

Heritable or Acquired?

Flamingos

Flamingos are large birds with long legs. They wade in shallow water looking for algae and small animals, like insects and brine shrimp, to eat.



OBSERVATION

You visit flamingos at several zoos and rescue centers. You notice their feathers vary in color from pale pinks to bright pinks, oranges & reds.

EXPERIMENT

You collect 6 pairs of flamingos: 3 pairs that are pale pink, and 3 pairs that are bright colors. You raise them in the same environment and give them the same types of food. Each pair has a chick, which you also raise in the same conditions. Once the chicks grow up, you observe their colors.

RESULTS

Pair #	Parent Color	Offspring Color
1	pale	medium
2	pale	medium
3	pale	medium
4	bright	medium
5	bright	medium
6	bright	medium

Color in flamingos is:

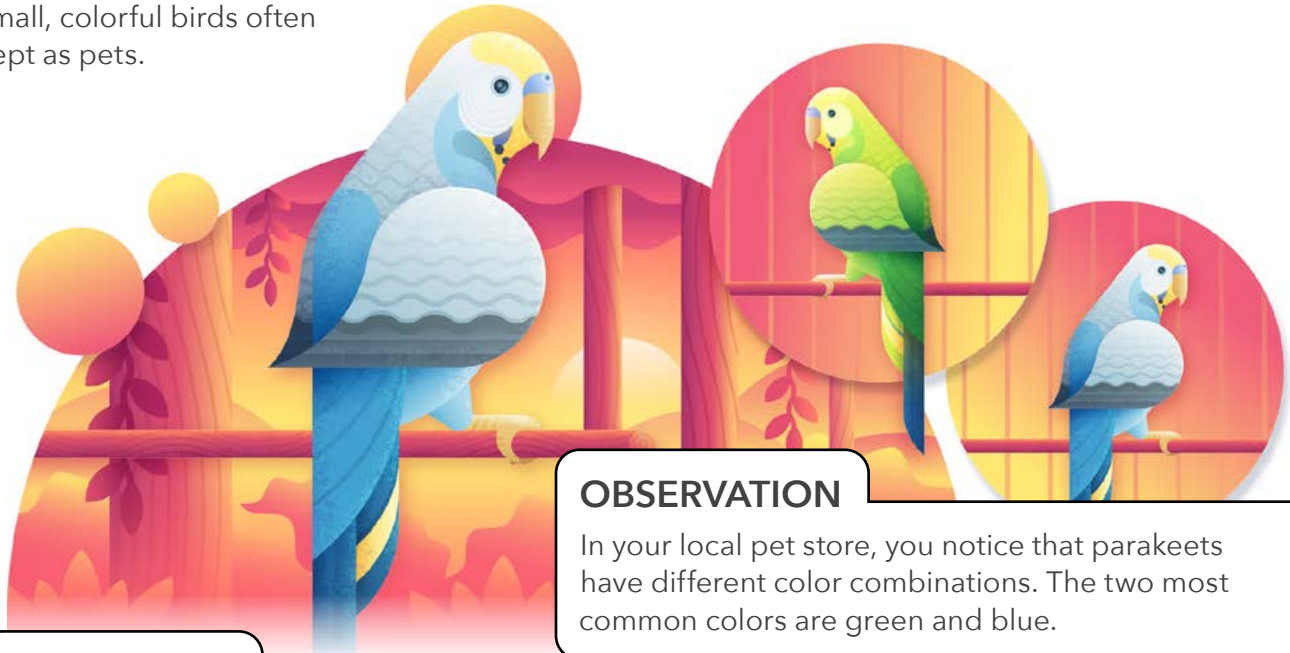
heritable
acquired

Evidence:

Heritable or Acquired?

Parakeets

Parakeets (or budgies) are small, colorful birds often kept as pets.



OBSERVATION

In your local pet store, you notice that parakeets have different color combinations. The two most common colors are green and blue.

EXPERIMENT

You buy 6 pairs of parakeets: 3 pairs that are mostly green, and 3 pairs that are mostly blue. You raise each pair in a separate cage, but you give them the same food and make sure all the other conditions are the same. Each pair has chicks, which you also raise in the same conditions. You observe the colors of the chicks.

RESULTS

Pair #	Parent colors	Offspring colors
1	green	3 green 1 blue
2	green	4 green
3	green	5 green 1 blue
4	blue	5 blue
5	blue	4 blue
6	blue	6 blue

Color in parakeets is:

heritable
acquired

Evidence:

Heritable or Acquired?

Wheat

Wheat is a type of grass that's grown for food. Its large seeds are ground into flour for making bread and other foods.



OBSERVATION

You sample wheat plants from many farms across a large area. You notice the roots of wheat plants from different farms have different lengths.

EXPERIMENT

You choose 5 plants with different root lengths. You measure the total length of each plant's roots. Then you gather their seeds, plant them, and grow them in the exact same conditions. When the plants grow up, you measure their total root length. Then you average the lengths together to get an average root length of the offspring from each parent plant.

RESULTS

Parent plant	Root length: parent (cm)	Avg. root length: offspring (cm)
1	930	960
2	1505	1480
3	1970	2010
4	2995	2875
5	3275	3250

Root length in wheat is:

heritable
acquired

Evidence: