

Gummy Worm Karyotype Game

Instructions:

1. Prepare gummy worms according to instructions for the gummy worm karyotype activity.
2. Print off the Karyotype Key and fruit fly template.
3. Cut out the 16 fruit fly phenotypes and color them to match the description.
4. Take turns arranging karyotypes and matching the cards by playing one of the following versions of the Karyotype game!

Choose 3

Set out gummy worms or paper chromosomes to make a fruit fly karyotype along with 3 fruit fly phenotype cards.

The player has to choose the correct card or, if no correct card is present, declare that no fruit fly is a match. Collect 10 cards to win.

It's a race!

One person arranges a karyotype from either gummy worms or paper chromosomes. Then two or more players race to find the correct phenotype card. The first person to choose the correct card earns a point!

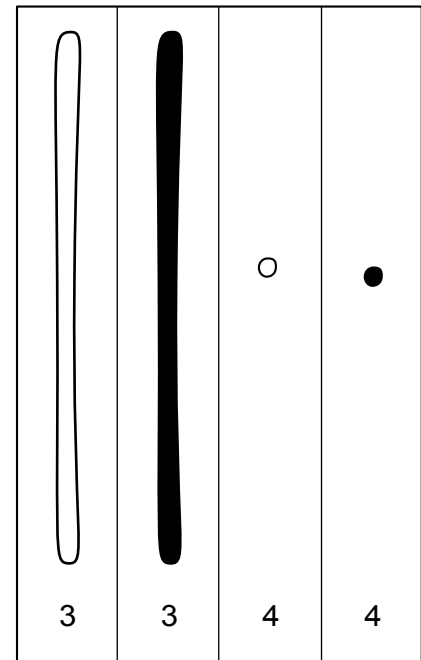
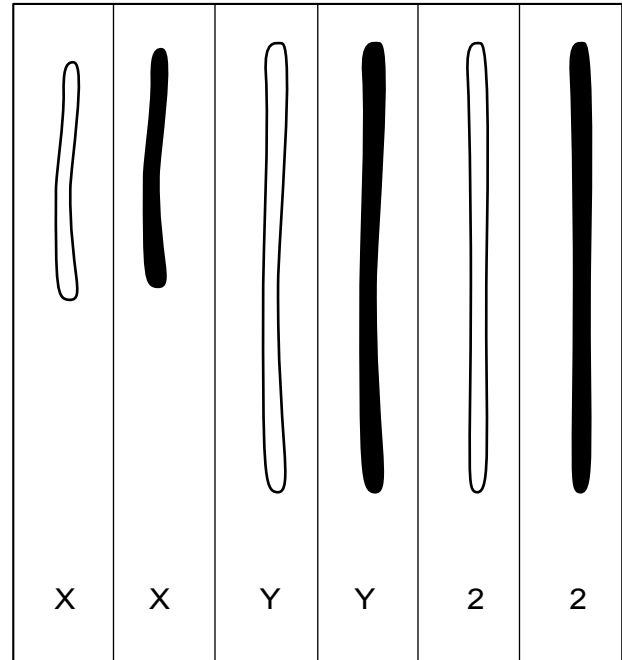
Reverse it

The phenotype cards are shuffled and one is drawn at random. The player then has to use gummy worms (or paper chromosomes) to arrange a karyotype that would produce that phenotype.

For a more advanced version, don't look at the karyotype key while building the phenotype. Just use it to check and see if it's correct. If it is, the player earns a point!

