

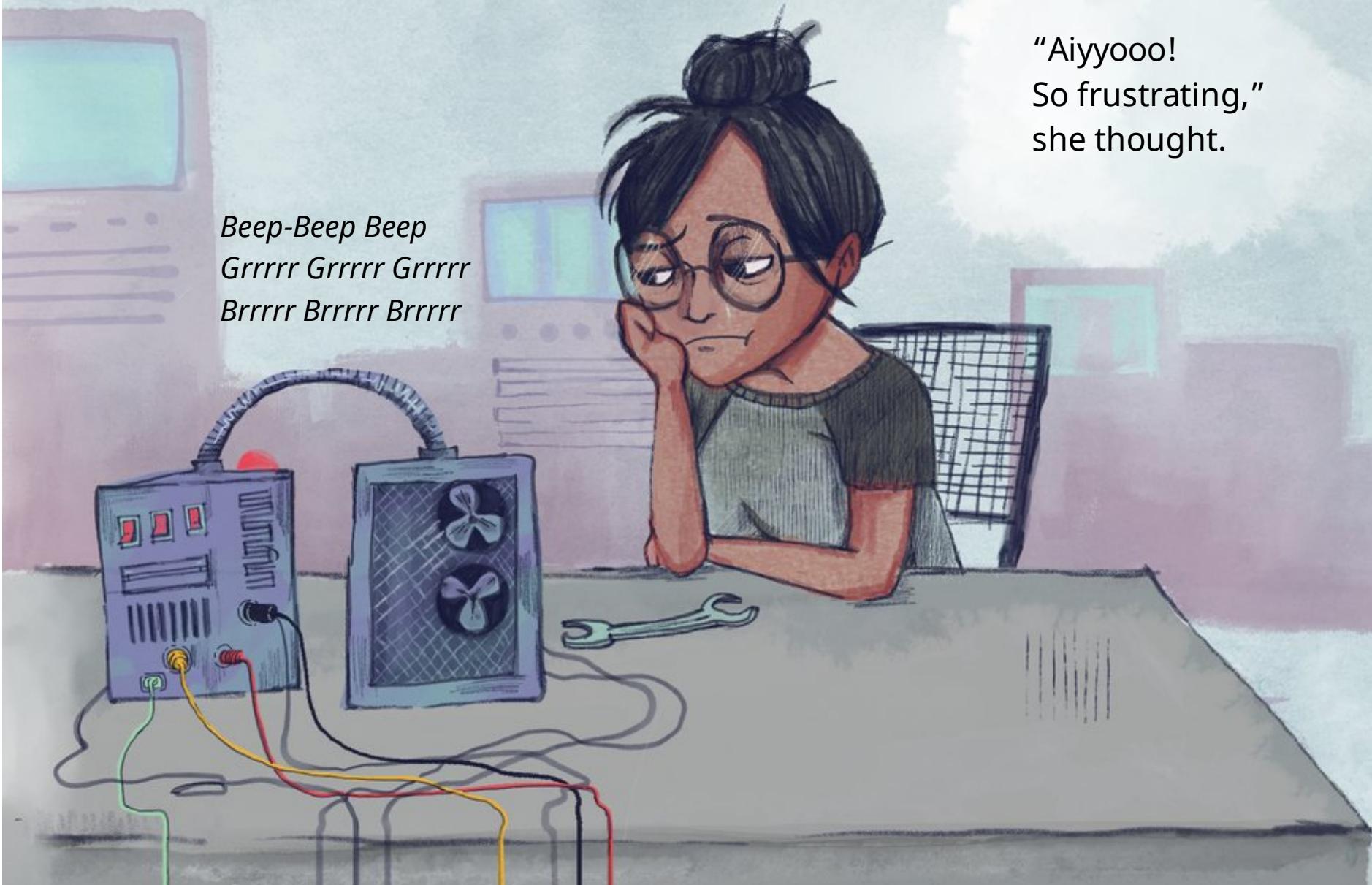


Level 3

The Plant Whisperer

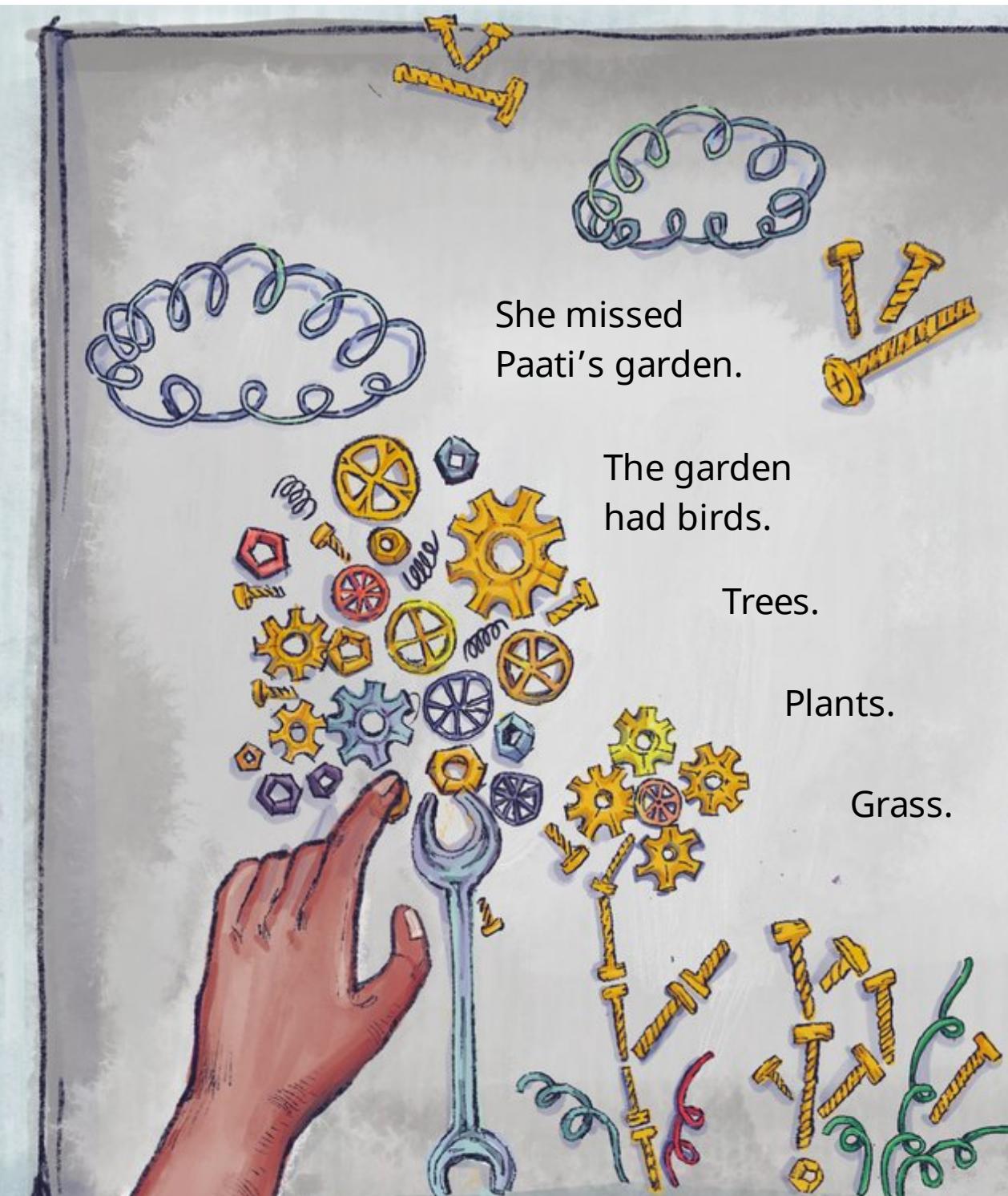
Author: Sayantan Datta
Illustrator: Bhavya Kumar

Jaishree, a young engineering student,
looked at her noisy machines.



