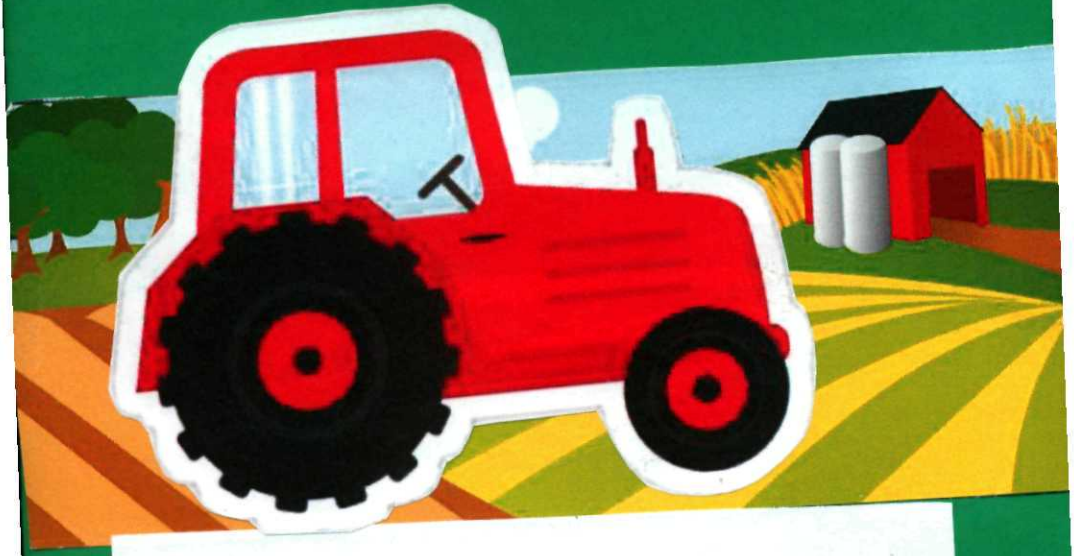
Where the Green Crops Grow



By:

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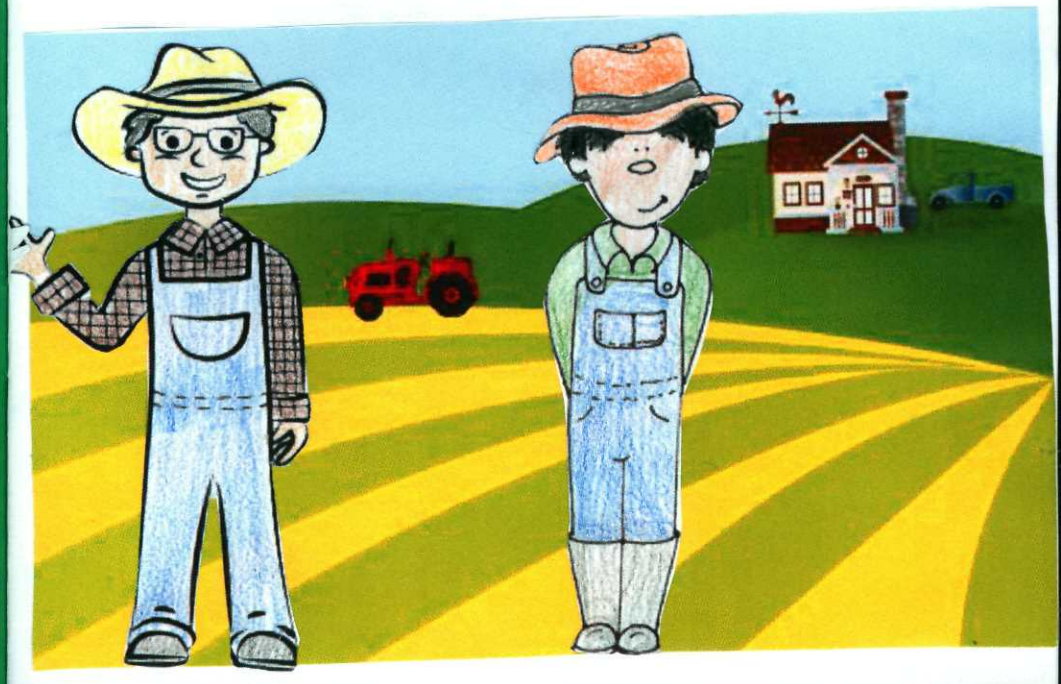
In Bowling Green, Kentucky, Farmer Brown and Farmer Green lived across the field from each other. They both farmed for many of years.

