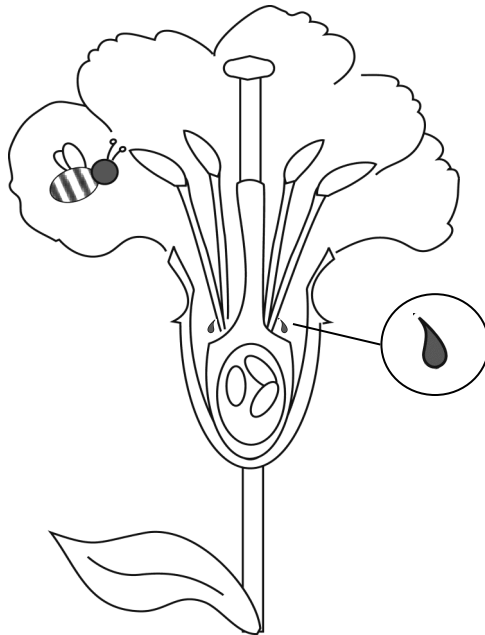


# Investigation Station #1

## Designing a Hand Pollinator Engineering Design Process: Ask!

Directions: Use your fingers and the wooden picks to DISSECT one flower.  
What parts can you IDENTIFY? LABEL the parts below:



1. What do you NOTICE about how the flower's parts look, feel, and smell?

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2. What parts of the flower are important to the pollination system? How?

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3. How will knowing about the flower's parts help you design a hand pollinator? RECORD your ideas:

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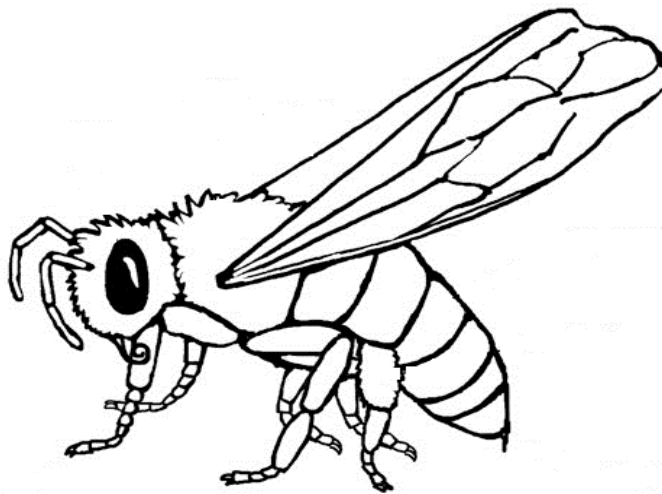
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Please clean up the station for the next group when you are finished.

**Investigation  
Station #2**

**Designing a Hand Pollinator  
Engineering Design Process: Ask!**

Directions: Use the models, pictures, and books to OBSERVE insects' bodies. What parts can you IDENTIFY? LABEL the parts below:



1. DESCRIBE the insect's parts.

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2. What parts of the insect are important to the pollination system? How?

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3. How will knowing about the insect's parts help you design a hand pollinator? RECORD your ideas:

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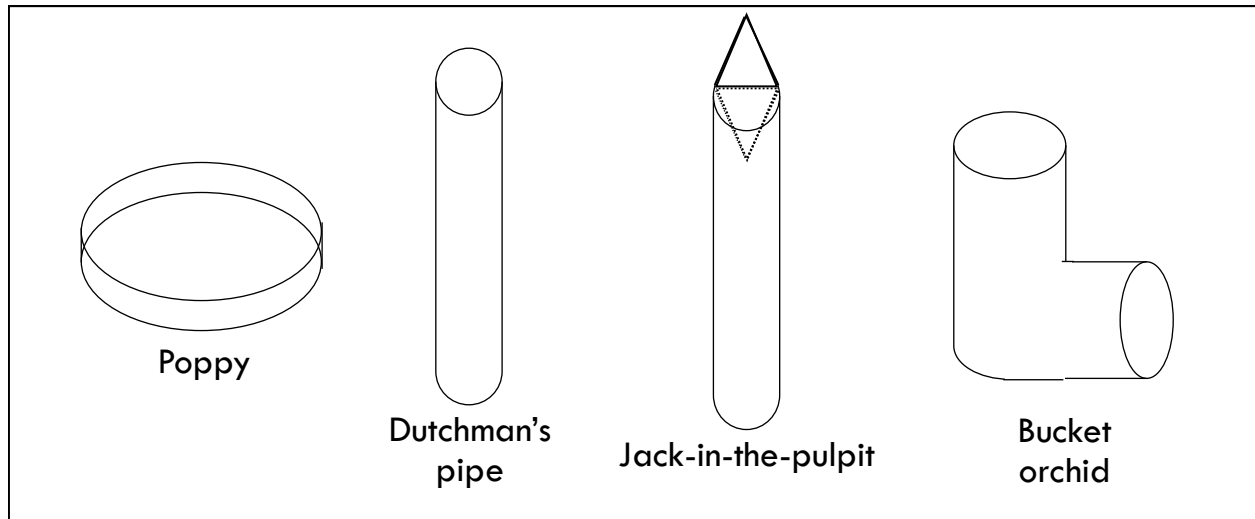
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Please clean up the station for the next group when you are finished.

