

Directions
Read this article. Then answer questions 29 through 35.

Move Over, Spider-Man— Here’s Spider-Goat!

by Joli Allen

Making silk threads isn’t just for spiders anymore. A special type of goat is doing it, too. Nubian goats look and act like any other playful, floppy-eared goats. But when they aren’t playing, these goats are busy making spider silk.

Spider silk is absolutely amazing. It’s five times stronger than steel, but it’s also very
5 light and flexible. Because of this, scientists plan to use it to make some totally cool
things! Imagine clothing that’s as light as a cobweb, yet won’t tear, or fishing line and
tennis racket strings that won’t break. Doctors might be able to use spider silk for making
tiny stitches in delicate eye surgery, but it could also be strong and flexible enough to
10 replace some worn-out parts of the human body. The silk also could be used to build
airplanes, buildings, and bridges, as well as create a tough coating for space stations.
Because of all these possibilities, scientists have been searching for ways to make spider
silk in huge quantities, and they have finally found the answer: Nubian goats!

Scientists have studied spider silk for years. They tried to raise spiders on spider farms
to collect silk from them, but the spiders didn’t enjoy living so close to one another.
15 Spiders like their own space, and when they don’t get it . . . well . . . they make space by
eating their neighbors!

Goats, the scientists discovered, are much friendlier than spiders and are also easier
to work with. Because they’re bigger, a few goats can produce more silk than a roomful of
spiders. The scientists chose Nubian goats for this job because they make milk at a
20 younger age than many other goats. So, the Nubian goats will make spider silk sooner and
for longer periods of time.

But how do the goats actually make the spider silk? That’s what scientist Jeffrey Turner
wanted to figure out when he taught animal science at McGill University in Montreal. He
noticed that the body parts of spiders that make silk and the parts of goats that make milk
25 are very much alike. Because of this, he figured that goats might be able to make spider
silk. The idea excited him, and he started his own company in 1993 to do more research
on how goats could do what spiders have been doing for years.

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Eventually, Turner and his fellow scientists found a way to place spider genes in goats so that the genes fit nicely, like a guest in a comfortable hotel. Every living animal,
30 including humans, has a set of genes inside of it that tells its body what to do. These genes are very, very tiny, but they hold lots of information on how to build parts of the body. A spider's genes contain instructions for making spider silk, and a goat's genes contain instructions for making milk. So by putting spider genes into goats, the goats then have the genes that tell their bodies how to make spider silk proteins.

35 Proteins are the body's basic building blocks. Just as people have proteins in their bodies that make their hair, skin, and muscles, the goats now have special proteins for making spider silk. When the goats produce milk, the spider silk proteins are in it, but it looks just like regular milk. Scientists separate the proteins out of the milk by skimming off the fat and then sprinkling salt on it. The salt makes the spider silk proteins curdle into
40 small clumps. These clumps are scooped out, and water is added until the mixture has the thickness of maple syrup. This is spider silk, and it's ready to be spun!

Next, the silk is taken to a spinning machine that copies the way spiders spin their silk. The secret to extra strong silk is in how the spiders spin it: they stretch the silk over and over again. The stretching makes all the protein building blocks line up, lock together,
45 and form a strong but flexible band. When the giant spinning machine is finished, the silk threads are stronger than steel and as flexible as rubber . . . but they're also thinner than a human hair.

Producing milk with spider proteins in it doesn't hurt the goats. Scientists did years of research to make sure the goats would be safe and healthy. The milk that's left after the
50 spider proteins are removed can still be used—as fertilizer on fields that grow feed for the goats.

In 1998, Dr. Turner bought a farm in Canada for raising his spider-silk goats, and they still live there today. The one thousand goats that make spider silk are raised in a normal environment and are healthy, curious, and energetic—just like any other Nubian goats.
55 Their owner gives them lots of space to roam and play. The goats particularly enjoy rolling down the farm's grassy hills, and they love listening to country music. Other music, such as rock music, has strange rhythms that make the goats jittery, but the steady beat of country music keeps them calm and happy. H'm . . . I wonder if they'd like the "Itsy Bitsy Spider" song.