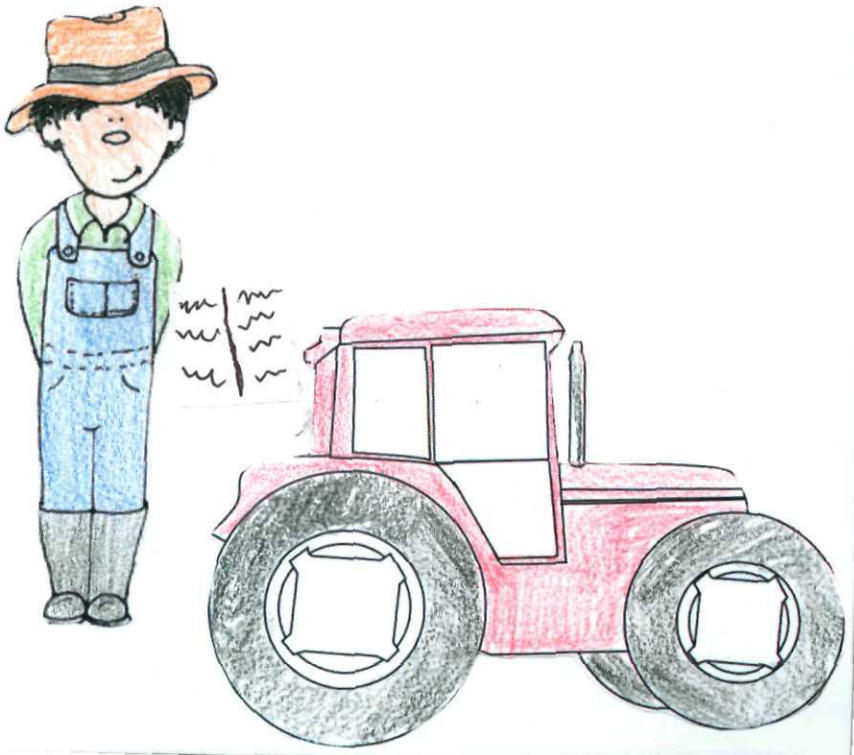


Launch Questions:

Who knows someone who has a farm or a garden at home?

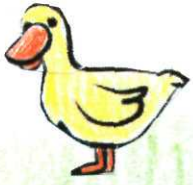
Who knows what plants need to grow?