# Investigation Station #3

## Designing a Hand Pollinator Engineering Design Process: Ask!

Directions: COMPARE the MODEL flowers to the pictures of real flowers.



How are the model flowers SIMILAR to the real flowers?

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2. How are they DIFFERENT?

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3. Why do you think we are using MODEL flowers instead of real flowers?

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Please clean up the station for the next group when you are finished.

# Investigation Station #4

## Designing a Hand Pollinator Engineering Design Process: Ask!

Directions: These are some of the materials that you may choose for your hand pollinator designs. OBSERVE their properties and COMPARE them to the insects in the pictures.

marble 	tape 	eraser 	foil 	pompom 	pipe cleaner 
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1. What are some of the PROPERTIES of these MATERIALS?

Marble: \_\_\_\_\_

Tape: \_\_\_\_\_

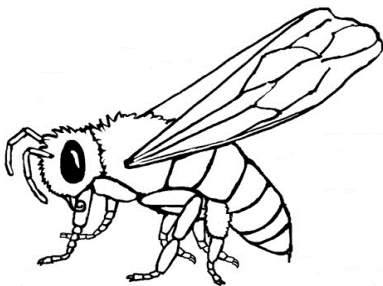
Eraser: \_\_\_\_\_

Foil: \_\_\_\_\_

Pompom: \_\_\_\_\_

Pipe cleaner: \_\_\_\_\_

2. Do any of these materials remind you of insect parts? Which ones and why?



\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

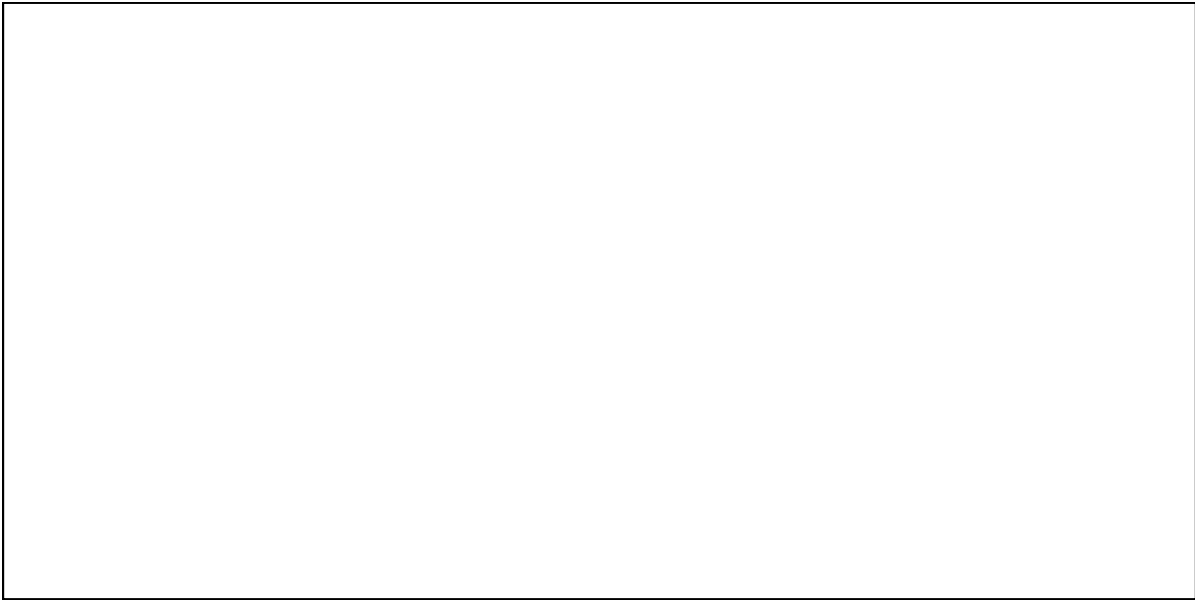
Please clean up the station for the next group when you are finished.

**Investigation  
Station #5**

**Designing a Hand Pollinator  
Engineering Design Process: Ask!**

Directions: Watch the video of bees INTERACTING with flowers. You can use the model bees and flowers to show what is happening.

1. Draw a picture to show how the bees INTERACT with the flowers.



2. DESCRIBE what you observed in the video.

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3. Explore the books about flowers and insects. What new ideas do you have about the POLLINATION SYSTEM?

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Please clean up the station for the next group when you are finished.

**Insect & Plant  
Word List**

**Designing a Hand Pollinator  
Engineering Design Process: Ask!**

**Insect Words**

head	legs	proboscis
thorax	pollen baskets	hairy
abdomen	wings	exoskeleton
antennae	eyes	pollinator

**Plant Words**

stem	stamen	ovary
leaves	anther	style
roots	pollen	nectar
flower	seed	petal
blossom	pistil	pollination

**Science Words**

observe	notice	model
describe	record	different
identify	properties	similar
compare	label	materials