The Plants That Saved Every Drop

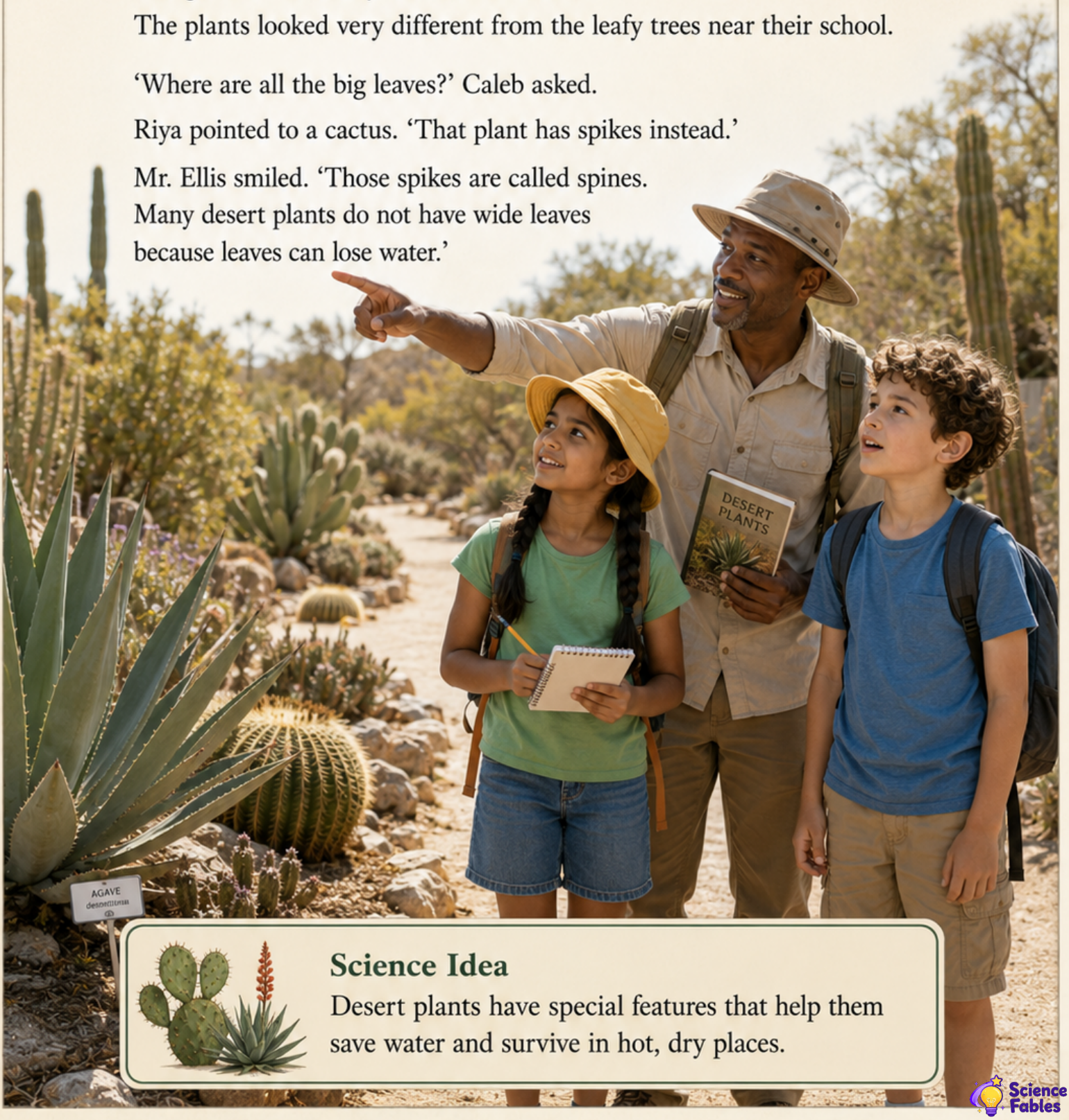
A story about desert plants

Riya and Caleb stepped into the desert garden and stopped.
The ground was sandy. The air felt warm.
The plants looked very different from the leafy trees near their school.

'Where are all the big leaves?' Caleb asked.

Riya pointed to a cactus. 'That plant has spikes instead.'

Mr. Ellis smiled. 'Those spikes are called spines.
Many desert plants do not have wide leaves
because leaves can lose water.'



Science Idea

Desert plants have special features that help them save water and survive in hot, dry places.

Science Fables

The Plants That Saved Every Drop

Looking closely at desert survivors

Riya looked surprised. ‘So the cactus changed its leaves into spines?’

‘Exactly,’ said Mr. Ellis. ‘Spines help protect the plant and reduce water loss.’

Caleb looked at the cactus from a safe distance. ‘Then where does it keep water?’

‘In its thick stem,’ said Mr. Ellis. ‘A cactus stem can store water like a living water tank.’

They walked farther and saw an aloe plant with thick, fleshy leaves.

‘This one looks like it is holding water too,’ Riya said.

‘It is,’ said Mr. Ellis. ‘Aloe stores water in its leaves.’



