

We Can All Be Winners Here!

by Lamar Green, Grade 6

If you listen to the news these days, you know that everybody is concerned that kids aren't eating enough nutritious food. If any of these concerned **citizens** ever visited our cafeteria at lunch time, they might worry even more! Yes, the daily hot lunch features healthy food, but the vegetables taste terrible. They're either overcooked frozen vegetables, or if they're in salads, they are not very fresh. And then what happens? Kids leave the vegetables untouched. Who wants to eat mushy broccoli or **wilted** lettuce? So the school spends money

on food that gets thrown away, and we kids don't get a complete, nutritious meal. Everybody loses.

But there's a way for everyone to win: Our school could set up a farm-to-school program. Over 2,000 schools all across the country already have farm-to-school programs that are running successfully. Here's how it works: The school sets up an arrangement with local farmers, who sell certain fresh fruits and vegetables to the school every few days. Farm-to-school programs also include classroom visits from farmers, who help kids understand what's involved in farming, and field trips for kids to see real farms firsthand.



The farmers win because they have a nearby market for their crops that they can depend on. They don't have to drive around, selling their food to different stores at a lower price, so the stores can turn around and sell it at a higher price. This means farmers earn more money and don't have to spend as much on transportation.

The school wins, too, because it gets to know the local farmers. It can work with farmers to decide which kinds of fruits and vegetables to grow. (Maybe we kids can make suggestions, too—that would be cool!)

But most of all, kids win. We get tasty, fresh fruit and vegetables



to eat. Think how fantastic it would be if our cafeteria also included a great salad bar! And along with eating better, we could learn more about where our food comes from through classroom visits and field trips. We'd get to know the farmers in our community and see for ourselves how our food is grown.

I hope I've made it clear why our school should set up a farm-to-school program. Everybody wins!





We Can All Be Winners Here

KEY VOCABULARY

- **citizens** (noun) A *citizen* is a resident of a particular place.
- **wilted** (adjective) *Wilted* means limp and faded.

- ▶ Why do kids currently throw away their school lunches at the author's school?
- ▶ What evidence does the author give to support his viewpoint that a farm-to-school program can help farmers?
- ▶ How might you benefit from a farm-to-school program if there was one at your school?
- ▶ Distinguish between facts and opinions in the text.
- ▶ Do you agree with the author that setting up a farm-to-school program can help children eat healthily?
- ▶ Imagine your job is to create television commercials. Design a commercial to persuade people to eat a healthy lunch. Include facts (not opinions!) from the letter. Write about or discuss your commercial.



SPLENDID SPIDERS

Fear of spiders is common. “Ugh!” people say, “Keep that creepy thing away from me.” Many people get out the broom when they see a spider in the house. And some people panic when they see just a photo of a spider. Fearful reactions may be common, but they are not sensible. Only a few kinds of spiders can harm people. Spiders are actually helpful because they eat insects. Spiders are fascinating creatures that deserve to be admired.

Spiders belong to a class of animals called **arachnids**. Unlike insects, spiders have eight legs, not six, and no wings or **antennae**. There are more than 35 *thousand* known **species** of spiders, with more species yet to be discovered. Spiders are successful predators that live all over the world.

Spiders share the unique ability to produce silk from their bodies. About half of the world’s spiders use their silk to spin webs, which are highly effective traps. The spider rests quietly in the web or nearby, waiting for its **prey**. An insect that lands on the sticky strands of silk cannot escape.

Webs come in many shapes, including funnels, sheets, and messy-looking cobwebs. The most familiar image of a web belongs to **orb-weavers**. Orb-weavers, such as the garden spider, create large, delicate, and beautifully patterned webs that **glisten** with dew.



Orb-weavers create delicate and beautifully patterned webs.

Spider silk is famous for its strength and its ability to stretch without breaking. The very large webs of certain orb-weavers have even been used as fishing nets. A spider produces different kinds of silk for different purposes. Dragline silk, for example, is a lifeline for a dangling spider. It is stronger than a steel wire of the same width, and much more stretchable. **Engineers** and scientists study spider silk as they try to make a fiber that is equally strong and flexible. Such lab-made spider silk could have many uses, from ultra-strong fabrics to supports for broken bones.