"Aiyyooo!
So frustrating,"
she thought.

*Beep-Beep Beep
Grrrrr Grrrrr Grrrrr
Brrrrr Brrrrr Brrrrr*



She missed
Paati's garden.

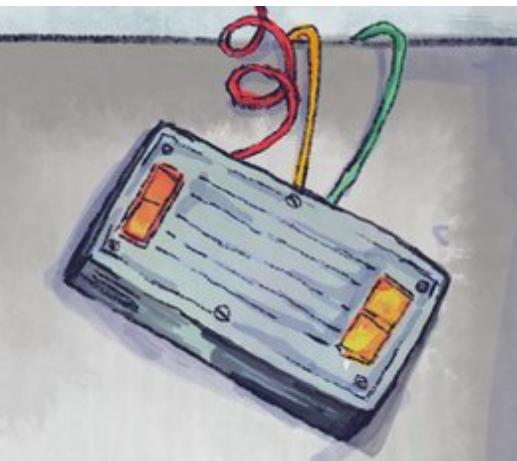
The garden
had birds.

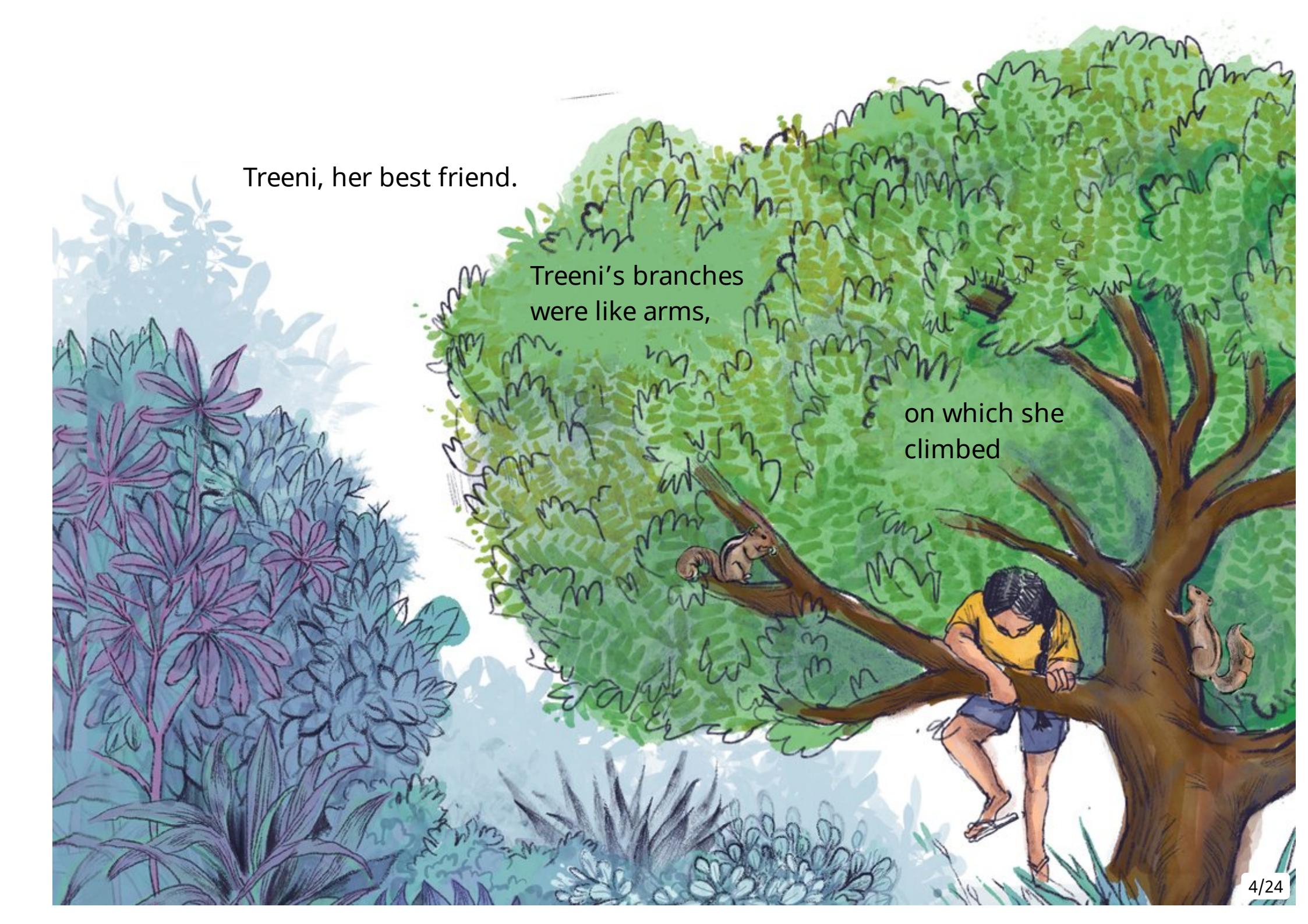
Trees.