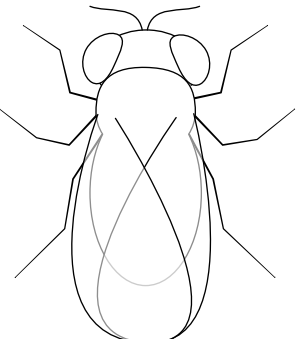
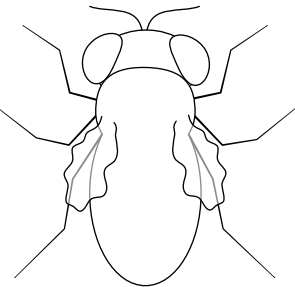
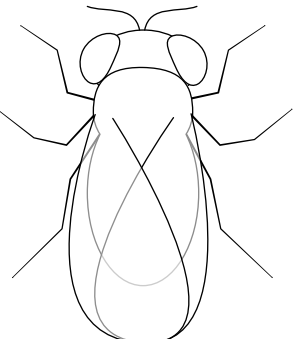
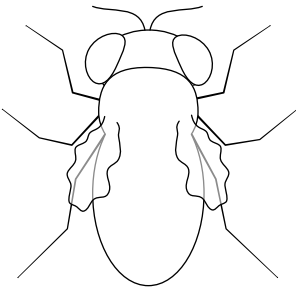
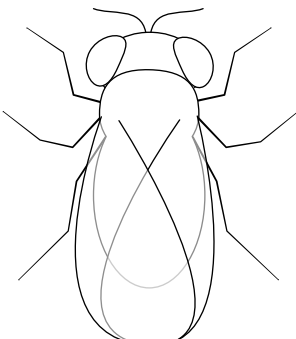
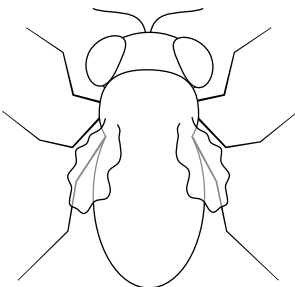
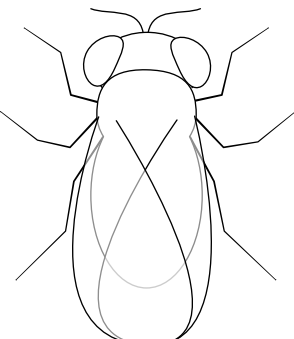
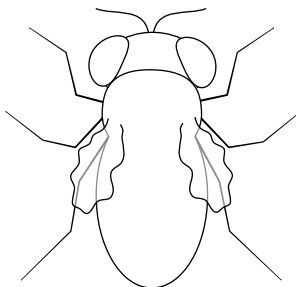
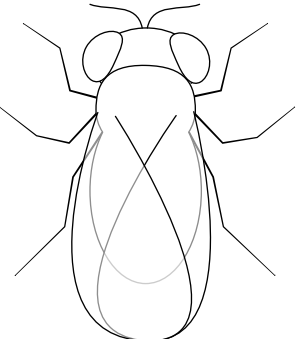
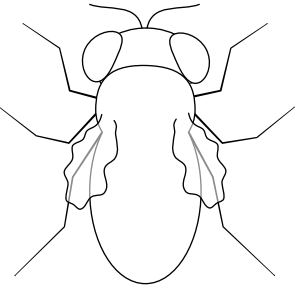
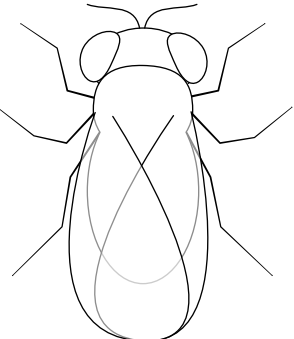
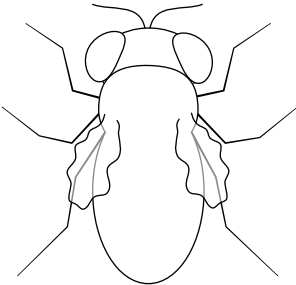
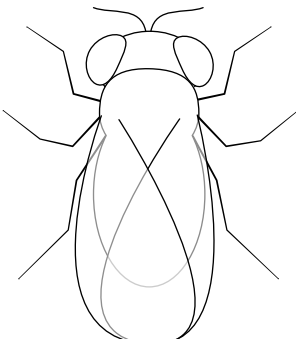
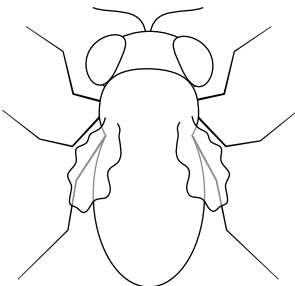
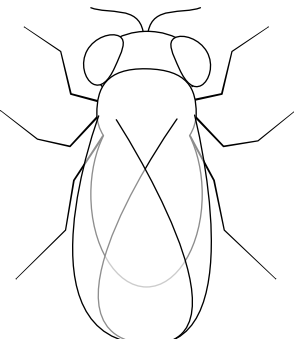
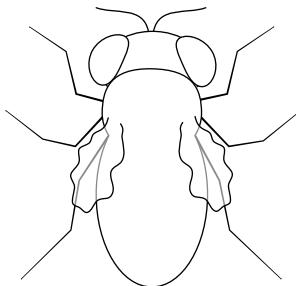
Chromosome Templates

Can be used in place of gummy worms for either gummy worm karyotypes or meiosis. (For the meiosis activity, print this page twice so there are 4 copies of each chromosome.)



Karyotype Key

XX chromosomes = female
 XY chromosome pair = male
 Dominant trait in X = red eyes
 Recessive trait in X = white eyes
 Dominant trait in 2 = functional wings
 Recessive trait in 2 = miniature wings (flightless)
 Dominant trait in 3 = yellow body color
 Recessive trait in 3 = ebony or black body color

 <p>♂ Yellow, winged, red-eyed male</p>	 <p>♂ Yellow, flightless, red-eyed male</p>	 <p>♂ Yellow, winged, white-eyed male</p>	 <p>♂ Yellow, flightless, white-eyed male</p>
 <p>♀ Yellow, winged, red-eyed female</p>	 <p>♀ Yellow, flightless, red-eyed female</p>	 <p>♀ Yellow, winged, white-eyed female</p>	 <p>♀ Yellow, flightless, white-eyed female</p>
 <p>♂ Ebony, winged, red-eyed male</p>	 <p>♂ Ebony, flightless, red-eyed male</p>	 <p>♂ Ebony, winged, white-eyed male</p>	 <p>♂ Ebony, flightless, white-eyed male</p>
 <p>♀ Ebony, winged, red-eyed female</p>	 <p>♀ Ebony, flightless, red-eyed female</p>	 <p>♀ Ebony, winged, white-eyed female</p>	 <p>♀ Ebony, flightless, white-eyed female</p>