



Name:

Date:

Student Exploration: Human Karyotyping

Human Karyotyping

Mount View Middle School (AP Biology Class)

Human Karyotyping Gizmo/overview

Directions: Follow the instructions to go through the simulation. Respond to the questions and prompts in the orange boxes.

Vocabulary: autosome, chromosomal disorder, chromosome, genome, karyotype, sex chromosome

Prior Knowledge Question (Do this BEFORE using the Gizmo.)

A **chromosome** is a rod-shaped structure made of coils of DNA. Most human cells have 23 pairs of chromosomes.

1. Why do you think humans have two sets of 23 chromosomes? (Hint: Where did each set come from?)

Humans have two sets of 23 chromosomes because a human gets one set of 23 chromosomes from their mother and another set of 23 chromosomes from their father, which results in 2 sets of 23 chromosomes.

2. How do you think different people's chromosomes would compare?

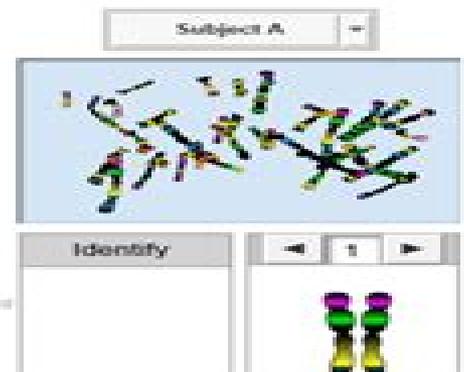
Different people's chromosomes would compare because most humans have 46 chromosomes. These chromosomes are mostly the same shape and size. The difference between people's chromosomes is found in the sex chromosomes. Males have one X chromosome and one Y chromosome. Females have two X chromosomes. People's chromosomes come from their parent's chromosomes. These chromosomes are unique in their own way, since these chromosomes have different variations. For example, people have different eye colors.

Gizmo Warm-up

Scientists use **karyotypes** to study the chromosomes in a cell. A karyotype is a picture showing a cell's chromosomes grouped together in pairs.

In the *Human Karyotyping* Gizmo, you will make karyotypes for five individuals. Take a look at the **SIMULATION** pane. Use the arrows to click through the numbered list of chromosomes at the bottom right of the pane.

1. How does the appearance of the chromosomes change as you move through the list?



Explore Learning Human Karyotyping Answer Key

Shasha Hu



Explore Learning Human Karyotyping Answer Key:

Reviewing **Explore Learning Human Karyotyping Answer Key**: Unlocking the Spellbinding Force of Linguistics

In a fast-paced world fueled by information and interconnectivity, the spellbinding force of linguistics has acquired newfound prominence. Its capacity to evoke emotions, stimulate contemplation, and stimulate metamorphosis is truly astonishing. Within the pages of "**Explore Learning Human Karyotyping Answer Key**," an enthralling opus penned by a very acclaimed wordsmith, readers attempt an immersive expedition to unravel the intricate significance of language and its indelible imprint on our lives. Throughout this assessment, we shall delve in to the book is central motifs, appraise its distinctive narrative style, and gauge its overarching influence on the minds of its readers.

https://media.cfan.org/data/publication/Documents/life_line_4_your_health.pdf

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