Plants.

Grass.

Best of all,
the garden had...



A colorful illustration of a girl climbing a large tree. The tree has a thick brown trunk and many green branches. A squirrel is climbing one of the branches. A small brown book is hanging from one of the branches. The girl is wearing a yellow shirt and blue shorts, and she is climbing a branch. The background is filled with green foliage and purple flowers.

Treeni, her best friend.

Treeni's branches
were like arms,

on which she
climbed



and played

and slept.

Jaishree called her father. "Daddy, I am going to study plants."

Humphh!

Daddy was an engineer and didn't like it. "I can convince him later," Jaishree thought.

She moved to a college to study plants.

And study she did. She finished two degrees in five years. "But there are SO MANY questions that I do not have answers to."



Do plants talk
to each other?

Do they fight?

Can they be friends with each
other, like Treeni was mine?

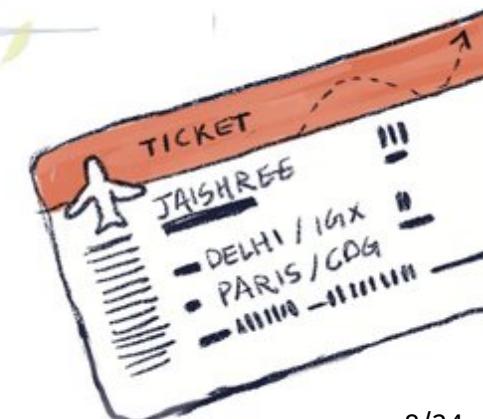
Jaishree went many places in search of answers.

From New Delhi she went to New York and back to New Delhi.



Sadly, the answers were
nowhere to be found.

Until she went to France.
That was where she heard a story.

