



Fernbank Science Center

Title: Chromosomes and Me (2710)

Level: 7th Grade

Location: Local School

Type: Outreach

Length: 55 minutes

Limit: 1 class/period

Program Description

Chromosomes are the largest structures of inheritance. In this class, students will learn about chromosome structure, what genes are located on certain chromosomes, the chromosome number for different organisms and how scientists pair chromosomes in a particular arrangement for karyotype analysis. Students will work cooperatively to arrange a human chromosome karyotype and identify whether there are any abnormalities or not.

Technology will be required for the presentation, demonstration(s) and student activities.

Please Note:

Coordination (by email) between the classroom teacher and the instructor is required prior to the date of the visit. Please contact the FSC instructor at patricia_jenkins@dekalbschoolsga.org

Standards

S7L2. Obtain, evaluate, and communicate information to describe how cell structures, cells, tissues, organs, and organ systems interact to maintain the basic needs of organisms.

S7L3. Obtain, evaluate, and communicate information to explain how organisms reproduce either sexually or asexually and transfer genetic information to determine the traits of their offspring.

Vocabulary

abnormality banding pattern chromosome karyotype gene trait centromere mutation

Pre-Visit Activities

What is a chromosome? What is a gene? What is a trait?

<https://learn.genetics.utah.edu/content/basics/oldtour/>

Post-Visit Activity

<https://www.biologycorner.com/worksheets/karyotyping.html>

Resources:

<https://ghr.nlm.nih.gov/primer/basics/gene>

<https://www.khanacademy.org/science/biology/gene-expression-central-dogma/central-dogma-transcription/a/the-genetic-code-discovery-and-properties>