29 In lines 4 through 12, the author explains why scientists are trying to find a way to produce spider silk using goats by showing

- A** possible uses for spider silk
- B** the popularity of spider silk
- C** how easy spider silk is to use
- D** how quickly spider silk can be developed

30 Which statement **best** explains an advantage of using goats rather than spiders for the production of silk?

- A** Goats produce stronger silk than spiders do.
- B** Scientists can insert genes into goats but not into spiders.
- C** Spider proteins in goat milk can be spun into silk.
- D** Goats are bigger than spiders and are much easier to raise.

31 What did Jeffrey Turner discover about using Nubian goats for possible silk production?

- A** Nubian goats already make a similar substance.
- B** Nubian goats have high amounts of protein in their milk.
- C** Nubian goats and spiders both prefer living in large groups.
- D** Nubian goats and spiders have body parts that are similar.

32 In the process described in lines 35 through 47, which step allows the threads to become strong enough for surgical procedures?

- A** The silk proteins are turned into clumps.
- B** The silk is stretched repeatedly.
- C** Salt is added to the goat's milk.
- D** Water is added to thin the clumps.

33 Why are lines 55 through 59 important to the article?

- A** They suggest that the goats are unusual.
- B** They explain how the goats are kept busy.
- C** They explain that the goats are treated well.
- D** They suggest that the goats are like humans.

34 Which statement **best** expresses a central idea of the article?

- A** Nubian goats produce better quality silk than spiders.
- B** Spider silk is a complex substance that takes effort to make.
- C** Nubian goats have been genetically altered to produce spider silk.
- D** Spider silk contains proteins that are similar to proteins in other living things.

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Which detail is **most** important to include in a summary of the article?

- A Scientists have made an attempt to gather silk from spiders living on farms.
- B Spider silk has qualities that can be used in many products.
- C A scientist started a company to research goat silk.
- D Machines spin spider silk into thin threads.

Directions

Read this story. Then answer questions 36 through 42.

Nina has just received a low grade on a social studies test. Before she can figure out what to do, the bell rings and she heads to her art class.

Excerpt from *Interference Powder*

by Jean Hanff Korelitz

The art studio was at the end of the corridor. Its walls were splotted by years of flung paint, and pockmarked from thousands of thumbtacks. All sorts of stuff was pinned up, from kindergarten smudges to our own collage self-portraits, with papier-mâché objects dropping down from the ceilings to sway over our heads. One of my own paintings hung
5 on the wall between two of the windows, and I smiled when I saw it. It was a picture I was kind of proud of: a study of Isobel's face, up close, her thin smile stretching across her face and her skin very white against a purple background. Isobel called this her vampiress portrait, which wasn't exactly a compliment. Still, I knew she liked the picture and felt proud to see it up on the wall.

10 When we got to the art room, I was surprised that Mrs. Smith, our teacher, was absent and in her place stood a tall woman with long hair in hundreds of little braids, some of them with beads and shells woven into their ends. The hair was mostly gray, but the woman's face wasn't really old. In fact, she looked around the same age as my mom. She grinned at us from the center of the room, with her hands thrust deep into the pockets of
15 her big, faded apron, which she wore over jeans so worn they looked buttery-soft. In one ear she wore a long, dangly earring with a feather that brushed her shoulder. Nothing was in her other ear. Her fingers were bare, but her wrists clattered with little bracelets, silver and gold and every color. I stared at those bracelets. I had never seen anything like them.

20 Our class was bunched up at the door, uncertain about whether or not to enter, given that our art teacher wasn't there; but this different person motioned us inside, grinning all the while. "Come on!" she said gleefully. "Mrs. Smith is sick today, so I was called in. My name is Charlemagne."

25 Charlemagne! Isobel and I exchanged a look. Only the week before, Isobel's father had shown us a print of an old painting with a man in a chair. Four priests were standing over him, waving something that looked like palm fronds.¹

"Is he a saint?" Isobel had asked.

¹**fronds:** branches

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Her dad had laughed. “He thought he was. But no. He’s King Charlemagne of France. Charles the Great! He made war on absolutely everybody.”