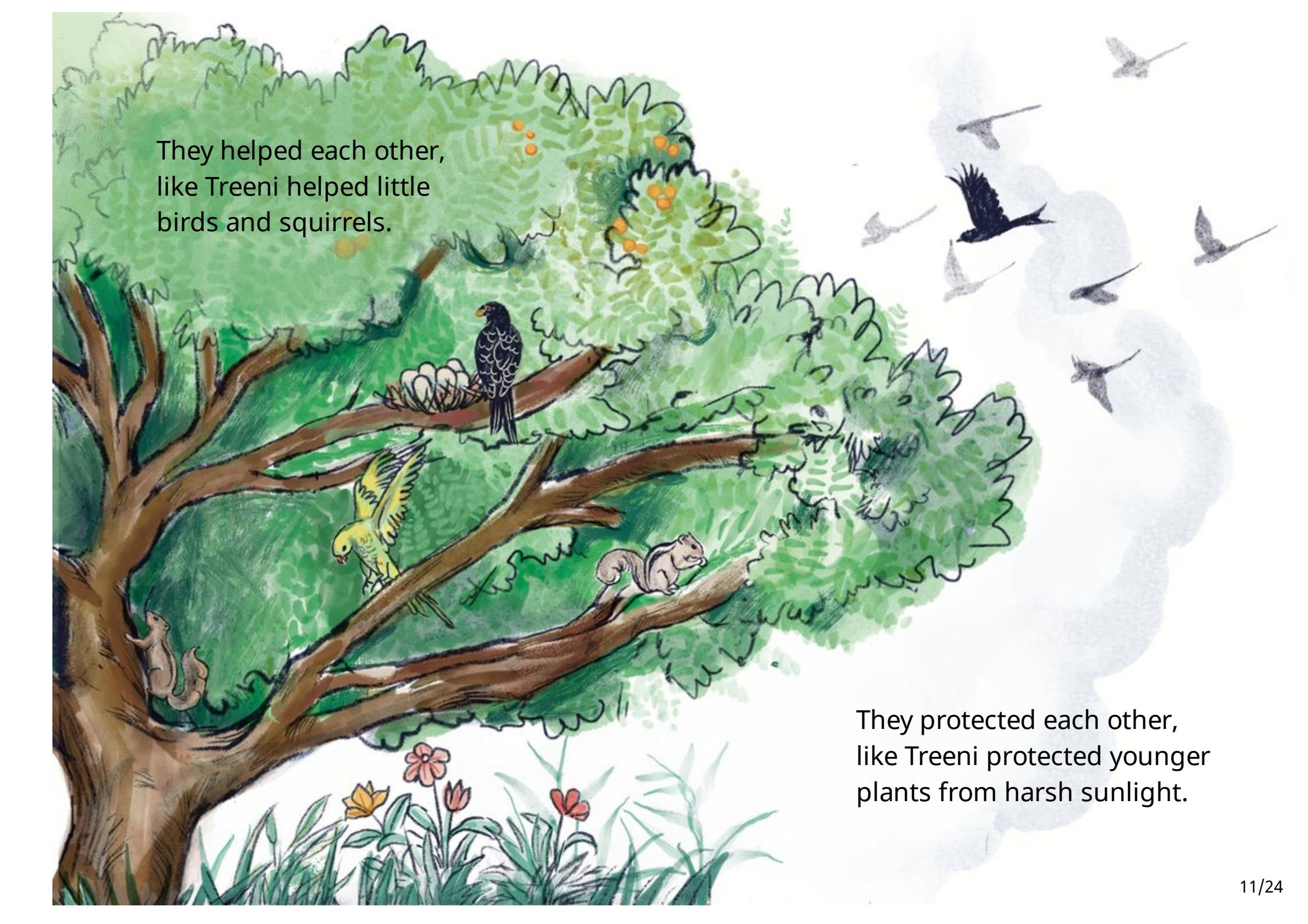




A lonely mustard plant could not grow properly under stress. It was small, sick and sad when the temperature was too high or too low, or when the light was too bright or too dim, or when the soil was too sandy.

But when the mustard plant had a friend nearby — another mustard plant — they both grew tall, green and happy. The mustard plants were helping each other! Alone, they were weak. Together, strong.





They helped each other,
like Treeni helped little
birds and squirrels.

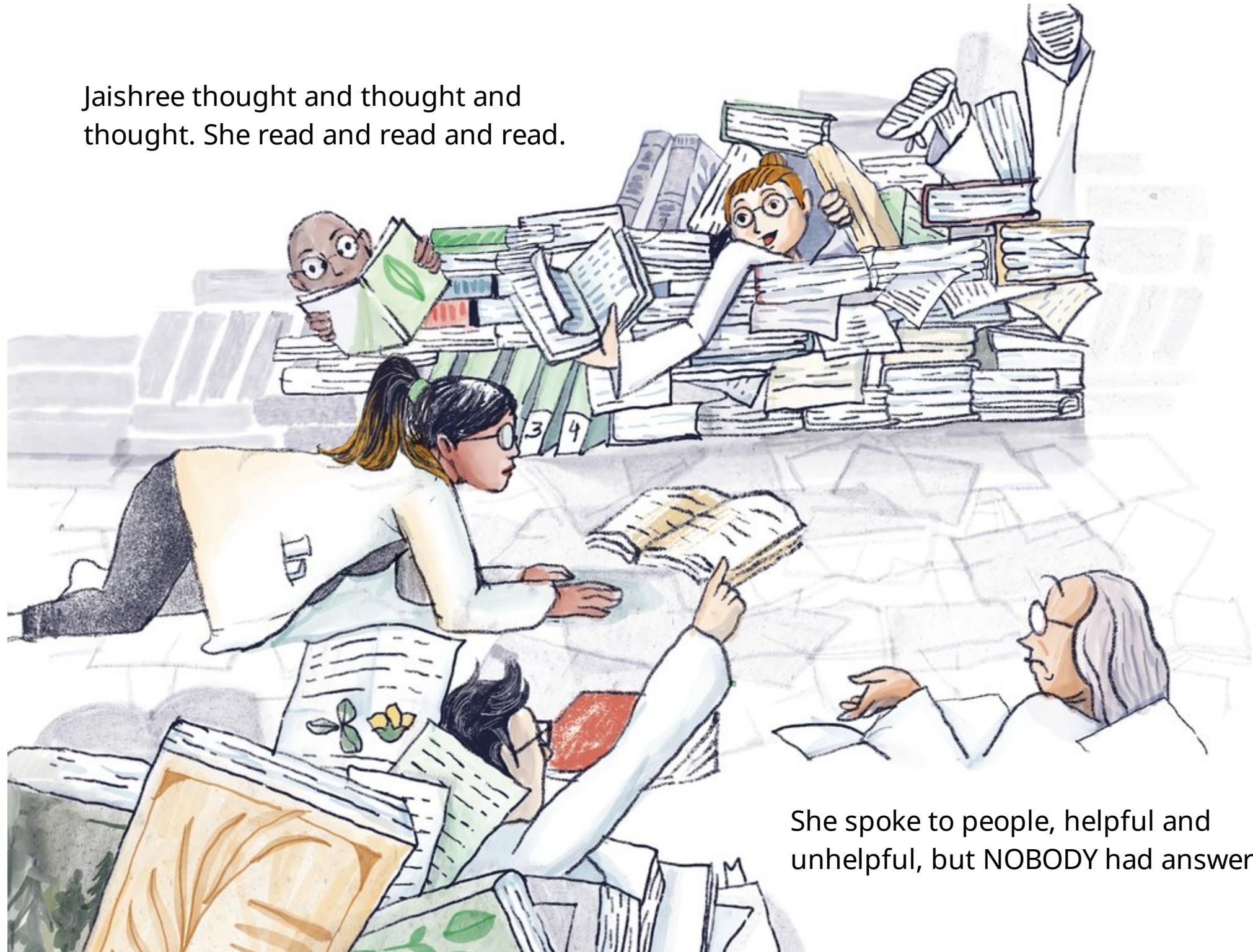
They protected each other,
like Treeni protected younger
plants from harsh sunlight.

But Jaishree still had more questions than answers!



Why do plants help each other?
How do plants help each other?

Jaishree thought and thought and thought. She read and read and read.



She spoke to people, helpful and unhelpful, but NOBODY had answers.

Luckily for Jaishree, mustard plants were fun to work with.



Growing them was not difficult, and she needed only one simple tool.

