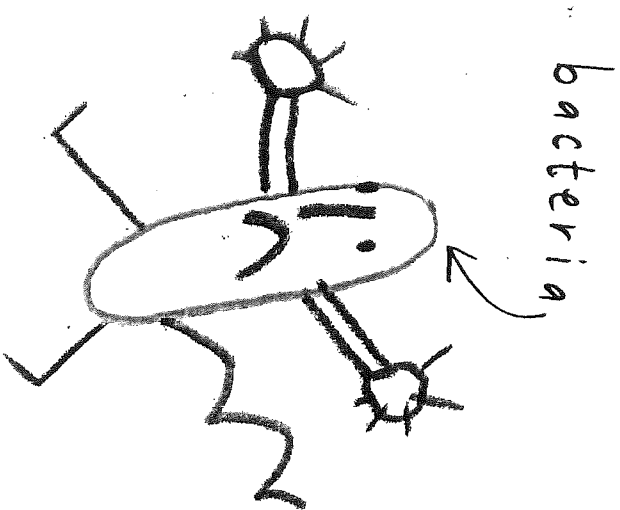
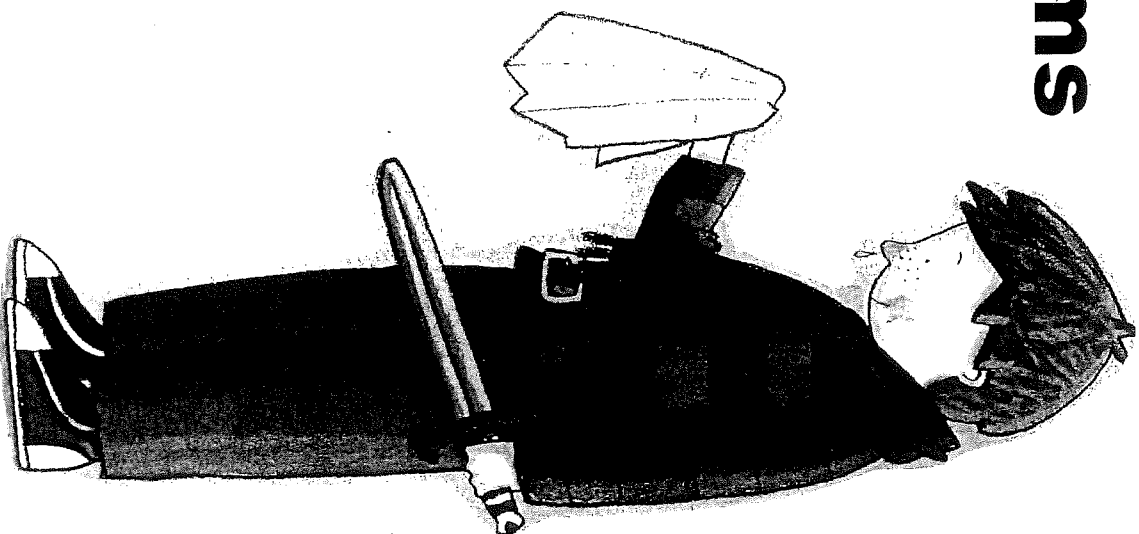
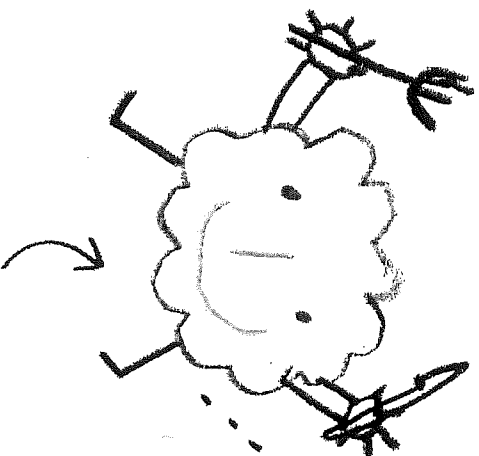


# **— Know How We Fight Germs**



white blood cells



Segmented Text

**"ATCH-O-O-OOO!"**

Sam sneezed  
a huge sneeze.

"Sam!" said Mom.

"That's GROSS!

Don't you have a tissue?"  
And she pulled one out of her  
pocket and wiped his nose.

"Thanks," said Sam, and

He sneezed again---

"ATCH-OOOOO!"