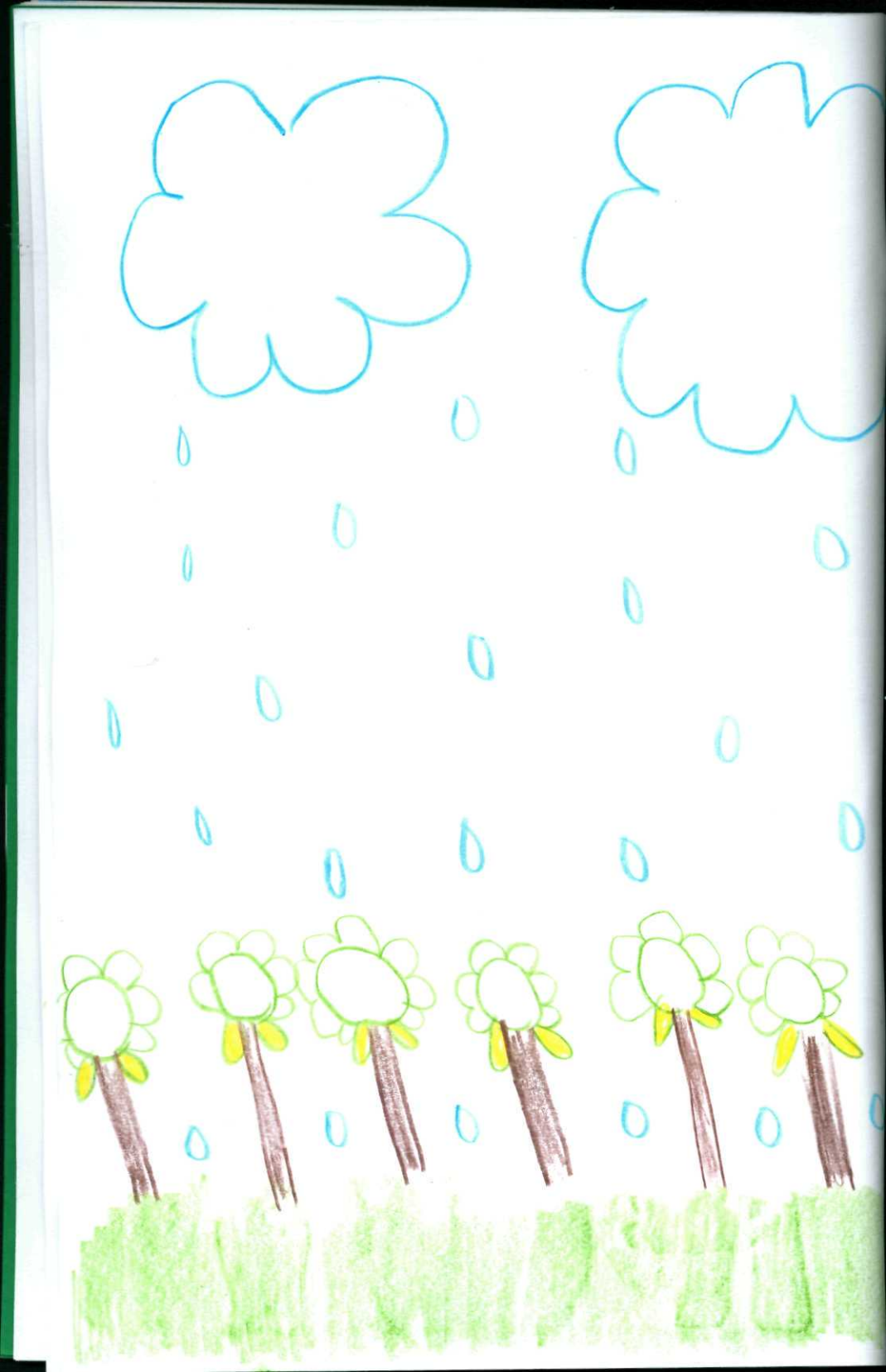
Farmer Green had just recently taken over his father's farm after graduating from college. Farmer Green had a new way of growing his crops. However, Farmer Brown has been growing his crops the same way for many of years.



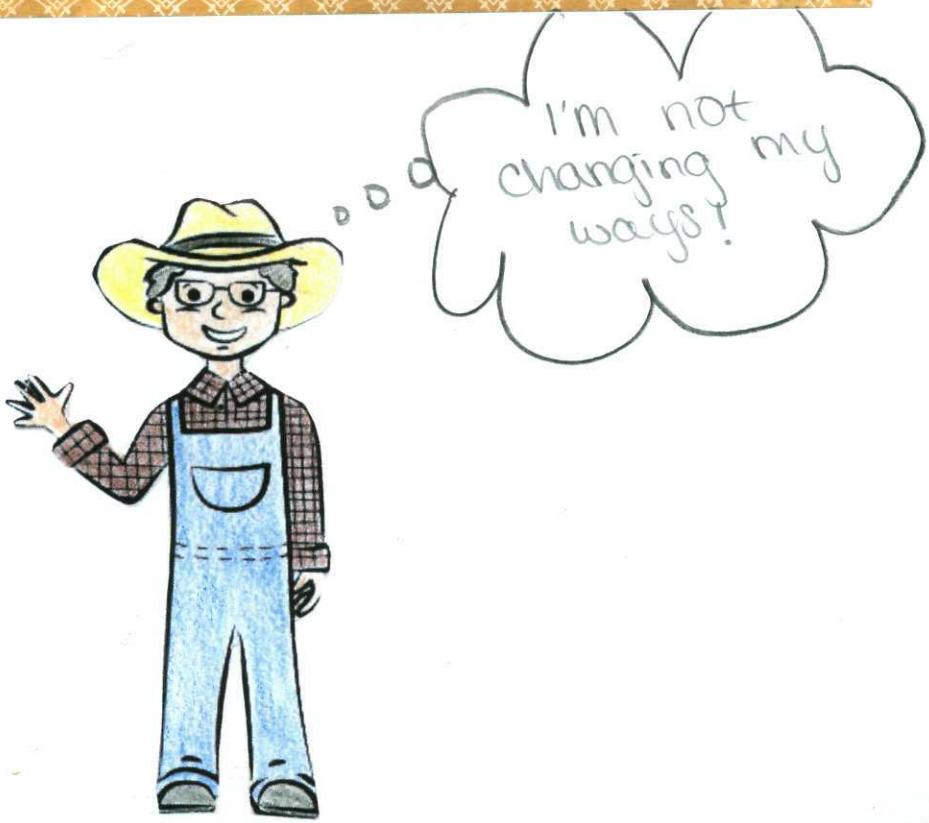

Hey! Try this farmer Brown!