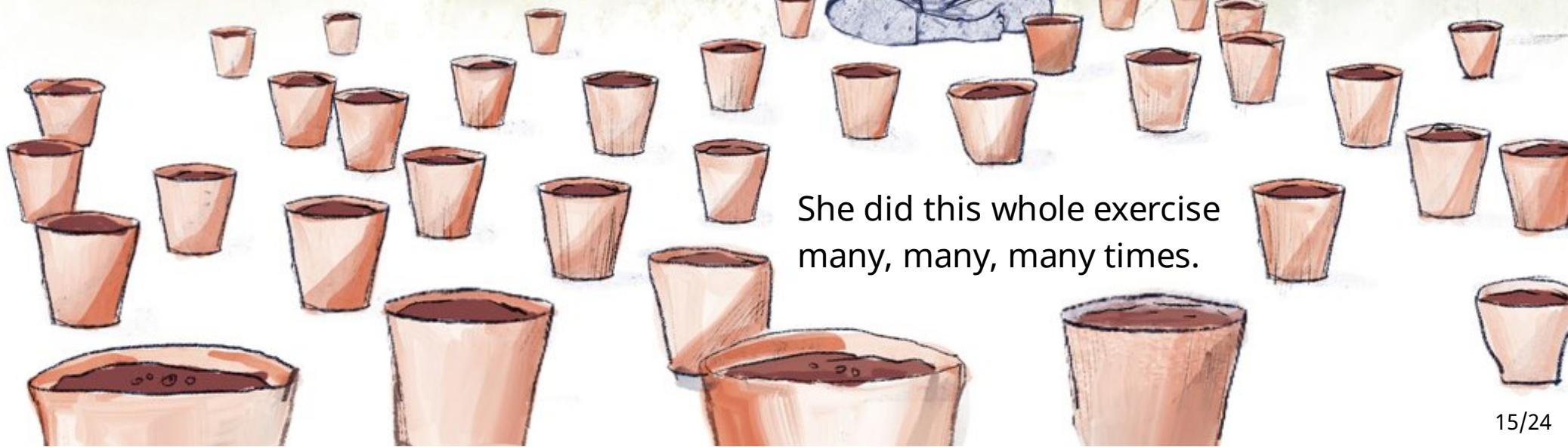
A paperclip!

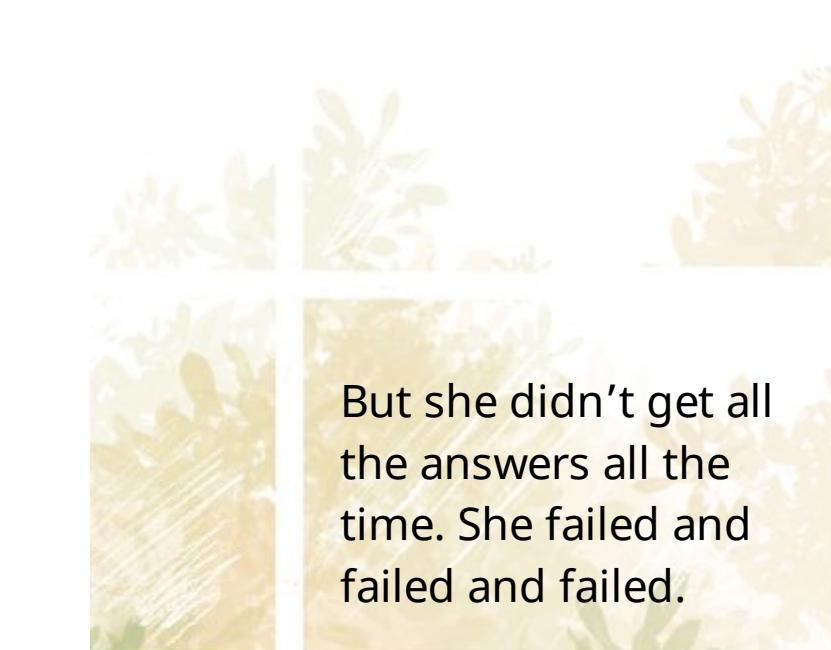


Jaishree used a paperclip to sow 4,000 tiny seeds, one at a time.

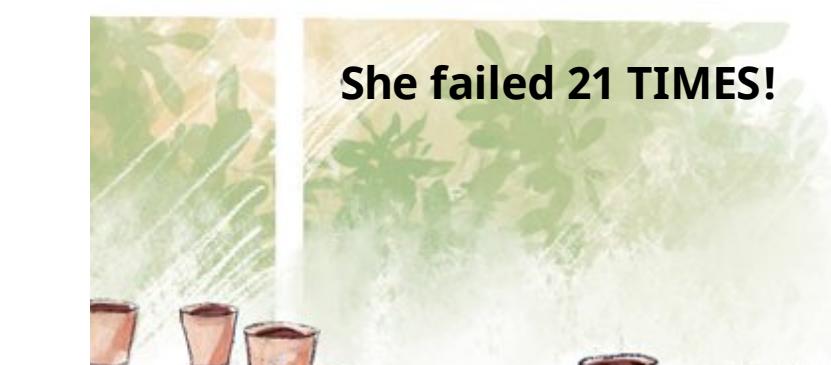


She did this whole exercise many, many, many times.





But she didn't get all the answers all the time. She failed and failed and failed.



She failed 21 TIMES!





Jaishree had more worries. Humans are not always as helpful as mustard plants.

She was often told wrong and unkind things.

"Women cannot do science."

"Indians cannot do science."

"STOP BUGGING ME," Jaishree thought. And she carried on with her work.

Finally, Jaishree succeeded.



“Oh yes, I have found it!”

She found that plants helped each other all the time.

She found that some mustard plants helped only similar mustard plants. Other mustard plants helped mustard plants that were not so similar.

As Jaishree knew, exciting answers always lead to more questions!