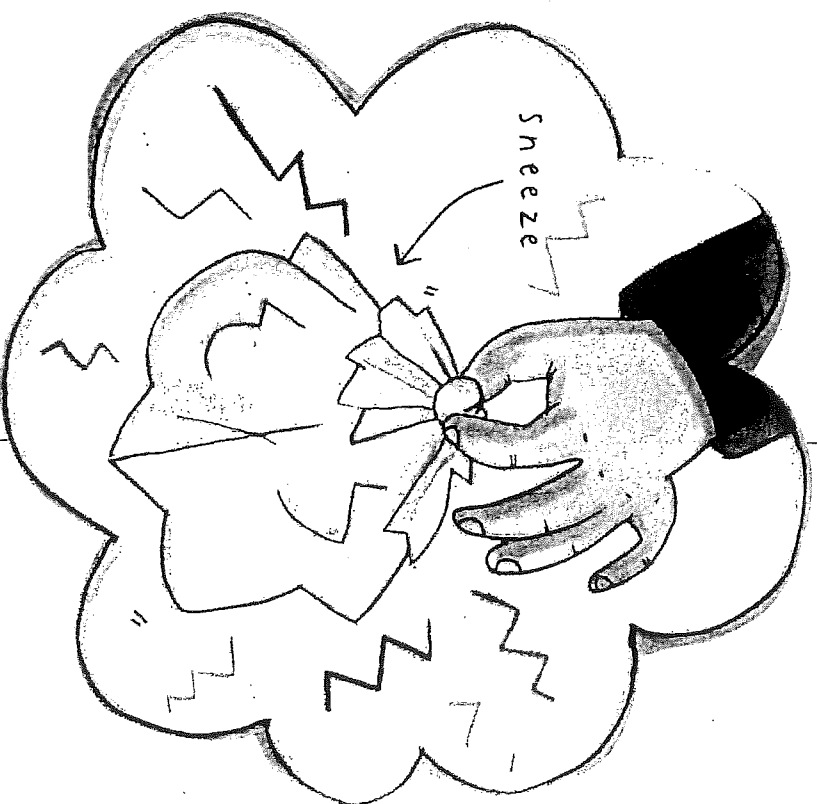
"You have a cold,"  
said Mom.

Questions

Based on the title and  
this opening scene,  
what do you think you  
will learn about in this  
story?

Important Ideas

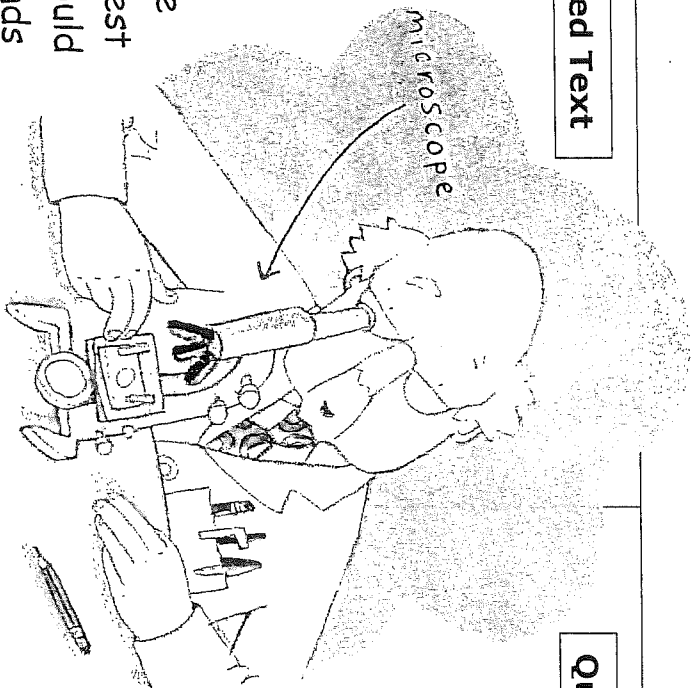
Focus: Begins with  
the concept that  
germs can spread.

