

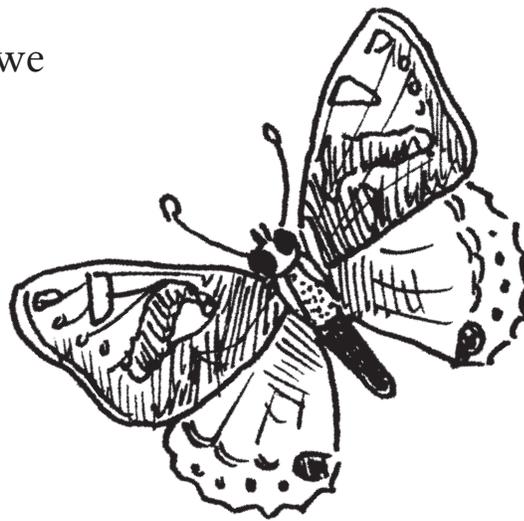
Chapter
One

Welcome to my Garden

I held my breath as I watched a butterfly crawl around the yellow maguey flower in my garden.

In Spanish, the word for butterfly is *mariposa*. My name, Mariana, reminded me of that word. Papa said that when I ran around my garden, I reminded him of a *mariposa*.

In the Dominican Republic, we enjoyed our gardens year-round. Even people who lived in the capital, Santo Domingo, grew plants in pots. We had lots of warm, sunny weather, and many plants grew very well





there.

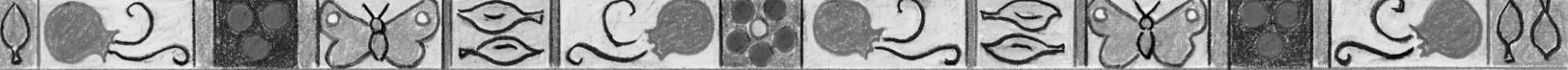
But my new ohelo berry plant was not doing well. My friend Pablo got special permission to bring it back from Hawaii, where he went for vacation. At first, my ohelo plant grew tasty orange and red berries. But then there were no more berries! Even though my ohelo plant still grew flowers, I couldn't get it to grow any new berries.

"Papá, my ohelo plant isn't growing berries. Do you know why?"

My father was weeding the vegetable garden. He walked over and looked at a branch of the ohelo plant.

"That's a good question, Mariana," he said. "Why don't we ask Tía Leti when we see her?"

"Great idea!" I said. "Tía Leti will know just what to



Chapter
Two

My Plant Puzzle

“Tía Leti!” I called from her front walkway. She came outside and gave me a big hug.

“How are you, Mariana?” Tía Leti asked.

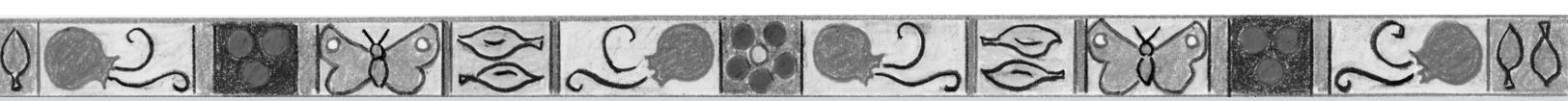
“I have a puzzle for you,” I said. “Papá said you could help me with it.”

We sat down at the table in Tía Leti’s backyard.

“So what is this puzzle, Mariana?” asked Tía Leti.

“I have a problem with my ohelo plant. At first, it grew berries. But now the berries have fallen off, and my plant hasn’t grown any more! I’ve been watering it and taking special care of it, but it’s no use.”

“That is a puzzle!” Tía Leti said. “But I bet we can solve it, if we ask some good questions. Do you know how plants make

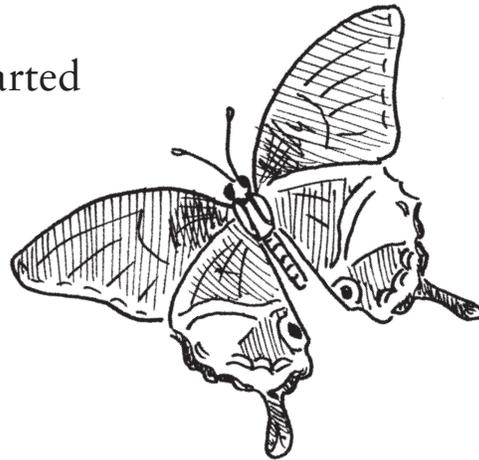


Chapter
Seven

A Design that Works

All day long I worked on my hand pollinator design. I tested different materials to see which one had the best texture for picking up and dropping off pollen. After I figured out which material worked the best, I made a handle for the pollinator that would let me reach into the ohelo flowers.

Six weeks later, my plant has started to grow berries again! My pollinator worked! I can't wait to pick some berries to give to Tía Leti. Now I'm exploring hand pollinators for other plants. I can make changes to my design to make



the pollinators work better for different types of plants. Each plant has its own pollinator.

For my ohelo plant, I really am its own pollinating *mariposa!*

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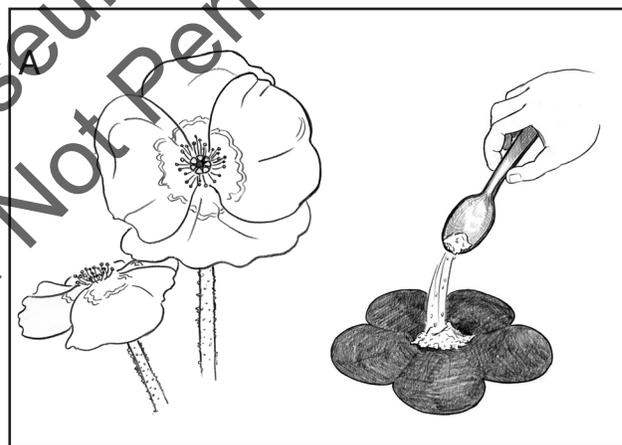
Try It!

Design a Hand Pollinator

You can design a hand pollinator, just like Mariana. There are many ways for plants to be pollinated: wind, birds, and insects are just a few. Have you ever seen insects visit a flower? What makes insects good pollinators? Your goal is to design a hand pollinator for a specific flower shape.

Materials

- Baking soda
- Construction paper
- Tape
- Aluminum foil
- Pipe cleaner
- Pom poms
- Craft stick
- String
- Test tube



Find a Flower

Think about what your pollinator needs to do. What is the shape of the flower you are designing? Select a flower from your yard or a flower shop. Or, you can make a model of a flower. Try one of these options:

A. Cut out a flower shape from dark construction paper and cover the center with a thin coat of baking soda to represent pollen on a flat flower, such as a poppy.

B. Fill the bottom of a test tube with baking soda to represent pollen in a tube-shaped flower such as a Dutchman's Pipe.