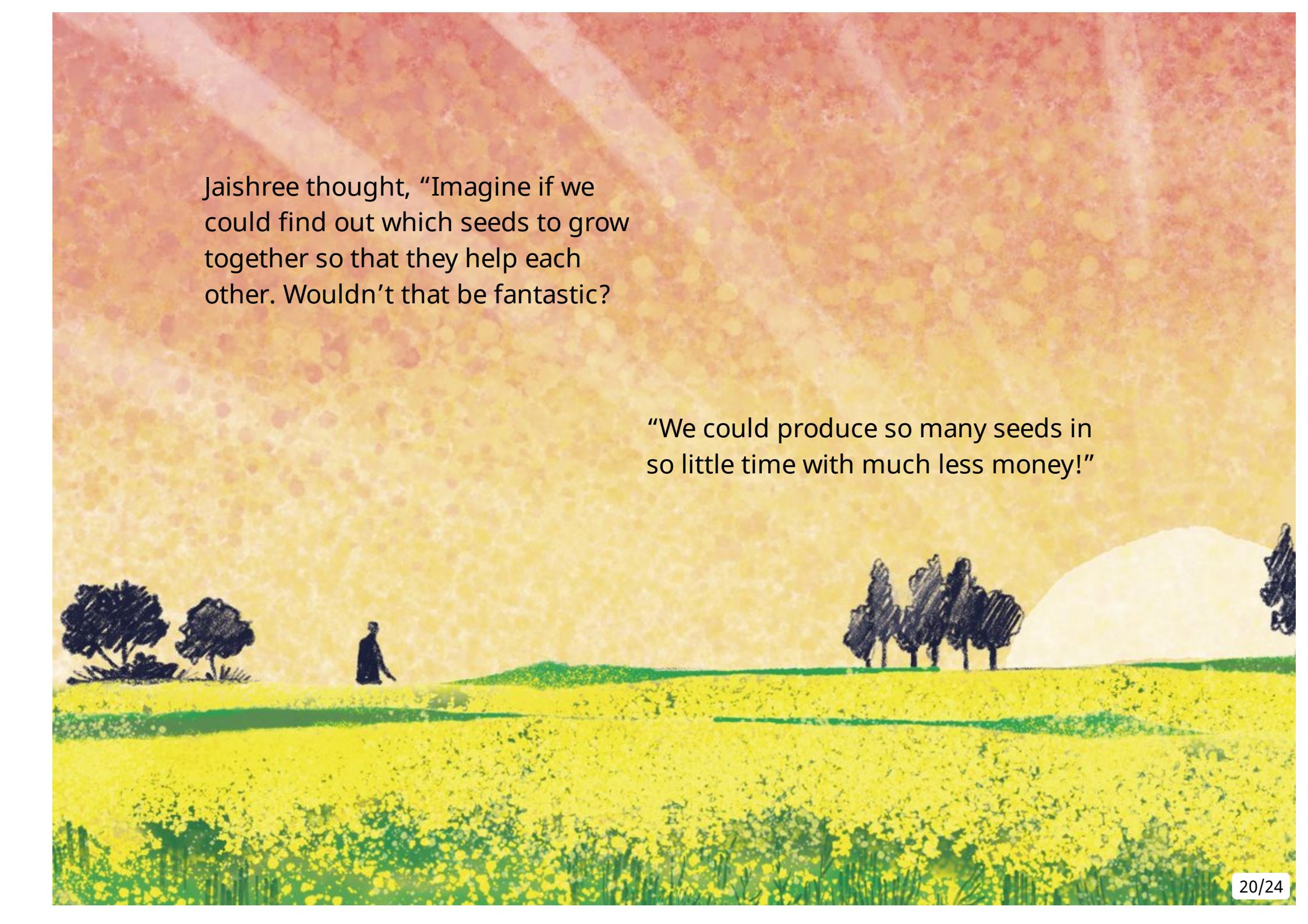
"That's curious. Why would some plants do one thing and others do something else? Why can't all plants help each other in the same way?"



She found that plants which grew with strangers learnt to help those strangers.