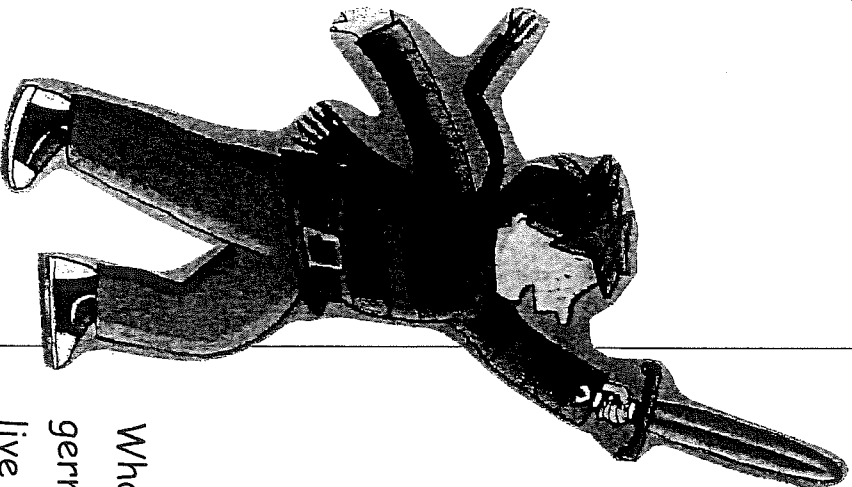


Segmented Text	Questions	Important Ideas
<p>"I know," said Sam,          "and I know why colds make          me sneeze. When I sneeze,          I'm blowing cold germs          out of my body."</p> <p>"You certainly are," said Mom.          "That's how cold germs spread          to other people, and why you          need to catch your sneeze          in a tissue. If someone else          breathes in your cold germs,          they might get a cold, too."</p> <p>"Oh," said Sam.          "Is that how          I got this cold?"</p> <p>"Probably," said Mom.          "I suppose you caught          it from someone at school."</p>	<p>How do you think Sam          caught his cold?</p> <p>What evidence is          there in the text to          back up your answer?</p>	<p>Stop Here:</p> <p>Opening dialogue          sets the scene for          defining and          explaining germs.</p> <p><u>Important Idea</u>          Using a tissue and          covering your mouth          is a way to keep          from spreading cold          germs.</p>

<div data-bbox="1372 420 1437 777">Segmented Text</div> <p data-bbox="1015 157 1226 913">"We studied germs at school," said Sam. "My teacher said you can sneeze them a really long way. She said you can sneeze them as far as 10 yards."  "That IS a long way," said Mom. "That's as far as three elephants standing in a line!"  Sam giggled. "I wouldn't like to be near an elephant when it sneezed!"</p>	<div data-bbox="1380 1249 1445 1480">Questions</div> <p data-bbox="584 1197 763 1522">What can you tell me about how germs spread?</p>	<div data-bbox="1388 1638 1453 2016">Important Ideas</div> <div data-bbox="1161 1617 1356 2037"><p data-bbox="1242 1627 1339 1921">Focus: Germs travel</p></div> <div data-bbox="284 1680 625 1995"><p data-bbox="576 1680 625 1879">Stop Here:</p><p data-bbox="487 1701 535 1984"><u>Important Idea</u></p><p data-bbox="284 1680 454 1984">Germs can travel as far as 10 yards.</p></div>
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Segmented Text	Questions	Important Ideas
<p>"ATCH-O-O-OOO"</p> <p>Sam peered at his tissue.</p> <p>"You can't see germs, can you?"</p> <p>"No," said Mom, "they're too tiny. Even the biggest ones are so small you could fit hundreds of thousands of them on the tip of your thumb. You can see germs only if you look at them under a microscope."</p> <p>Sam sniffed.</p> <p>"I bet I've got MILLIONS of germs inside me."</p> <p>"BILLIONS! Said Mom.</p>	<p>After reading this segment, what can you tell me about the existence of germs?</p> <p>Where can germs live?</p> <p>Can I see germs?</p>	<div data-bbox="1003 1629 1341 2018"><p>Focus: Germs are small, can live anywhere, and live in great number.</p></div> <p>Stop Here:</p> <p><u>Important Ideas</u></p> <p>Germs by the millions can live on us and in us.</p> <p>Germs are so small we can only see them through a microscope.</p>