Spiders do amazing things. For example, they taste their food by using the hairs on their legs. They digest their food *before* they swallow it, using chemicals to turn it into liquid. Young spiders leave their birthplace by “ballooning”—riding air **currents** on lightweight



Spider silk is so strong and flexible that engineers want to make fiber just like it.

silk threads. In addition to spiders that trap prey, there are spiders that jump, spiders that spit, and spiders that fish. Trapdoor spiders live in silken **burrows** with removable lids. When an insect passes by, the spider pops out from under the lid and grabs its prey in a flash.

People may say, “A spider—ugh!” However, once they learn a little more about spiders, it might be more fitting to say, “A spider—wow!” Spiders are marvels of the natural world.



Splendid Spiders

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KEY VOCABULARY

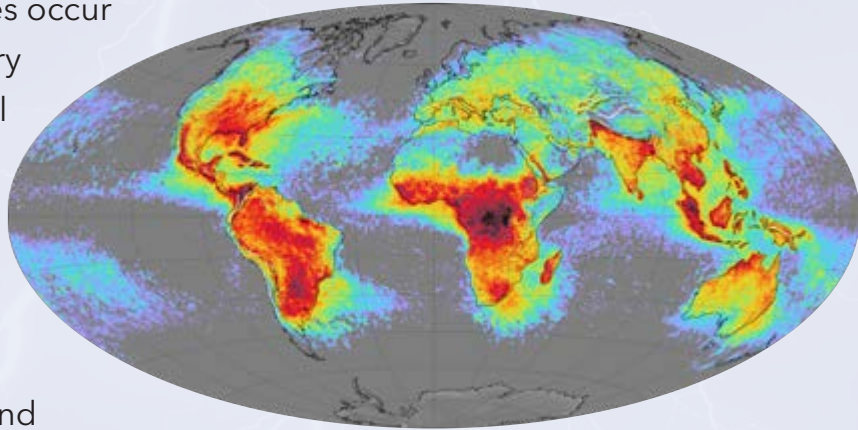
- **arachnids** (noun) An *arachnid* is an animal with eight legs.
- **antennae** (noun) An *antenna* is a long, thin body part used for sensing.
- **species** (noun) A *species* is a classification of living organisms.
- **prey** (noun) *Prey* is an animal that is hunted and eaten by another.
- **orb** (noun) An *orb* is a rounded shape or a sphere.
- **glisten** (verb) To *glisten* is to shine or sparkle.
- **engineers** (noun) An *engineer* is a person who designs buildings or machines.
- **currents** (noun) A *current* is a body of air moving in one direction.
- **burrows** (noun) A *burrow* is a hole or tunnel where an animal lives.

- ▶ Name three things you learned about what spiders look like and where they live.
- ▶ Explain how spider webs can be “highly effective traps.”
- ▶ Why are scientists and engineers studying spider silk? How might their studies affect your life?
- ▶ How is an orb-weaver similar to a trapdoor spider? How is it different?
- ▶ The author gives an opinion in the last paragraph. Do you agree? Explain.
- ▶ Imagine you are a spider. Use evidence from the text to write about or discuss a typical day in your life.

WHEN LIGHTNING STRIKES

Imagine two huge lightning bolts **simultaneously** strike the tips of two skyscrapers. Impossible? Well, just such a thing happened in Chicago in 2010, and one photographer was lucky enough to capture the spectacular moment. But then, lightning flashes often have a way of being highly dramatic.

Most of us don't see many lightning flashes in a year, but don't be fooled. According to recent satellite data, over three million lightning flashes occur worldwide every day. Most travel from cloud to cloud, but about 860,000 of them strike either the ground or some water surface on Earth.



Places where the most lightning strikes occur are shown in deep red.

Lightning travels at the speed of light, which is 186,282 miles per second (299,792,458 meters per second). The reason the thunder we hear trails far behind the lightning we see is because the speed of sound is **comparatively** slow. It takes five seconds just to travel a mile (3 seconds per kilometer) in warm summer air. This difference in speeds provides a quick way of estimating how close an electrical storm is. As soon as you see a lightning flash, start counting seconds (*one thousand and one, one thousand and two*). Stop when you hear the thunder and divide by five to get the number of miles.

