Extended Mendelian Genetics

7.1 Chromosomes and Phenotype

Objectives:

Key Concept:

Vocabulary

Autosomal Gene Traits

(dominant)

Sex-linked Traits

Notes

The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, on which genes are located, can affect the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

* Carrier
* Sex-linked gene
* X chromosome inactivation

\_\_\_\_\_\_\_\_\_\_\_\_\_ copies of each \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ gene affect \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

* Mendel studied \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ gene traits, like \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Other examples of autosomal gene traits:
* Mendel’s \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ apply to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ genetic disorders
	+ A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ for a recessive disorder is a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	+ Disorders caused by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ alleles are uncommon

**Why do you think Disorders caused by dominant alleles are uncommon?**

***Answer on your EXIT TICKET***

Males and females can differ in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

* Genes on \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ genes
	+ Y chromosome gene in mammals are responsible for \_\_\_\_\_\_\_ characteristics

Sex-linked Traits continued



Autosomal vs Sex-linked Disorders

 Autosomal Sex-Linked (X-linked)

* + X chromosomes genes in mammals affect \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ traits
* Male mammals have an \_\_\_\_\_\_\_\_\_\_\_ genotype
	+ \_\_\_\_\_\_\_\_\_\_ of a male’s sex-linked genes are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	+ Males have \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_ copies of sex-linked genes.
* Female mammals have an \_\_\_\_\_\_\_\_ genotype
	+ Expression of sex-linked genes is similar to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ genes in females
	+ X chromosome \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ randomly “\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_” one X chromosomes.

**Why do you think male Calico cats are rarely found?**

***Answer on your EXIT TICKET***