Segmented Text	Questions	Important Ideas
<p>"But not all germs make us sick, and when they do, our bodies try to fight them off."</p> <p>"I know," said Sam.</p> <p>"I've got something in my blood that fights germs."</p> <p>"That's right," said Mom.</p> <p>"About half your blood is water, but there are also lots of things in it called <b>cells</b>—red ones and white ones. And there are parts of cells called <b>platelets</b>, too."</p>	 <p>What happens to germs that try to live in our bodies?</p> <p>What is our blood made of?</p>	<div data-bbox="1144 1656 1343 2007"> <p>Focus: Our bodies are equipped to fight the effects of germs.</p> </div> <div data-bbox="280 1656 816 2039"> <p>Stop Here:</p> <p><u>Important ideas</u></p> <p>Our bodies fight off germs.</p> <p>Our blood is made of red blood cells, white blood cells, and platelets.</p> </div>

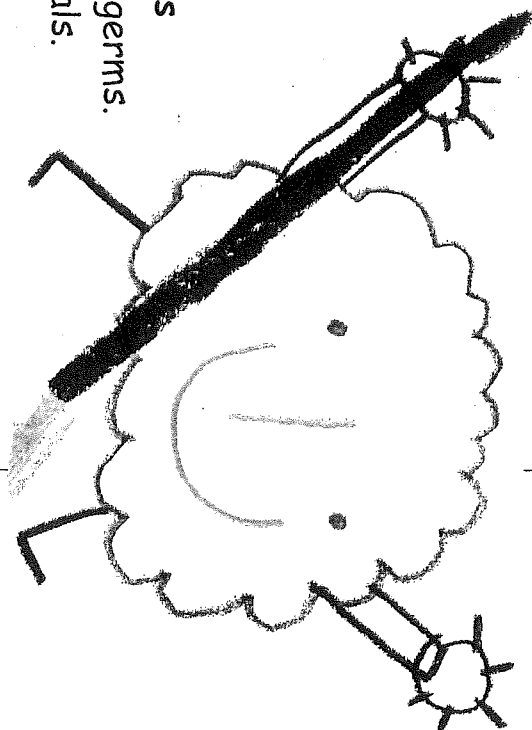
Segmented Text

"There are?" asked Sam.  
"Is that why blood is  
red—'cause of the  
**red blood cells?**"

Mom nodded.

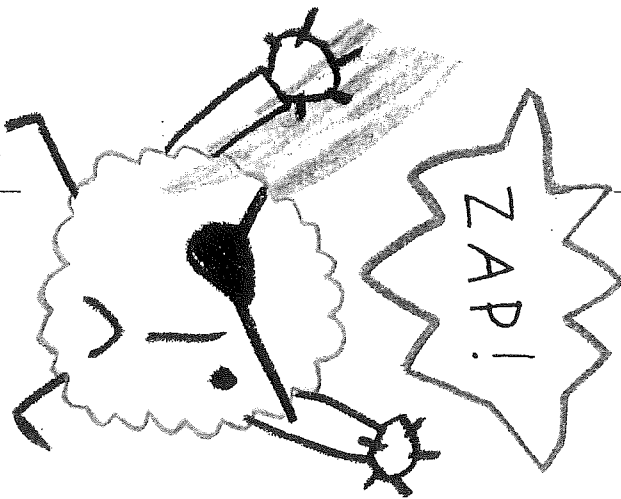
"And the **white blood cells**  
are the ones that kill the germs.  
they make special chemicals.  
Then they zap the cold  
germs with the chemicals  
and kill them."

"C-O-O-L," said Sam.  
"Germ busters to the rescue!"  
And he sneezed again.



Questions

What color is our  
blood? What makes  
it this color?  
What tool does a  
body have to fight  
germs?



Important Ideas

Stop Here:

Important Ideas  
Blood is red because  
of red blood cells.  
White blood cells  
fight germs that  
enter our bodies.

Segmented Text	Questions	Important Ideas
<p>"You should put your coat on." Said Mom.</p> <p>"Keeping warm helps</p> <p>"Okay," said Sam.</p> <p>"But cold germs aren't the only bad germs, are they?"</p> <p>'Cause when I had chickenpox the doctor said I'd caught chickenpox germs."</p> <p>"Yes, he did," said Mom.</p> <p>"That's because there are lots of different germs. They all do different things, and scientists divide them into groups. One group is called <b>viruses</b>- cold germs and chickenpox germs are both <b>viruses</b>."</p>	<p>What do scientists call cold germs and chickenpox germs?</p>	<p>Focus: There are many kinds of germs.</p> <p>Stop Here:</p> <p><u>Important Ideas</u></p> <p>Viruses are a kind of germ.</p>