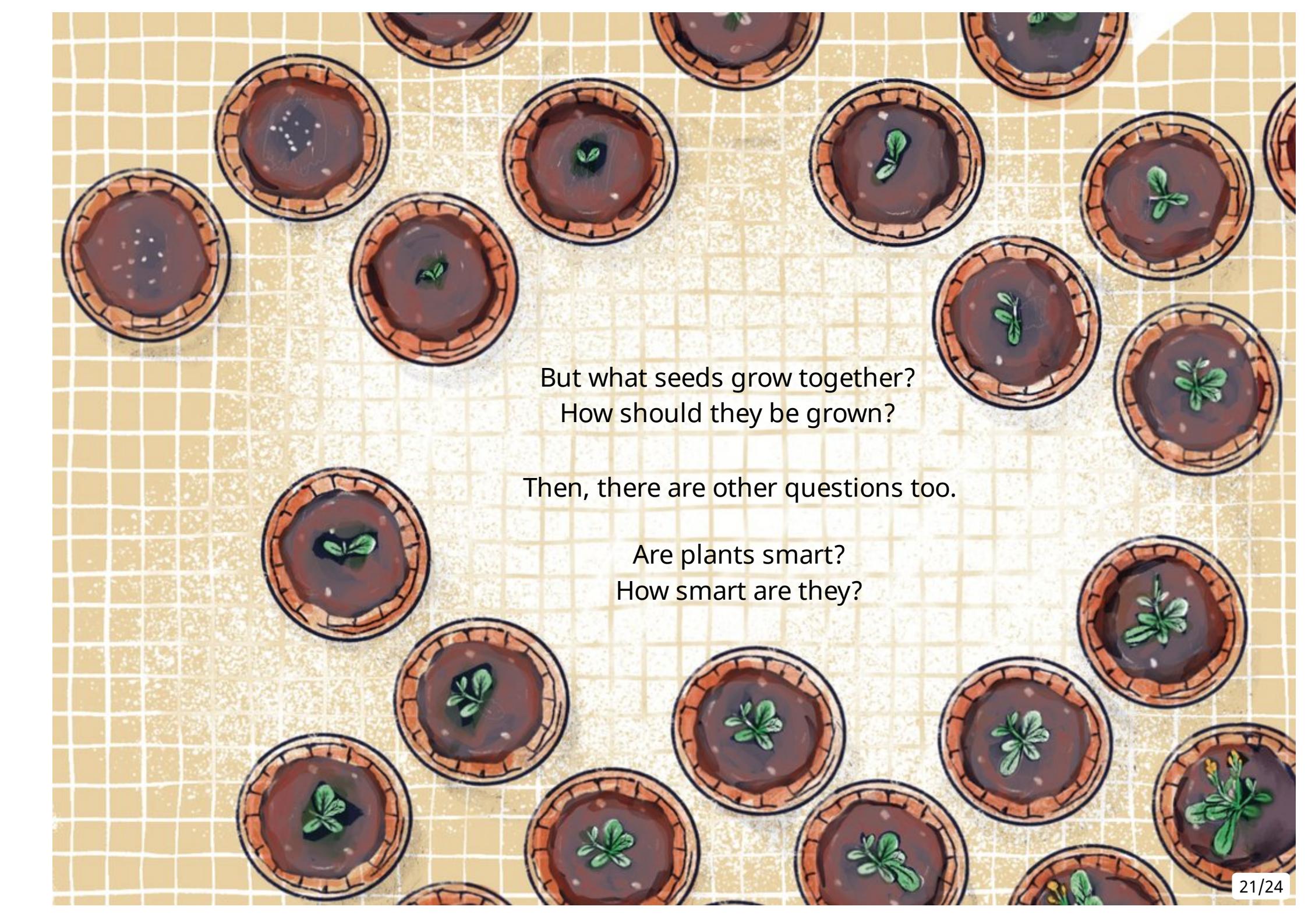
This behaviour is shaped over many many years by another curious thing called evolution.





Jaishree thought, "Imagine if we could find out which seeds to grow together so that they help each other. Wouldn't that be fantastic?"

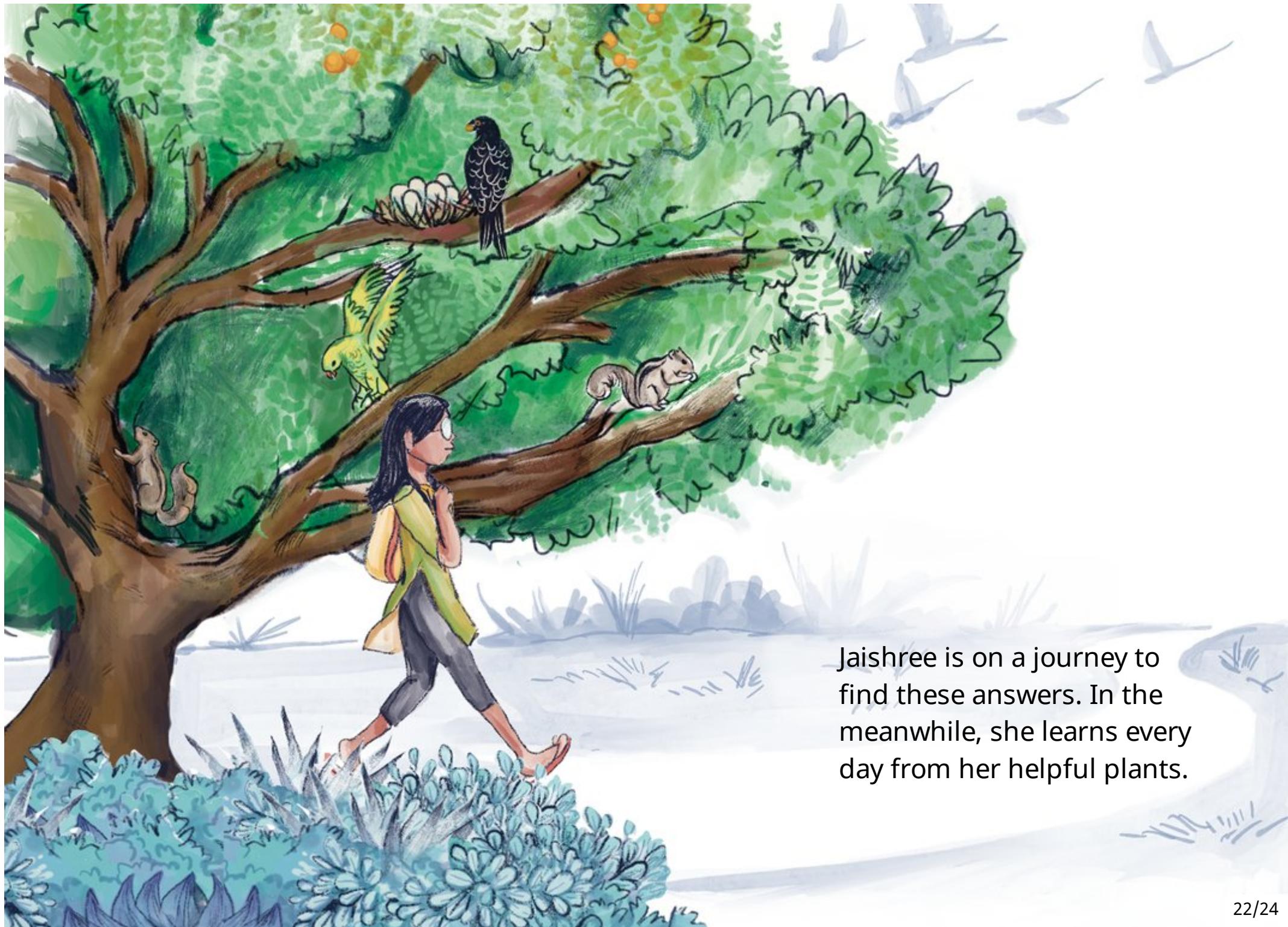
"We could produce so many seeds in so little time with much less money!"



