

Unit 2 Pollen For You Probe

All of the tepary bean seeds in the bottom row came from this wild relative at the top.



Beatrice and her friends were discussing why today's tepary beans look so different from the ancient, wild beans they are related to. The ancient, wild beans pictured at the top grew from 0 BCE to over 100 years ago - pre-Industrial Revolution. These were their ideas:

Beatrice: "Nature decides what the beans will look like. When I plant beans in my garden, the seeds that come from the plant don't look the same as the parent plant."

Gloria: "Rising temperatures due to climate change have made the soil hotter so the colors of the seeds have changed over time."

Cat: "Over time groups of people selected and bred the bean plants with variations they liked which led to the many different varieties we have today."

Dan: "So many people have been using pesticides over the years, the seed color has changed."

TEACHER KEY:

The best response is from Cat. This is a good description of the process of artificial selection that occurs when humans select for desired traits in the domestication of plants and animals. Gloria may not understand that seeds are the offspring of plants, and seeds get traits from their parent plants. Beatrice and Dan are connecting that the environment and human activities have impacts on populations and their variations, but evolution of plants takes time and many generations. You may find students thinking of everything they hear about Climate Change. They hear of Climate Change causing change in plant growth, the look of plants, and more. Refer to the information at the beginning that states the wild, ancestral beans grew 0 BCE to 100 years ago, pre the Industrial Revolution. Humans were not impacting the planet then as they have been more recently and are today.