

ANATOMY OF AN INSECT



Illinois Extension
UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

OBJECTIVES

LEARN THE BODY PARTS OF INSECTS AND WHAT EACH SECTION DOES, IDENTIFY THESE PARTS AND MAKE A BUTTERFLY SHOWING EACH BODY PART.

MATERIALS

1-PIPE CLEANER
2-COFFEE FILTERS OR PIECES OF PAPER (TISSUE PAPER AND LIGHTER WEIGHT PAPERS WORK BEST)
ASSORTED MARKERS*

FACTS

GUIDING QUESTIONS

1. WHAT IS AN INSECT?
2. WHAT ARE THE PHYSICAL CHARACTERISTICS OF INSECTS?

CONCEPTS

- AN INSECT IS A VERY SMALL ANIMAL WITH PARTICULAR CHARACTERISTICS.
- INSECTS ARE INVERTEBRATES. THEY HAVE NO BACKBONES.
- MOST INSECTS WALK, BUT SOME CAN FLY AND JUMP.
- INSECTS NEED WATER, AIR, AND FOOD TO LIVE.

- MOST INSECTS HAVE FIVE BASIC PHYSICAL CHARACTERISTICS:
 - INSECTS HAVE WHAT WE CALL AN EXOSKELETON OR A HARD, SHELL-LIKE COVERING ON THE OUTSIDE OF ITS BODY.
 - INSECTS HAVE THREE MAIN BODY PARTS: HEAD, THORAX, AND ABDOMEN.
 - INSECTS HAVE A PAIR OF ANTENNAE ON TOP OF THEIR HEADS.
 - INSECTS HAVE THREE PAIRS OF LEGS. THEY USE THE LEGS FOR WALKING, BUT SOMETIMES AN INSECT MAY HAVE A PAIR OF LEGS THAT ARE SPECIALLY DESIGNED FOR JUMPING.
 - INSECTS HAVE TWO PAIRS OF WINGS.
- SOME INSECTS ARE HELPFUL TO PEOPLE.
- SOME INSECTS ARE HARMFUL TO PEOPLE.



INTEREST APPROACH-ENGAGEMENT

ASK A QUESTION(S):

1. CAN YOU NAME A TYPE OF INSECT?
 - A. BUTTERFLY, GRASSHOPPER, BEETLE, LADYBUG
2. WHAT DO THEY LOOK LIKE?
 - A. DO INSECTS HAVE A HEAD?
 - B. HOW ABOUT ARMS?
 - C. DO THEY HAVE A "TUMMY" OR STOMACH?



ACTIVITY 1:

- EXPLAIN THEY WILL MAKE THEIR OWN BUTTERFLY WITH EACH BODY PART.
- GIVE THEM 2 COFFEE FILTERS (SMALL PIECES OF PAPER) AND TELL THEM TO DECORATE THEIR BUTTERFLY WINGS. (IF USING MARKERS OR PAINT, (**PROTECT THE TABLE SURFACE WITH NEWSPAPER OR OTHER DISPOSABLE MATERIAL. MARKERS AND PAINT WILL BLEED THROUGH THE FILTER PAPER.**)
- HAVE THEM FOLD THE "WINGS" ACCORDION STYLE. DEMONSTRATE THE PROCESS FOR THEM. SOME CHILDREN MAY NEED MORE ASSISTANCE WITH THIS PART. SET WINGS ASIDE.
- TAKE THE PIPE CLEANER AND FOLD IT IN HALF.
- MEASURE UP FROM THE FOLD IN THE PIPE CLEANER APPROX. 2". TWIST THE PIPE CLEANER MAKING A LOOP. OPEN UP LOOP WITH YOUR FINGERS. **ABDOMEN**
- NEXT, SET YOUR WINGS, ONE ON TOP OF THE OTHER, IN BETWEEN THE TWO SIDES OF THE PIPE CLEANER AND TWIST THE PIPE CLEANER TIGHTLY ABOVE THE WINGS LOCKING THEM IN TO PLACE. **THORAX**
- PUT YOUR FINGER ON TOP OF THE TWIST AND THEN TWIST THE PIPE CLEANER AROUND YOUR FINGER. SOME CHILDREN MAY NEED SOME HELP WITH THIS STEP. REMOVE FINGER LEAVING THE LOOP. **HEAD**
- REMAINING PIPE CLEANER ENDS ARE THE **ANTENNAE**.
- FLUFF WINGS OUT AS NEEDED.
- REVIEW WITH THEM WHAT THE BODY PARTS ARE CALLED. FOR EXAMPLE, ASK THEM TO SHOW YOU ON THEIR BUTTERFLY WHERE THE ABDOMEN IS, OR HOLD UP A BUTTERFLY AND ASK, WHAT PART IS THIS?



ACTIVITY 2:

- ASK THEM WHAT THEY THINK EACH PART DOES.
- TALK ABOUT EACH PART AND ITS FUNCTION.

THE INSECT BODY IS DIVIDED INTO THREE PARTS:

- THE HEAD, THORAX, AND ABDOMEN.
- THE HEAD IS SPECIALIZED FOR SENSORY INPUT AND FOOD INTAKE.
- THE THORAX, WHICH IS THE ANCHOR POINT FOR THE LEGS AND WINGS (IF PRESENT), IS SPECIALIZED FOR LOCOMOTION.
- THE ABDOMEN IS FOR DIGESTION, RESPIRATION, EXCRETION, AND REPRODUCTION.