30 And now, here we were, only a week later, confronted with one of Charles the Great’s actual descendants, since what else could Ms. Charlemagne be? Imagine being descended from a medieval French king! How totally thrilling! Mom always told me that her great-great-great-uncle had invented the glue they use on the back of postage stamps, but that was nothing compared to being connected to ancient royalty.

35 Ms. Charlemagne began passing out paper as we drifted to the art tables. “I don’t have any special plan today,” she said. “I think we’ll just see where our creativity takes us. Let’s see what happens on the page. After all, that’s what artists do, isn’t it?”

Was it? I’d always thought they planned their paintings beforehand and then tried to make the picture on the canvas match the picture in their mind. That’s what I always did, anyway.

40 The kids around me were picking through the pencil and crayon bins, looking at one another with uncertain expressions. They were used to being told by Mrs. Smith what the day’s subject was or how they were supposed to make their pictures.

“Let’s let the colors pick themselves!” Ms. Charlemagne chirped. “Let’s let the pictures tell us what they should look like! Let’s see what’s on your mind today!”

45 I looked down at my blank white sheet. I knew what was on my mind. My low 62 grade, my never-to-be-had singing lessons, my mom’s expression when she sees my test score tonight. I sighed and reached for a pencil. I began to draw my mother in our kitchen at home, her face pinched up in a frown. I drew her thin eyebrows and her eyes, with their pretty, curling eyelashes, looking down. I drew her hair falling forward a bit and
50 one hand, the one that still wore my father’s wedding ring, on the table before her. Next to that hand I drew my test; and just to make myself feel even worse, I drew my ugly score—62—right there on the paper. For a long moment I glared at it, as if willing it to change.

55 Then it struck me! I *could* change that number, at least here if not in real life. I could turn my pencil over and rub those terrible numbers away, then write new numbers in their place. I was the lord of my own picture, wasn’t I? I could give myself a 63 on my social studies test, or a 61, or . . . why not even a perfect 100?

- 36** How does Nina's attitude toward Ms. Charlemagne change?
- A** Nina becomes less interested after noticing Ms. Charlemagne's bracelets.
 - B** Nina becomes more fascinated after learning Ms. Charlemagne's name.
 - C** Nina becomes less surprised after hearing Ms. Charlemagne's viewpoints.
 - D** Nina becomes more suspicious after hearing Ms. Charlemagne's assignment.

- 37** How do lines 34 through 39 contribute to the development of the story?
- A** by suggesting that Ms. Charlemagne is not qualified to teach art
 - B** by introducing Nina to a new way to think about art
 - C** by showing that Ms. Charlemagne does not understand how artists work
 - D** by describing the way Nina usually completes art assignments

- 38** Why does the author use the word "chirped" in line 43 of the story?
- A** to reveal that Ms. Charlemagne has creative ideas
 - B** to imply that Ms. Charlemagne is new at teaching art
 - C** to demonstrate that Ms. Charlemagne has a cheerful outlook
 - D** to show that Ms. Charlemagne easily relates to the art students

39 Read this sentence from line 54.

I *could* change that number, at least here if not in real life.

How does this sentence **best** contribute to the development of the story?

- A** by signaling a change in Nina’s thinking
- B** by emphasizing the importance of the setting
- C** by revealing Nina’s strong feelings
- D** by suggesting a new plot development

40 Which quotation **best** supports a theme of the story?

- A** “Still, I knew she liked the picture and felt proud to see it up on the wall.” (lines 8 and 9)
- B** “I had never seen anything like them.” (line 18)
- C** “Imagine being descended from a medieval French king!” (lines 30 and 31)
- D** “I was the lord of my own picture, wasn’t I?” (line 56)

41 Based on details in the story, what can readers conclude about Ms. Charlemagne?

- A** She is a respected artist.
- B** She has a famous relative.
- C** She has a unique personality.
- D** She is a popular substitute teacher.

How do the details in the story help develop a theme?