But what seeds grow together?
How should they be grown?

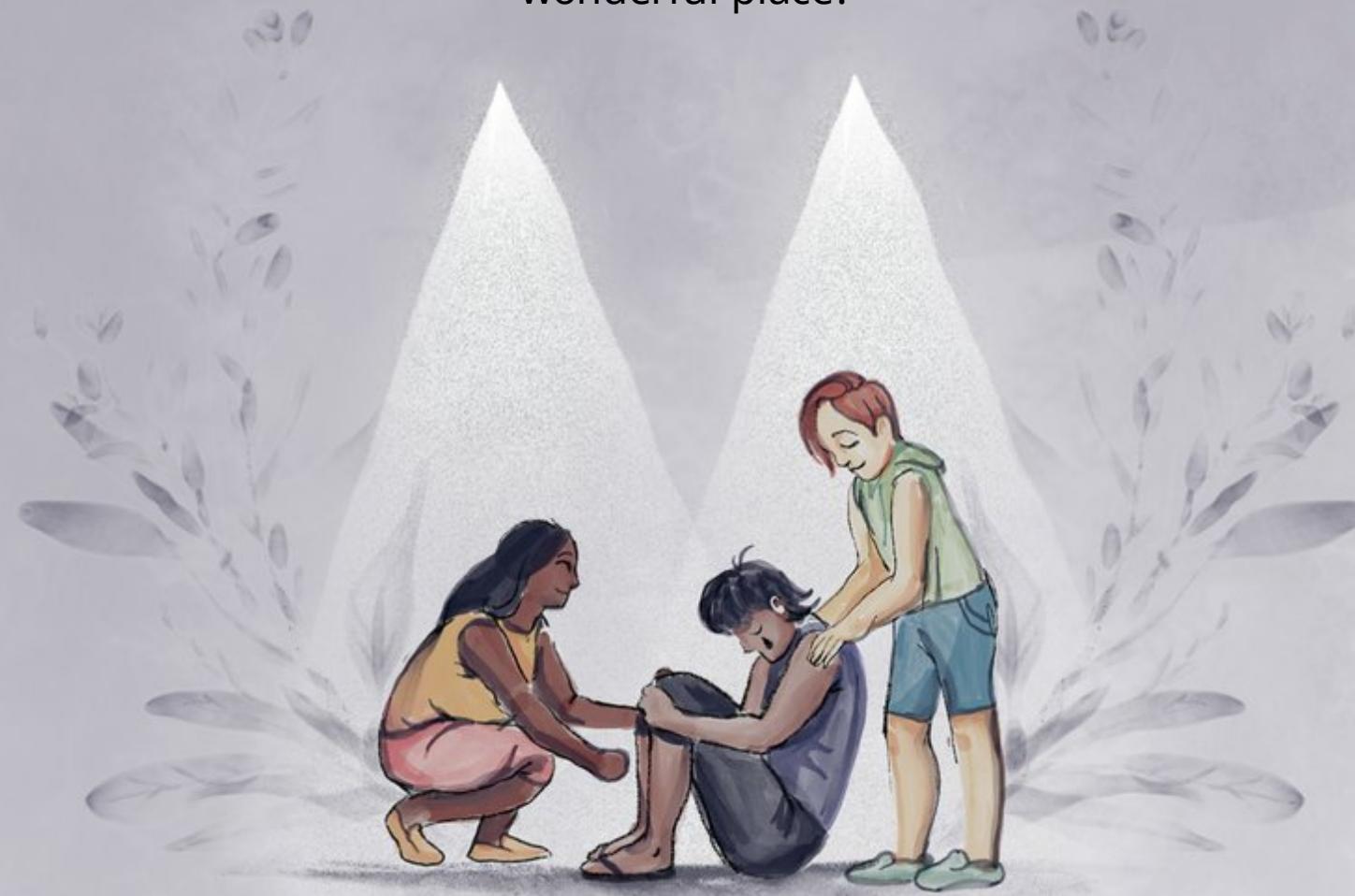
Then, there are other questions too.

Are plants smart?
How smart are they?



Jaishree is on a journey to find these answers. In the meanwhile, she learns every day from her helpful plants.

“If only humans helped each other more, the world would be such a wonderful place!”



What did YOU learn from plants today?

Do you know **H Jaishree Subrahmaniam**?

Dr H Jaishree Subrahmaniam has loved plants since her childhood in New Delhi. She quit an engineering degree to study botany. In 2017, Jaishree started her PhD in France.

Her research focused on altruism in plants. Using mustard plants (*Arabidopsis thaliana*), Jaishree discovered that plants help each other grow better in times of stress. Her research also



explained that plants that have grown around "strangers" for millions of years have learnt to extend help to them, while other plants only help plants that are similar to them.

In 2021, Jaishree was selected for the prestigious Marie Curie Fellowship (named after a very important woman scientist) to pursue her postdoctoral research. She will attempt to find out whether plants can be considered intelligent or smart.

This journey, however, was not easy. Jaishree had to face racism and sexism many times at work, but her undeterred motivation kept her going. She is actively involved in taking science outside laboratories to anyone and everyone. She is also a social worker, helping create an equitable and welcoming space in science for women. She believes humans have a lot to learn from plants, especially how to extend help in times of stress without being selfish.

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The Plant Whisperer

(English)

Young Jaishree loves nothing more than plants. She wants to understand them, which is why she decides to spend her life studying plants. This biography of ecologist Dr H Jaishree Subrahmaniam is a story of passion and gumption.

This is a Level 3 book for children who are ready to read on their own.



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