Science Idea

Cacti store water in thick stems.
Aloe stores water in thick leaves.

The Plants That Saved Every Drop

More desert tricks

Nearby, an agave plant spread its sharp leaves like a giant green star.

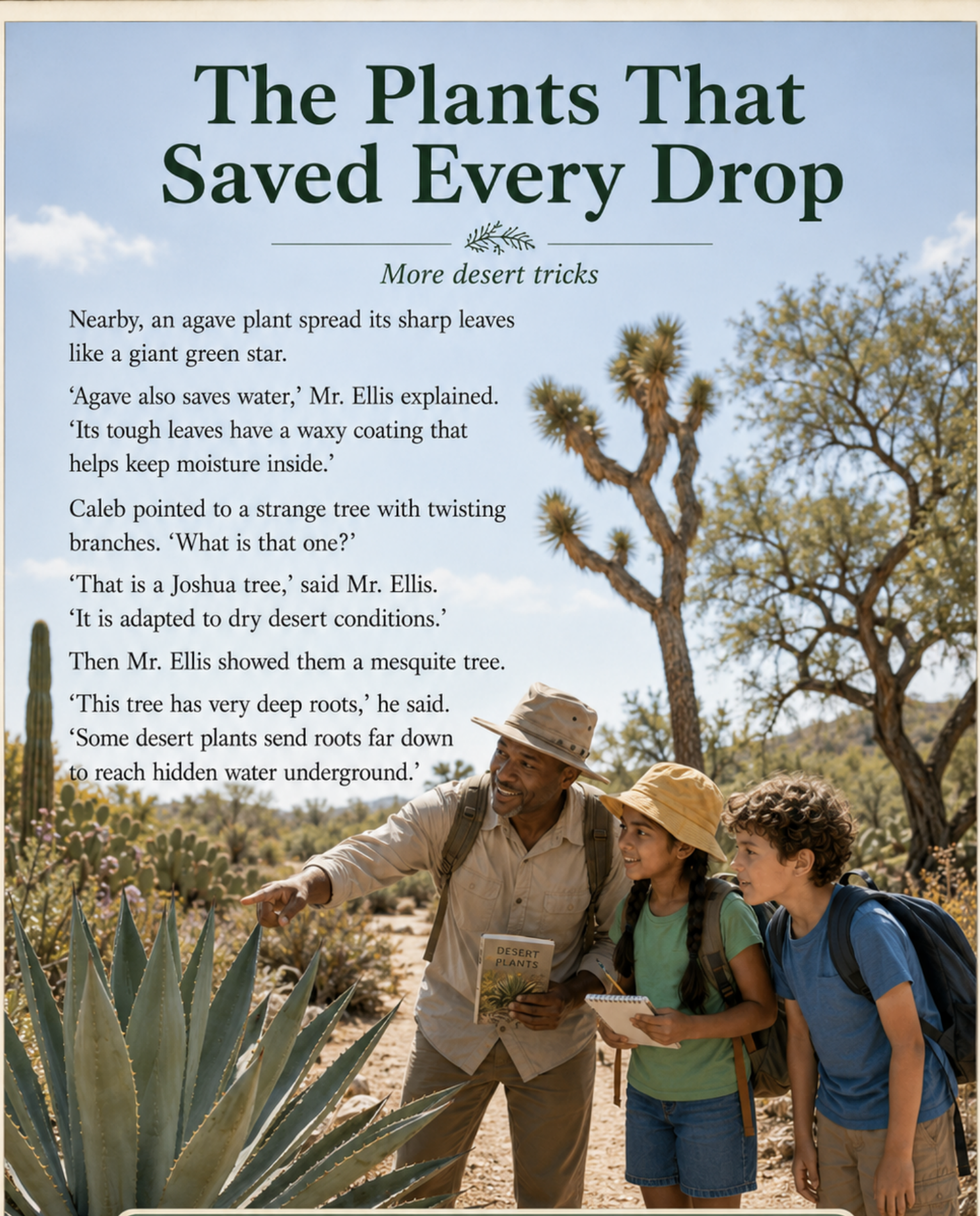
'Agave also saves water,' Mr. Ellis explained. 'Its tough leaves have a waxy coating that helps keep moisture inside.'

Caleb pointed to a strange tree with twisting branches. 'What is that one?'

'That is a Joshua tree,' said Mr. Ellis. 'It is adapted to dry desert conditions.'

Then Mr. Ellis showed them a mesquite tree.

'This tree has very deep roots,' he said. 'Some desert plants send roots far down to reach hidden water underground.'





Science Idea

Agave has a waxy coating. Joshua trees are adapted to desert life. Mesquite trees use deep roots to reach water.

Science Fables

The Plants That Saved Every Drop

Why roots matter

Riya looked at the sandy ground. ‘So some plants store water, and some search for it.’

‘Good thinking,’ said Mr. Ellis.

He knelt and drew a quick picture in the sand.

‘Some roots grow deep to find hidden water underground,’ he explained. ‘Others spread wide near the surface so they can quickly drink rain before it disappears.’