As enjoyable as lightning is to watch, it can do tremendous damage. Lightning strikes are the major cause of forest fires and frequently cause power **outages**. A lightning strike in northern New York caused a blackout that **paralyzed** New York City in 1977. More importantly, about 24,000 people are killed by lightning every year. Ten times that number are seriously injured. So if you see a flash of lightning, start counting. The latest guidelines say to head for shelter as soon as that number is under 30.

If you're in a car, make sure the windows and doors are closed. If you're outdoors and can't reach a building, avoid anything tall in your area. Lightning tends to take the most direct route to Earth, striking the closest (tallest) object that happens to be in its path.



Lightning occurs in electrical storms.

Stay away from single trees, high fences, and other such structures, especially metal ones that **conduct** electricity. Avoid open areas. If you are swimming in water, get out. If you can't get out of the open, crouch close to the ground.

If you make it indoors, you still have to be careful. These days, buildings include various forms of lightning protection, but lightning is tricky. It can travel through phone lines, so only use cell phones for calls. It can come through faucets, so don't take a shower or wash anything during a storm. Don't stand close to windows.

Electrical storms are amazingly beautiful, but don't forget that they are also amazingly dangerous!



When Lightning Strikes

KEY VOCABULARY

- **simultaneously** (adverb) *Simultaneously* means happening at the same time.
- **comparatively** (adverb) *Comparatively* means relative to something else.
- **outages** (noun) An *outage* is a period when a service is unavailable.
- **paralyzed** (verb) *Paralyzed* means unable to move.
- **conduct** (verb) To *conduct* is to transfer, for example, heat or electricity.

- ▶ List three facts you learned about lightning.
- ▶ Explain a way to estimate how close an electrical storm is.
- ▶ How might you use what you learned about lightning to stay safe in an electrical storm?
- ▶ How are lightning flashes and forest fires connected?
- ▶ The author states that lightning storms are “amazingly beautiful.” Explain why you agree or disagree.
- ▶ Imagine you are a meteorologist, and an electrical storm is coming your way. Use evidence from the text to give an oral or written weather report.

The Business of Zoos

Early in the twenty-first century, **conservation** groups in Thailand protested against shipping elephants to zoos in Australia. Supporters of animal rights in the United States claimed that elephants in city zoos were being harmed. The leader of one animal-protection group asked, "Is there any value having elephants at zoos other than to allow people to see them in person?"

Allowing people to see **exotic** animals is a main purpose of zoos. Ever since ancient times, wild animals from distant lands have been put on display, simply for people's viewing pleasure.

A zoo animal was placed in a cage with bars. Keepers fed it and cleaned its cage, but paid no attention to its other needs. A caged animal had nothing to do. Zoo visitors might see a lion or a bear endlessly **pacing** its tiny cell. They might see a gorilla sitting on a concrete floor, staring blankly. At times, visitors felt more sadness than awe.

In the late twentieth century, many zoos began to change. Zoos created natural-looking environments, such as rainforests and large outdoor enclosures. Many zoos offered animals more space and stimulating activities. But zoo critics point out that even in natural-looking environments, most animals have nowhere to hide, as they would in nature. They must be on display for visitors.



Outdoor enclosures provide more natural environments for zoo animals.



Zoo supporters say animals born in zoos would not be able to survive in the wild.

Some opponents of zoos say that there is no need for people to see exotic animals up close anymore. Television and the Internet make it easy to view wild animals in their natural **habitats**.

Supporters of zoos argue that educating the public about wildlife is a worthwhile goal. When people get close to a mighty gorilla or an adorable panda, for example, they are willing to give money to help save these animals' threatened habitats. The people that work at zoos are often active in conservation programs that protect species in the wild. Many zoo doctors have saved the lives of sick animals in wildlife preserves.

Zoo supporters also emphasize that today's zoo animals are mainly

born in **captivity**. They are not caught in the wild and brought to the zoo. Some zoos even run captive-breeding programs. These programs are designed to return the zoo's baby animals to the wild one day. For example, the breeding program set up by a New York zoo in the early 1900s, saved the "American buffalo" from **extinction**. Instead, today, tens of thousands of **bison** roam the North American plains. These kinds of programs tend to be costly, however. They also have a low success rate. To survive in the wild, most animals need to be born there.

Very few people want to ban zoos entirely. Zoo critics and supporters alike, including many in the zoo business, have some shared goals. They want to make sure that captive animals live well, and that wild animals can live freely.



