

Name _____

Date _____

HOME/SCHOOL CONNECTION

Genetics

Directions: Complete both activities by _____.

Activity 1: Phenotypes

Phenotypes are the physical characteristics of organisms. These physical characteristics are passed on genetically (from a mother and father) and can be affected by an organism's environment. For instance, a dog may have brown fur, which was a trait passed on by its parents. That same dog may also have gotten into a fight with an alley cat, resulting in permanent scars on its face. The scars would now be considered part of the dog's phenotypes – its physical characteristics. The scars, however, were not inherited from its parents.

Humans have many phenotypes that are passed on by their parents. The combinations of these phenotypes are what make each of us unique and special. Use the attached chart to determine which phenotypes you have, then use the back side to observe the phenotypes of your family. Compare the physical characteristics that make you and each member of your family both similar and different.

Activity 2: Fingerprints

Fingerprints are another phenotype of humans that distinguish us from one another. Each finger has a unique pattern of lines, and no two people have the same patterns!

Use the next sheet to compare the fingerprints of your family members. If you have an inkpad at home, you can use that. If not, be creative with a washable marker, food coloring, or another safe household material. Can you determine if any fingerprint patterns have been passed on genetically in your family? Use the space below to describe your thinking.

Name: _____

basic fingerprint patterns



loop

arch

whorl

Family Fingerprints

Directions: Put your fingerprint in the first box and test other family members in the other boxes

Thumb:

Name	Name	Name	Name	Name

Pointer:

Name	Name	Name	Name	Name

Middle:

Name	Name	Name	Name	Name

Ring:

Name	Name	Name	Name	Name



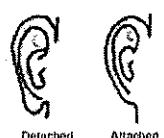






Pinky:

Name	Name	Name	Name	Name

Name: _____ Date: _____

Directions: Go through and figure out whether you have these phenotypes. If you have the phenotypes check the yes box; if not, check no. Once you have completed your section check with other members of your family to see what you have in common or different!

You

Phenotypes	Yes	No
Tongue Roller 		
Widow's Peak 		
Attached Ear Lobe 		
Hitch-Hiker's Thumb 		
Bent Little Finger 		
Mid-Digital Hair 		
Dimples 		
Short Hallux (Big Toe) 		
Short Index Finger 		

Family Member: _____

Phenotypes	Yes	No
Tongue Roller		
Widow's Peak		
Attached Ear Lobe		
Hitch-Hiker's Thumb		
Bent Little Finger		
Mid-Digital Hair		
Dimples		
Short Hallux (Big Toe)		
Short Index Finger		

Family Member: _____

Phenotypes	Yes	No
Tongue Roller		
Widow's Peak		
Attached Ear Lobe		
Hitch-Hiker's Thumb		
Bent Little Finger		
Mid-Digital Hair		
Dimples		
Short Hallux (Big Toe)		
Short Index Finger		