Caleb looked around again. ‘The desert doesn’t look empty anymore,’ he said. ‘It looks clever.’



Science Idea

Desert plants may have deep roots or wide shallow roots to collect water.

The Plants That Saved Every Drop

Every plant has a trick

Riya looked around again. The desert no longer seemed empty. It seemed clever.

'Every plant has a water-saving trick,' she said.

Caleb nodded. 'Cactus stores it. Spines save it. Roots find it. Waxy leaves protect it.'

At the end of the walk, Riya drew a cactus, aloe, agave, Joshua tree, and mesquite in her notebook. At the bottom she wrote: 'In the desert, every drop matters.'



Science Idea

Desert plants use special adaptations to save water and survive.

Science Fables

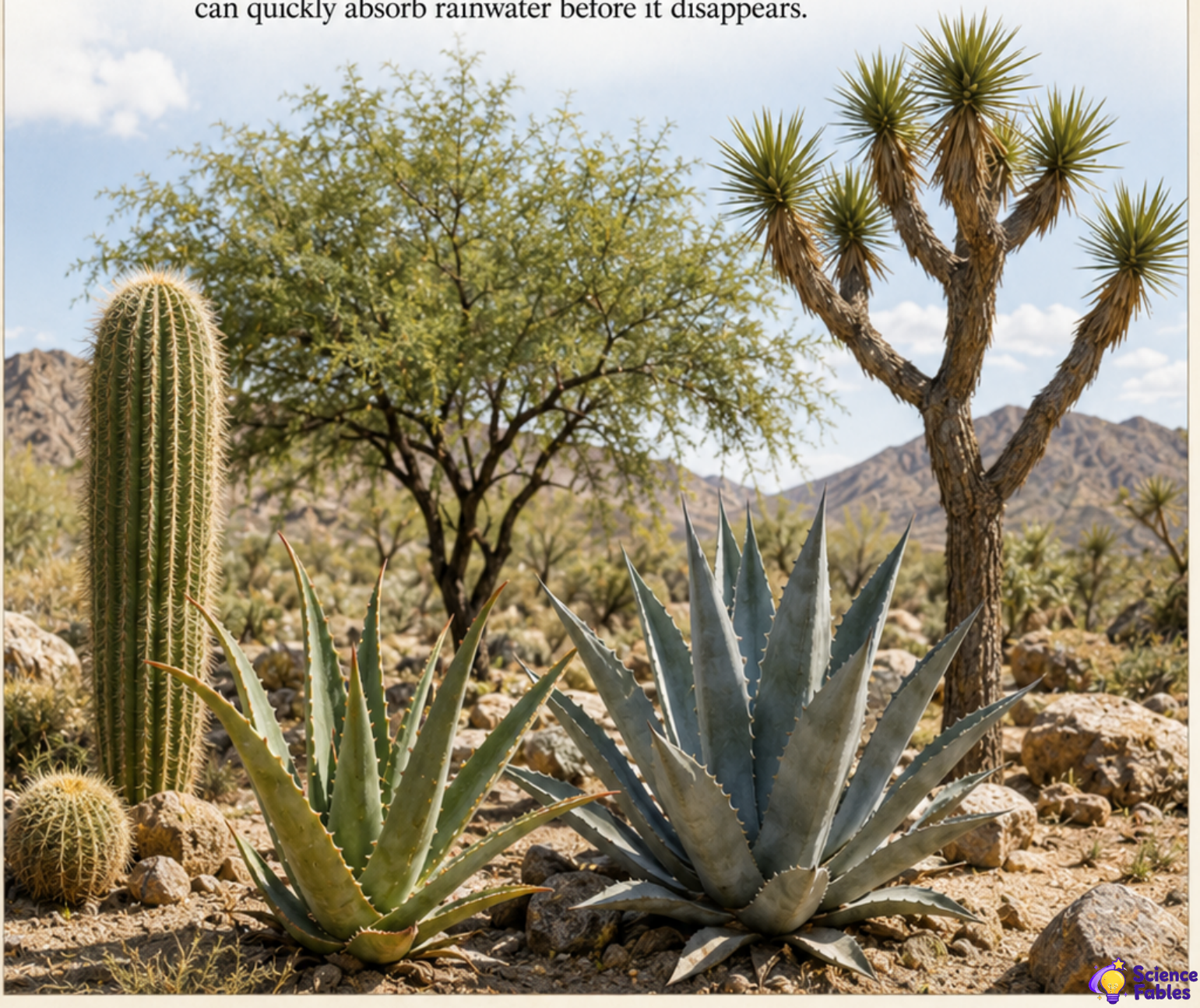
Science Element

How desert plants survive

Desert plants survive with very little water. Many have special adaptations that help them live in hot, dry places.

- Cactus — thick stems store water; spines reduce water loss.
- Aloe — *thick* leaves store water.
- Agave — waxy, tough leaves help keep moisture inside.
- Joshua tree — adapted to dry desert conditions.
- Mesquite — *deep* roots can reach underground water.

Some desert plants also grow shallow spreading roots so they can quickly absorb rainwater before it disappears.



Science Fables