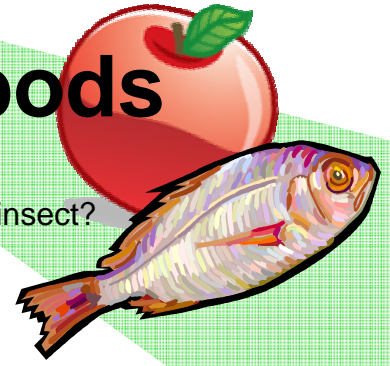


Six-Legged Arthropods



QUESTION: What are the characteristics and structures of an insect?

MATERIALS:

- | | |
|-----------------------|--------------|
| preserved grasshopper | metric ruler |
| magnifying lens | Petri dish |

PROCEDURE:

1. Place the insect in the Petri dish and examine it carefully. Using the diagram provided, identify the structures listed below.

- | | |
|--------------|------------|
| abdomen | ovipositor |
| antennae | palpi |
| anus | prothorax |
| compound eye | simple eye |
| fore wing | spiracles |
| head | thorax |
| hind wing | tympanum |
| mandibles | |

2. Complete the Data table A by identifying the function of the structures listed.
3. Use the ruler to measure the structures listed below. Record the measurements in Data table B.

- | | |
|----------------|----------------|
| abdomen | leg - 3rd pair |
| antennae | prothorax |
| head | thorax |
| leg - 1st pair | wing |
| leg - 2nd pair | |

DATA: See next page

QUESTIONS:

1. Which appendages are used for locomotion?
2. Which appendages are sensory?
3. How many spiracles are visible? What are these used for?
4. How is this insect similar to other arthropods? How is it different?
5. Name the kingdom, phylum, class, and order for this insect.

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DATA:

Data table A

STRUCTURE	FUNCTION
Antennae	
Anus	
Compound eye	
Fore wing	
Hind wing	
Mandibles	
Ovipositor	
Palpi	
Prothorax	
Spiracles	
Tympanum	

ANSWER POOL

breathing

chewing

crawling

egg laying

feeling

flying

food gathering

hearing

jumping

seeing

smelling

tasting

excreting waste

Data table B

STRUCTURE	SIZE (mm)	STRUCTURE	SIZE (mm)
Antennae		Leg - 1st pair	
Head		Leg - 2nd pair	
Prothorax		Leg - 3rd pair	
Thorax		Wing	
Abdomen			

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GRASSHOPPER, EXTERNAL STRUCTURE

