Just off the coast of Southern California sits Santa Cruz Island, where a magical creature called the island fox \_\_26\_\_. A decade ago, this island's ecosystem was in \_\_27\_\_ Wild pigs attracted golden eagles from the mainland, and those flying \_\_28\_\_ crashed the fox population. So the Nature Conservancy launched a \_\_29\_\_ war against the pigs, complete with helicopters and sharp shooters.

And it worked. Today, federal agencies are pulling the island fox from the Endangered Species List. It's the fastest-ever recovery of a mammal, joining peers like the Louisiana black bear as glowing successes in the history of the Endangered Species Act.

But the recovery of Santa Cruz Island isn't just about the fox. The Nature Conservancy has \_\_30\_\_ war on a multitude of invasive species here, from sheep to plants to the \_\_31\_\_ Argentine ant. "Our philosophy with the island has always been, 'OK, \_\_32\_\_ the threats and let the island go back to what it was," says ecologist Christina Boser. And it appears to be working. Native plants are coining back, and the fox once again bounds about carefree.

But keeping those foxes from harm will occupy Boser and her colleagues for years to come. You see, humans are still allowed on Santa Cruz Island, and they bring dogs. So Boser has to vaccinate her foxes against various diseases. "We're obligated to keep a pulse on the population for at least five years after the foxes are delisted," says Boser. That includes tagging the foxes and \_\_33\_\_ their numbers to ensure nothing goes wrong.

This is the story of the little fox that has come back, and the people who have \_\_34\_\_ their lives to protecting it. This is the story of wildlife conservation in the age of mass \_\_35\_\_.

A) aggressive B) chaos C) configuration D) declared E) dedicated F) dwells G) extinction H) fierce I) hinders J) mammal K) monitoring L) predators M) remove N) tempt O) underlying

Do Parents Invade Children's Privacy When They Post Photos Online?

A) When Katlyn Burbidge's son was 6 years old, he was performing some ridiculous song and dance typical of a first-grader. But after she snapped a photo and started using her phone, he asked her a serious question: "Are you going to post that online?" She laughed and answered, "Yes, I think I will." What he said next stopped her. "Can you not?"

B) That's when it dawned on her: She had been posting photos of him online without asking his permission. "We're big advocates of bodily autonomy and not forcing him to hug or kiss people unless he wants to, but it never occurred to me that I should ask his permission to post photos of him online," says Burbidge, a mom of two in Wakefield, Massachusetts. "Now when I post a photo of him online, I show him the photo and get his okay. "

C) When her 8-month-old is 3 or 4 years old, she plans to start asking him in an age-appropriate way, "Do you want other people to see this?" That’s precisely the approach that two researchers advocated before a room of pediatricians （儿科医生）last week at the American Academy of Pediatrics meeting, when they discussed the 21st century challenge of "sharenting", a new term for parents' online sharing about their children. "As advocates of children's rights, we believe that children should have a voice about what information is shared about them if possible", says Stacey Steinberg, a legal skills professor at the University of Florida Levin College of Law in Gainesville.

D) Whether it's ensuring that your child isn't bullied over something you post, that their identity isn't digitally "kidnapped", or that their photos don't end up on a half dozen child pornography (色情） sites, as one Australian mom discovered, parents and pediatricians are increasingly aware of the importance of protecting children's digital presence. Steinberg and Bahareh Keith, an assistant professor of pediatrics at the University of Florida College of Medicine, say most children will likely never experience problems related to what their parents share, but a tension still exists between parents' rights to share their experiences and their children's rights to privacy.

E) "We're in no way trying to silence parents, voices," Steinberg says. "At the same time, we recognize that children might have an interest in entering adulthood free to create their own digital footprint. "They cited a study presented earlier this year of 249 pairs of parents and their children in which twice as many children as parents wanted rules on what parents could share. "The parents said, ‘We don't need rules-we're fine,’ and the children said, ‘Our parents need rules,’ Keith says. "The children wanted autonomy about this issue and were worried about their parents sharing information about them. "

F) Although the American Academy of Pediatrics offers guidelines recommending that parents model appropriate social media use for their children, it does not explicitly discuss oversharing by parents. "I think this is a very legitimate concern, and I appreciate their drawing our attention to it", David Hill, a father of five, says. He sees a role for pediatricians to talk with parents about this，but believes the messaging must extend far beyond pediatricians, offices. "I look forward to seeing researchers expand our understanding of the issue so we can translate it into effective education and policy," he says.

G) There's been little research on the topic, Steinberg wrote in a law article about this issue. While states could pass laws related to sharing information about children online, Steinberg feels parents themselves are generally best suited to make these decisions for their families. "While we didn't want to create any unnecessary panic, we did find some concerns that were troublesome, and we thought that parents or at least physicians should be aware of those potential risks," Steinberg says. They include photos repurposed for inappropriate or illegal means, identity theft, embarrassment, bullying by peers or digital kidnapping.

H) But that's the negative side, with risks that must be balanced against the benefits of sharing. Steinberg pointed out that parental sharing on social media helps build communities, connect spread-out families, provide support and raise awareness around important social issues for which parents might be their children's only voice.

I) A C. S. Mott survey found among the 56 percent of mothers and 34 percent of fathers who discussed parenting on social media, 72 percent of them said sharing made them feel less alone, and nearly as many said sharing helped them worry less and gave them advice from other parents. The most common topics they discussed included kids' sleep, nutrition, discipline, behavior problems and day care and preschool.