The Business of Zoos

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KEY VOCABULARY

- **conservation** (noun) *Conservation* is the act of protecting a natural resource.
- **exotic** (adjective) *Exotic* means unusual or coming from a faraway land.
- **pacing** (verb) To *pace* is to walk back and forth when anxious.
- **habitats** (noun) A *habitat* is the place where a plant or animal usually lives.
- **captivity** (noun) *Captivity* is the state of being confined.
- **extinction** (noun) *Extinction* is the disappearance of a species.
- **bison** (noun) A *bison* is a large, shaggy mammal.

- ▶ According to the passage, what is the main purpose of zoos?
- ▶ Explain how caged animals in early zoos might have been harmed, even though their basic needs for food and shelter were being met.
- ▶ Describe the differences between a zoo 100 years ago and a zoo today. Create an illustration to show these differences.
- ▶ How do zoos help animals that are living in the wild?
- ▶ Do you agree with zoo critics who say people don't need zoos because they can view exotic animals on television or on the Internet? Why or why not?
- ▶ How would you improve zoos if you could?



Balancing the Needs of People and Plovers



Certain kinds of **plovers** such as the piping plover, hooded plover, and western snowy plover, build their nests on sandy beaches. They build them between dunes or sea walls and the high-tide mark. This is precisely where beachgoers like to lay down their towels to enjoy a day at the beach.

This has created quite a debate. On one side, are the cute little birds that have been described as “cotton balls on toothpicks.” Their light brown, white and gray coloring makes them hard to spot

on the sand. In spring, these birds lay their tiny, sand-colored, hard-to-see eggs in shallow nests dug into the sand.

These nests face danger from many sources. Storms and **surging** waves may wash them away. The eggs may be crushed by careless humans (on foot, in off-road **vehicles**, and with dogs). They may also be eaten by **predators** (such as foxes, cats, gulls, crows, and ravens).

If the eggs survive and hatch, it takes over a month for the chicks to grow strong enough to fly. To help them grow, plovers look for food by the water’s edge



or in seaweed on the beach. If they're frightened by people or predators, they run and hide wherever they can. This running and hiding uses up valuable energy. If it happens often enough in a day, a chick will starve.

Because their numbers are so low, beach-nesting plovers' status is "**threatened**." This means there are laws to protect them and organizations looking out for them. Some of the **techniques** used to protect nesting plovers include putting ropes around nests, and providing little wooden shelters for chicks to hide in. The most extreme of all is closing off part or all of a beach during nesting season (which occurs between April to August).

All this protection angers the other side of the debate: beachgoers. Plovers are drawn to exactly the wide, sandy beaches that people like to frequent. When it has come down to the plovers' right to protection or people's beach-going rights, plovers have

won. People find themselves cut off from favorite beaches and crowded into what is left. But all this may be changing.

Plover experts now believe that the biggest danger to plover nests are storms and predators. Nothing can be done about storms, and destroying or relocating plover predators creates new problems. But it does seem that predators stay away from beaches often filled with people. So

Plovers are drawn to wide, sandy beaches.



some beach communities have begun to have a more "relaxed" attitude. They rope off any plover nests and post warnings to protect the plovers, but they don't close off the beach. The little birds seem willing to coexist with people, as long as the people don't disturb their nests or chicks.

Maybe, just maybe, we can all get along!

Balancing the Needs of People and Plovers

KEY VOCABULARY

- **plovers** (noun) A *plover* is a small bird that wades in the sea.
- **surgin** (verb) To *surge* is to move forward powerfully.
- **vehicles** (noun) A *vehicle* is something used for carrying people or goods.
- **predators** (noun) A *predator* is an animal that hunts and eats another.
- **threatened** (adjective) *Threatened* means in danger.
- **techniques** (noun) A *technique* is a way of doing a task.

- ▶ List three dangers that threaten plovers' nests.
- ▶ Explain how people on the beach can harm plovers.
- ▶ How might you use what you learned about plovers to help save them?
- ▶ If an entire beach is closed off during nesting season, how might beachgoers react?
- ▶ Do you think there should be laws to close beaches to protect the plovers? Why or why not?
- ▶ Imagine it is your job to create beach signs to protect plovers. Include information from the article on your sign.