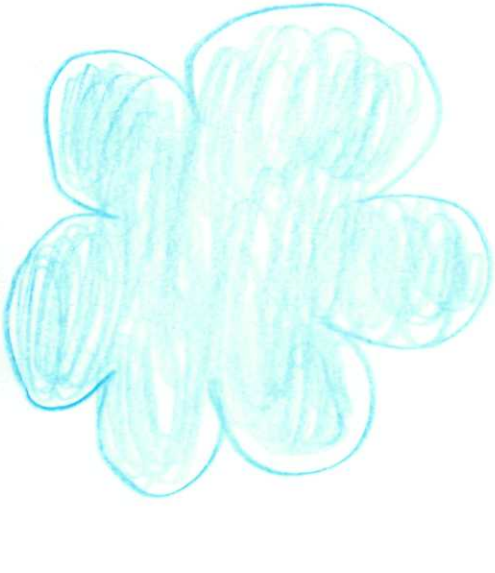
Farmer Green tries to introduce his new way of farming to Farmer Brown. He tells Farmer Brown that instead of tilling his soil, it is better for the soil and crops to have a cover crop. "What is a cover crop?" asked Farmer Brown. Farmer Green explained that cover crops are things such as weeds and previous plants left behind that help the soil gain nutrients. The remaining crops help conserve soil from running off the fields when it rains.



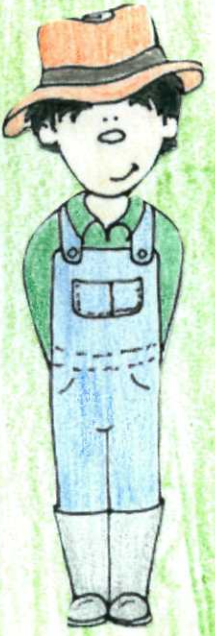


Farmer Brown refuses to listen to Farmer Green. He says, "I've been tilling my soil for years which loosens oxygen so water can better reach the crops." "But this isn't true" said Farmer Green. "It actually presses your soil down into the ground which causes rain to runoff the soil." With all of that being said, Farmer Brown still didn't care about this new way of farming.





Later that week, Farmer Brown's grandson, Carter came over after school. Carter asked his grandpa why Farmer Green's crops were growing so much better than theirs. "I don't know, it just might not be a good year for our field" said Farmer Brown.



Unsatisfied with his grandpa's answer, Carter went through the field to go see Farmer Green. "Well hello there little boy. What can I help you with on this side of the field?" "I was just wondering how you got your crops to grow so good when my grandpa's field is not looking so good." Farmer Green then explained to him that he was not plowing his fields. Instead, he was leaving old plants and weeds behind to reduce soil loss after rain and provide more nutrients for the new crops.

Lesson Questions:

Would you listen to farmer Brown or farmer Green?

Later that night, Carter told his grandpa what Farmer Green said about not plowing his fields. His grandpa said, "don't listen to any of that nonsense, I've been plowing my fields for years." "But grandpa, look at your field and Farmer Green's field! When you don't till your field, not only do you save soil from running off after it rains, but it also stays more moist than the soil in plowed fields."

The next planting season, Farmer Brown decided to listen to Carter and Farmer Green. He planted over old crops and weeds instead of plowing. When it was time to harvest, he had some of the best crops around while also helping the environment!

Congress Questions:

Which is best for the soil? Tilling or non-tilling. Why is it better?

CONTENT STANDARDS:

2.ESS.3 Investigate how wind and water change the shape of the land and design solutions for prevention

5.6 Fundamental concepts and processes of engineering and technology, including properties and uses of natural and human-made materials, the use of technology to meet human needs and solve problems, and the design of moving systems and simple mechanical devices

6.5 Major concepts and processes of geography, including characteristics and locations of major human and physical features of the world, characteristics of human and physical systems, and interactions between human and physical systems

LEARNING OUTCOMES:

As a result of reading this book, students will summarize the effects of tilling verses non-tilling soil.

As a result of reading this book, students will recognize the differences between tilling and non-tilling soil.