Segmented Text	Questions	Important Ideas
<p>"Oh yeah, I remember," said Sam.</p> <p>"There are some germs called bac...something, too."</p> <p>"Bacteria," said Mom.</p> <p>"They're another germ group. Bacteria live on all kinds of things, but they especially love dirt. So if you eat dirty food or don't wash your hands before meals, bad bacteria can get into your body."</p>	<p>Can you name another kind of germ and where it lives?</p> <p>How can it get into our bodies?</p>	<p>Stop Here:</p> <p><u>Important Ideas</u></p> <p>Bacteria lives in dirt and can enter our bodies when we don't wash our hands before eating.</p>

Segmented Text	Questions	Important Ideas
<p>Sam wiped his nose.            "Do <b>white blood cells</b> zap the bac things, too?"</p> <p>"They do kill them, but not by zapping," said Mom.</p> <p>"When bad <b>bacteria</b> get into your blood, the <b>white blood cells</b> come along and gobble them up!"</p> <p>"YUCK!" said Sam.            "Germ munchers to the rescue!"</p>	<p>What is the job of white blood cells?</p>	<p>Stop Here:</p> <p><u>Important Idea</u></p> <p>White blood cells fight off germs, including bacteria.</p>

Segmented Text	Questions	Important Ideas
<p>"How do you know about bacteria anyway?" asked Mom.</p> <p>Sam showed her the scab on his elbow.</p> <p>"When I fell down at school, my teacher washed the dirt off and sprayed some stingy stuff on the cut. She said it was for the bac things."</p> <p>"Bacteria," said Mom.</p> <p>"Yeah," said Sam. "She said they might get into the cut. The spray helps to kill them, and then a scab grows to keep them out. She said scabs are made when blood gets all sticky and hard."</p>		

Segmented Text	Questions	Important Ideas
<p>"That's where the <b>platelets</b> come in," explained Mom, "the parts of the <b>cells</b> I was telling you about. Scabs are made by billions of <b>platelets</b> and <b>red blood cells</b> clumping and lumping together."</p> <p>"Yeah," said Sam.</p> <p>"And when the skin's healed, the scab falls off."</p>	<p>What is a scab made of?</p> <p>What is the purpose of a scab?</p> <p>When will a scab fall off?</p>	<p>Stop Here:</p> <p><u>Important Ideas</u></p> <p>Scabs keep out bacteria.</p> <p>Platelets and red blood cells make scabs.</p> <p>When skin heals, scabs fall off.</p>

### Segmented Text

"And that's why you need to keep cuts clean and not pick at scabs before they're ready to come off by themselves," said Mom, "so the bad bacteria don't get in."

"I know," said Sam.

"But I LIKE picking at scabs."

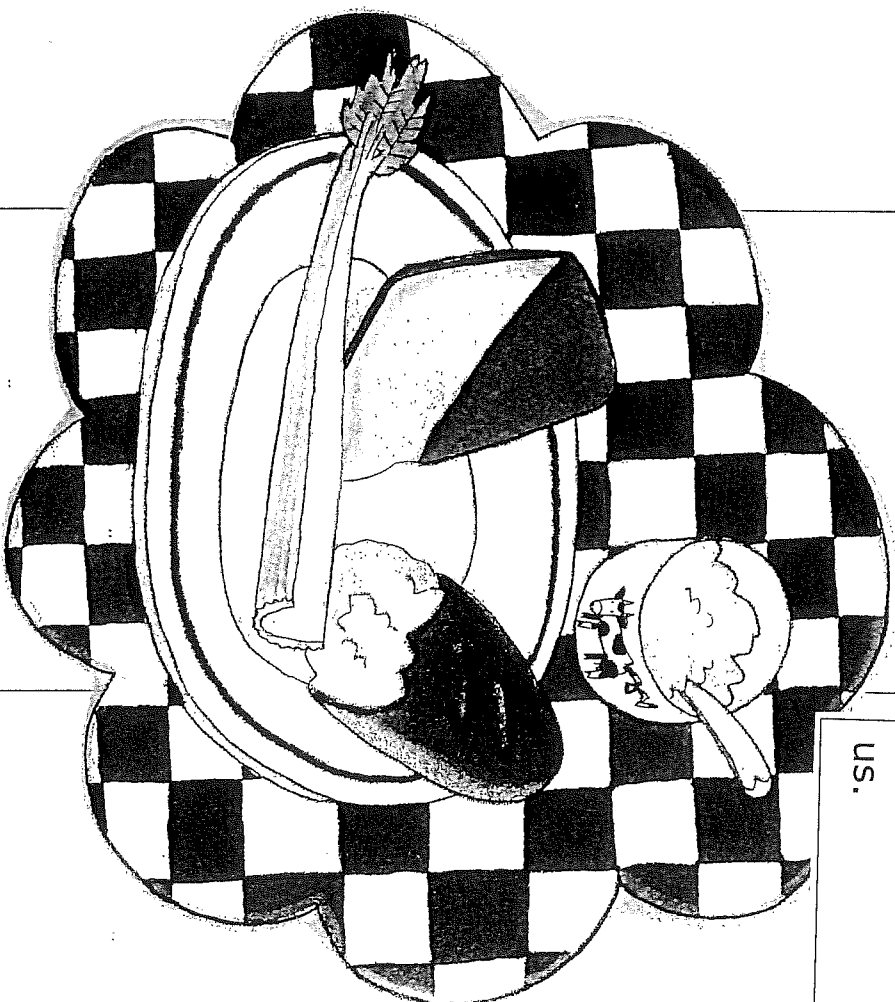
"Not all bacteria are bad, though," said Mom.

