DON'T FORGET TO DRAW PICTURES OF WHAT YOU SEE AS WELL.
- EARLY MORNING IS THE BEST TIME TO FIND WEBS. LOOK AROUND DOOR AND WINDOW FRAMES, BETWEEN 2 STURDY PLANTS, OR BETWEEN TWO TREE BRANCHES.
- DIURNAL (DAY TIME) SPIDERS ARE OFTEN BRIGHTLY COLORED. NOCTURNAL (NIGHT TIME) SPIDERS ARE OFTEN BROWN OR GRAY.

ACTIVITY 2: MAKE A NATURE JOURNAL

- TAKE A PIECE OF CARDSTOCK AND FOLD IT "HAMBURGER" STYLE OR WIDTH-WISE.
- FOLD SEVERAL PIECES OF COPY PAPER THE SAME WAY.
- PUT THE CARDSTOCK ON THE OUTSIDE OF THE COPY PAPER TO ACT AS A COVER.
- KEEP TRACK OF YOUR OBSERVATIONS BY DRAWING PICTURES OF WHAT YOU SEE AND WRITING DOWN DESCRIPTIONS AND MEASUREMENTS.

ACTIVITY 3: MAKE A PINECONE SPIDER

- USING THE FLAT END OF THE PINECONE FOR THE FRONT OF THE SPIDER, TWIST EACH OF THE 4 PIPECLEANERS AROUND THE PINECONE. SHAPE THE PIPE CLEANERS LIKE A SPIDER'S LEGS.
 - PEEL OFF THE BACKING ON THE GOOGLY EYES REVEALING A STICKY ADHESIVE. ATTACH THE EYES ON THE FRONT OF YOUR SPIDER. NOTE THE ARRANGEMENT OF EYES OFTEN GIVES YOU A CLUE TO WHAT TYPE OF SPIDER IT IS.
 - STICK UP TO ALL 8 EYES ON YOUR SPIDER. IT IS YOUR CHOICE AS TO HOW MANY YOU GIVE YOUR SPIDER.
 - IF THE ADHESIVE DOESN'T STICK TO THE PINECONE, USE THE PROVIDED GLUE STICK TO ADD GLUE TO THE BACK OF THE GOOGLY EYE AND THEN STICK IT TO THE PINECONE.
- NOTE: SMALL CHILDREN MAY NEED ASSISTANCE WITH THIS TASK.

LESSON PLAN CREATED BY WENDY FERGUSON, PROGRAM COORDINATOR