Instructions:

-In one class session (either the class preceding the one when the activity will be performed, or immediately prior to doing the activity), introduce students to Pedigree charts as a tool for studying Mendelian inheritance patterns in humans. During this introduction, cover the use of current, inclusive practices (for example, depicting gender, but making note of someone’s sex assigned at birth, for transgender individuals). A sample presentation, including these slides, is provided. Instructors likely already have a slide set covering similar material and will have a sense of how long this typically takes them. Expect approximately **20-30 minutes** if you have not presented this before, depending on how many questions you expect, and if you intend to give examples of different traits that are inherited in each of the different patterns.

-For students looking for more information on the standardized practices of inclusive pedigrees, provide the enclosed scientific article.

-For the interactive class activity, some **preparation work is required (30-60 minutes worth)**. The instructor should print out the “Identities” file and separate each “identity” into an individual paper. This can be laminated to allow reuse, if desired.

-The game involves 40 “identities”, divided into 3 families (of 13, 12, 15). Depending on class size, only 2 families can be used, but if a class is close to 40, unclaimed identities can be handed out (so that some students have 2, within the same family), for the sake of having all necessary information to do the activity.

-During class, introduce the activity:

* Everyone will receive an identity with a name, their sex chromosomes, and a statement indicating if you display a specific phenotype or not (adjusting as needed, such as suggested in the previous paragraph). The phenotypes being studied are NOT LIKING CANDY, ENJOYING K-POP, and BEING SCARED OF LOUD NOISES.
* Students’ task:
* Find the other members of your family, and use the information from each of your identities to construct a properly labelled, accurately represented Pedigree chart with your family (there are 3 families, each consisting of 3 generations)
* After constructing the Pedigree chart, interpret the information shown to conclude what type of inheritance pattern your studied phenotype most likely demonstrates. (This is ideally done if each group has some space in the classroom and a dry-erase board and markers to work with.)

The activity will likely take **20-30 minutes**.

-Once the group has produced their Pedigree chart and determined the most likely form of inheritance (you may consult the “Pedigree answers” file to validate), students should erase **their answer**, but not the chart. Their classmates can then go around the room to see the two other Pedigree charts, to try and deduce from the chart what type of inheritance pattern is most likely shown. This can take another **~5 minutes** of class time or can be done outside of class where students are given images of the Pedigrees.

-During the activity wrap-up, ask/reveal the pattern for all three charts, pointing out their characteristics that make the patterns evident. **Time: 5 minutes**.