

Engineering a Bee

Name _____ Date _____

When thinking about engineering a bee, you must consider the phrase “form follows function.” What adaptations (form) do bees have to move from plant to plant gathering nectar and in the process pollinating plants (function)? In order to pollinate plants, bees need (1) a power source to provide energy for movement, (2) the ability to move from plant to plant (wings, legs, etc...), (3) ability to see a flower in ultraviolet light to see the flowers, (4) ability to land on that flower, and (5) the ability to collect the pollen to carry from plant to plant for pollination. In the space below, sketch out how an engineered bee will look and label all the parts they will need to accomplish the functions listed above.



After sketching, you will be building your own engineered bee using materials provided by your teacher so that it looks as close to your sketch as possible. Turn in your completed project along with this paper to your teacher.

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Scientific Knowledge:	The drawing shows an understanding of the adaptations of bees with all parts included.	The drawing shows an understanding of the adaptations of bees but missing 1-2 parts.	The drawing shows an understanding of the adaptations of bees but missing more than 2 parts.	The drawing shows a lack of understanding of the adaptations of bees and is incomplete.
Drawing—Attention to Detail:	The drawing is neatly drawn with all the parts labeled and easy to understand.	The drawing is complete with all the parts labeled and easy to understand.	The drawing is incomplete missing some parts and labels.	The drawing is not neatly drawn and missing many parts and labels.
Construction Materials:	Construction materials chosen for model are realistic looking and appropriate.	Construction materials are mostly realistic looking and appropriate.	Construction materials were chosen with limited thought to the end product.	Inappropriate construction materials. Little thought given to construction.
Quality of End Product:	While building made an effort to get all parts built, using appropriate materials.	While building made an effort to get all parts built, but inappropriate choice of materials.	Building that was completed was appropriate but lacking some parts.	Little effort was made to build lacking parts and appropriate materials.
TOTAL POINTS:				

Teacher Comments:	
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