

What is an insect?

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For the last two months we've been talking about insects without really defining what they are. Butterflies, ants and grasshoppers all look very different, yet they are all considered insects. Spiders look a lot like ants but they are not insects. So, what's the deal?

Insects are really a big group called a "class". Every creature that has three body parts (head, thorax and abdomen), six legs, two antennae, compound eyes and a hardened exoskeleton belongs to the "Class Insecta". Within that class are a lot of smaller groups called "orders". Each order of insects has the basic insect body parts plus something special. For example, insects in the order of Lepidoptera have two pairs of wings, sucking mouthparts, and undergo a complete change from their young form of caterpillar to their adult form of butterfly. Grasshoppers belong to the order of Orthoptera; they also have two pairs of wings, enlarged hind legs and chewing mouthparts. Spiders look a lot like some insects but they always have eight legs instead of six, so they aren't in the same class as insects.

To get a feel for the different insect body parts, make some insect models. You'll need:

- **Oval shaped sandwich cookies**
- **Small marshmallows**
- **Pretzel sticks**
- **String licorice, any color**
- **Peanut butter or canned frosting**
- **Non-pareils, sprinkles, or coated chocolate chips**

Start with a sandwich cookie. When you pick it up, you'll notice that it's hard on the outside and soft in the middle. For your model, the hard cookie outside represents an insect's exoskeleton. That's the hard covering that protects the thorax and abdomen of insects. Think about the hard outside of a grasshopper or ladybug and you'll understand what I mean. To be an insect, your model has to have six legs, so take six pretzels and stick them around the edges of the cookie. You may need to use some peanut butter or frosting to help them stay between the layers of the cookie. Give your model a head by using the peanut butter to stick on a marshmallow somewhere between the legs, and then stick two non-pareils on the marshmallow to make compound eyes. (A compound eye looks like lots of tiny eyes on the surface of one bigger eye). The last thing your insect model needs are antennae, so cut some short pieces of the licorice and stick them in the head. Now, you have an insect model!

You can personalize your model by adding optional insect parts like wings and simple eyes using fruit leather and small candies. Experiment with different kinds of cookies and crackers to see how many different insects you can create. To learn more about insects, go to the library and look for books about bugs. Two good ones are *Pet Bugs* by Sally Stenhouse Kneidel and *Bugs! Bugs! Bugs!* By Jennifer Dussling. Another really cool book that you'll find at book stores is *Bugs in 3-D* by Mark Blum.