- A** Nina's thoughts about her mother help develop the theme that being honest will make you feel better.
- B** Nina's interaction with Isobel helps develop the theme that experiencing a new situation is easier with a friend.
- C** Nina's drawing helps develop the theme that expressing yourself can help you work through your struggles.
- D** Nina's description of Ms. Charlemagne helps develop the theme that judging others by their appearance is not a good idea.

**THE STATE EDUCATION DEPARTMENT
THE UNIVERSITY OF THE STATE OF NEW YORK / ALBANY, NY 12234
2017 English Language Arts Tests Map to the Standards
Released Questions on EngageNY**

Grade 6 Question	Type	Key	Points	Standard	Subscore	Secondary Standard(s)	Multiple Choice Questions:	Constructed Response Questions:	
							Percentage of Students Who Answered Correctly (P-Value)	Average Points Earned	P-Value (Average Points Earned ÷ Total Possible Points)
Book 1									
8	Multiple Choice	B	1	CCSS.ELA-Literacy.L.6.5a	Reading		0.84		
9	Multiple Choice	B	1	CCSS.ELA-Literacy.RL.6.5	Reading		0.53		
10	Multiple Choice	D	1	CCSS.ELA-Literacy.RL.6.4	Reading		0.51		
11	Multiple Choice	A	1	CCSS.ELA-Literacy.RL.6.4	Reading		0.51		
12	Multiple Choice	C	1	CCSS.ELA-Literacy.RL.6.2	Reading		0.56		
13	Multiple Choice	B	1	CCSS.ELA-Literacy.RL.6.1	Reading		0.43		
14	Multiple Choice	B	1	CCSS.ELA-Literacy.RL.6.3	Reading		0.69		
15	Multiple Choice	C	1	CCSS.ELA-Literacy.RL.6.1	Reading		0.46		
16	Multiple Choice	B	1	CCSS.ELA-Literacy.RL.6.1	Reading		0.42		
17	Multiple Choice	A	1	CCSS.ELA-Literacy.RL.6.1	Reading		0.65		
18	Multiple Choice	D	1	CCSS.ELA-Literacy.RL.6.3	Reading		0.54		
19	Multiple Choice	A	1	CCSS.ELA-Literacy.RL.6.5	Reading		0.54		
20	Multiple Choice	B	1	CCSS.ELA-Literacy.RL.6.3	Reading		0.71		
21	Multiple Choice	D	1	CCSS.ELA-Literacy.RL.6.6	Reading		0.59		
29	Multiple Choice	A	1	CCSS.ELA-Literacy.RI.6.3	Reading		0.71		
30	Multiple Choice	D	1	CCSS.ELA-Literacy.RI.6.1	Reading		0.59		
31	Multiple Choice	D	1	CCSS.ELA-Literacy.RI.6.3	Reading		0.49		
32	Multiple Choice	B	1	CCSS.ELA-Literacy.RI.6.3	Reading		0.57		
33	Multiple Choice	C	1	CCSS.ELA-Literacy.RI.6.5	Reading		0.63		
34	Multiple Choice	C	1	CCSS.ELA-Literacy.RI.6.2	Reading		0.53		
35	Multiple Choice	B	1	CCSS.ELA-Literacy.RI.6.2	Reading		0.51		
Book 2									
36	Multiple Choice	B	1	CCSS.ELA-Literacy.RL.6.3	Reading		0.66		
37	Multiple Choice	B	1	CCSS.ELA-Literacy.RL.6.5	Reading		0.71		
38	Multiple Choice	C	1	CCSS.ELA-Literacy.RL.6.4	Reading		0.69		
39	Multiple Choice	A	1	CCSS.ELA-Literacy.RL.6.5	Reading		0.73		
40	Multiple Choice	D	1	CCSS.ELA-Literacy.RL.6.2	Reading		0.69		
41	Multiple Choice	C	1	CCSS.ELA-Literacy.RL.6.1	Reading		0.74		
42	Multiple Choice	C	1	CCSS.ELA-Literacy.RL.6.2	Reading		0.72		
43	Constructed Response		2	CCSS.ELA-Literacy.RI.6.4	Writing to Sources	CCSS.ELA-Literacy.L.6.1, CCSS.ELA-Literacy.L.6.2		1.42	0.71