Using Public Genomic Databases

## Overview

This activity teaches students to …

**Duration:**

## Learning Objectives

1. Explore commonly-used public genomic databases to become familiar with the biological information on them.
2. Identify genomic information for five different *Drosophila* genes.
3. Compare how gene location and expression differs between species for homologous genes.
4. Determine the associations between *Drosophila* gene homologs and human diseases.

## Materials

* Students will need:
  + An internet connection for this activity. Students will use these websites: [*FlyBase*](https://flybase.org/), [*Mouse Genome Informatics*](https://informatics.jax.org/), [*ZFIN (Zebrafish Information Network*](https://zfin.org/) , [*NCBI*](https://www.ncbi.nlm.nih.gov/datasets/gene/), [*OMIM*](https://omim.org/), and [*MalaCards*](https://www.malacards.org/)
* Download the student activity as:
  + [Web page](https://genomicseducation.org/module/public_databases_student_guide.html)
  + [Word (docx)](https://github.com/fhdsl/GEMs/raw/main/docs/docx/module/public_databases_student_guide.docx)
  + Google Doc - coming soon!
* Google Slides presentation available for borrowing images [here](https://docs.google.com/presentation/d/1fy3FwkSLETnRUdf8huddq2n4qcb6eOyzwVg05dbudII/edit?slide=id.g2c8182c8825_0_50#slide=id.g2c8182c8825_0_50).
* Answer key available here.

## Scientific Topics

## Outline