"You have good bacteria living inside you all the time, helping to keep you healthy. And some food has good bacteria in it, too—like yogurt and cheese. There are even bacteria that help to make good soil."

### Questions

### Important Ideas

Focus: Some bacteria is good and lives inside of us.



Segmented Text

"Do we have good soil?" asked Sam.

"Yes," said Mom. "That's why we grow such great vegetables."

Sam sighed.

"Like spinach, you mean."

"That's right," said Mom.

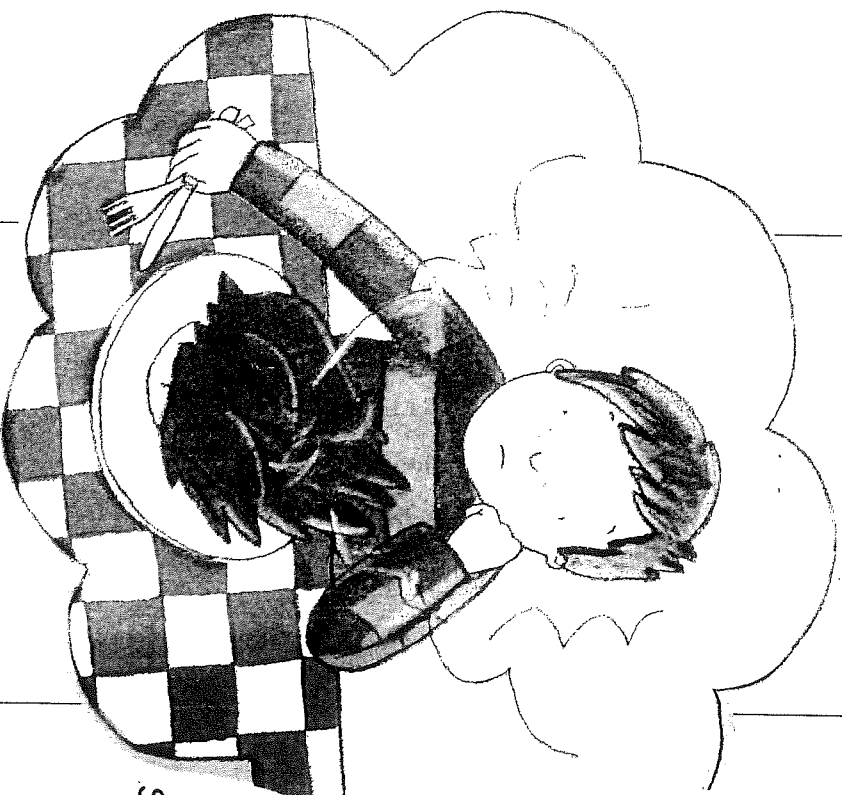
**"ATCH-O-O-O-O-O!"**

She sneezed a huge sneeze.

"Mom!" giggled Sam.

"That's GROSS!"

"Don't you have a tissue?"



Questions

Where can we find good bacteria?

Important Ideas

Stop Here:

Important Idea

There are good bacteria that live in foods such as yogurt and cheese and in good soil.