J) "There's this peer-to-peer nature of health care these days with a profound opportunity for parents to learn helpful tips, safety and prevention efforts, pro-vaccine messages and all kinds of other messages from other parents in their social communities", says Wendy Sue Swanson, a pediatrician and executive director of digital health at Seattle Children’s Hospital, where she blogs about her own parenting journey to help other parents. "They're getting nurtured by people they've already selected that they trust." she says.

K) "How do we weigh the risks, how do we think about the benefits, and how do we alleviate the risks?" she says. "Those are the questions we need to ask ourselves, and everyone can have a different answer."

L) Some parents find the best route for them is not to share at all. Bridget O'Hanlon and her husband, who live in Cleveland, decided before their daughter was born that they would not post her photos online. When a few family members did post pictures, O'Hanlon and her husband made their wishes clear. "It's been hard not to share pictures of her because people always want to know how babies and toddlers (学走路的孩子）are doing and to see pictures, but we made the decision to have social media while she did not," O'Hanlon said. Similarly, Alison Jamison of New York decided with her husband that their child had a right to their own online identity. They did use an invitation-only photo sharing platform so that friends and family, including those far away, could see the photos, but they stood firm, simply refusing to put their child's photos on other social media platforms.

M) "For most families, it's a journey. Sometimes it goes wrong, but most of the time it doesn't, " says Swanson, who recommends starting to ask children permission to post narratives or photos around ages 6 to 8. "We'll learn more and more what our tolerance is. We can ask our kids to help us learn as a society what's okay and what's not. "

N) Indeed, that learning process goes both ways. Bria Dunham, a mother in Somerville, Massachusetts, was so excited to watch a moment of brotherly bonding while her first-grader and baby took a bath together that she snapped a few photos. But when she considered posting them online, she took the perspective of her son: How would he feel if his classmates, parents saw photos of him chest-up in the bathtub? "It made me think about how I'm teaching him to have ownership of his own body and how what is shared today endures into the future," Dunham says. "So I kept the pictures to myself and accepted this as one more step in supporting his increasing autonomy. "

36. Steinberg argued parental sharing online can be beneficial.

37. According to an expert, when children reach school age, they can help their parents learn what can and cannot be done.

38. One mother refrained from posting her son’s photos online when she considered the matter from her son's perspective.

39. According to a study, more children than parents think there should be rules on parents' sharing.

40. Katlyn Burbidge had never realized she had to ask her son's approval to put his photos online.

41. A mother decided not to post her son's photo online when he asked her not to.

42. A woman pediatrician tries to help other parents by sharing her own parenting experience.

43. There are people who decide simply not to share their children's photos online.

44. Parents and physicians should realize sharing information online about children may involve risks.

45. Parents who share their parenting experiences may find themselves intruding into their children's privacy.

Passage One

Questions 46 to 50 are based on the following passage.

Perhaps it is time for farmers to put their feet up now that robots are used to inspect crops, dig up weeds, and even have become shepherds, too. Commercial growing fields are astronomically huge and take thousands of man-hours to operate. One prime example is one of Australia's most isolated cattle stations, Suplejack Downs in the Northern Territory, extending across 4,000 square kilometers, taking over 13 hours to reach by car from the nearest major town—Alice Springs.

The extreme isolation of these massive farms leaves them often unattended, and monitored only once or twice a year, which means if the livestock falls ill or requires assistance, it can be a long time for farmers to discover.

However, robots are coming to the rescue.

Robots are currently under a two-year trial in Wales which will train 'farmbots' to herd, monitor the health of livestock, and make sure there is enough pasture for them to graze on. The robots are equipped with many sensors to identify conditions of the environment, cattle and food, using thermal and vision sensors that detect changes in body temperature.

"You've also got color, texture and shape sensors looking down at the ground to check pasture quality," says Salah Sukkarieh of the University of Sydney, who will carry out trials on several farms in central New South Wales.

During the trials, the robot algorithms (算法) and mechanics will be fine-tuned to make it better suited to ailing livestock and ensure it safely navigates around potential hazards including trees, mud, swamps, and hills.

"We want to improve the quality of animal health and make it easier for farmers to maintain large landscapes where animals roam free," says Sukkarieh.

The robots are not limited to herding and monitoring livestock. They have been created to count individual fruit, inspect crops, and even pull weeds.

Many robots are equipped with high-tech sensors and complex learning algorithms to avoid injuring humans as they work side by side. The robots also learn the most efficient and safest passages, and allow engineers and farmers to analyze and better optimize the attributes and tasks of the robot, as well as provide a live stream giving real-time feedback on exactly what is happening on the farms.

Of course, some worry lies in replacing agricultural workers. However, it is fanners that are pushing for the advancements due to ever-increasing labor vacancies, making it difficult to maintain large-scale operations.

The robots have provided major benefits to farmers in various ways, from hunting and pulling weeds to monitoring the condition of every single fruit. Future farms will likely experience a greater deal of autonomy as robots take up more and more farm work efficiently.

46. What may farmers be able to do with robots appearing on the farming scene?

A) Upgrade farm produce.

B) Enjoy more leisure hours.

C) Modify the genes of crops.

D) Cut down farming costs.

47. What will 'farmbots' be expected to do?

A) Take up many of the farmers, routines.

B) Provide medical treatments for livestock.

C) Lead the trend in farming the world over.

D) Improve the quality of pastures for grazing.

48. What can robots do when equipped with high-tech sensors and complex learning algorithms?

A) Help farmers choose the most efficient and safest passages.

B) Help farmers simplify their farming tasks and management.

C) Allow farmers to learn instantly what is occurring on the farm.

D) Allow farmers to give them real-time instructions on what to do.

49. Why are farmers pressing for robotic farming?

A) Farming costs are fast increasing.

B) Robotics technology is maturing.

C) Robotic fanning is the trend.

D) Labor shortage is worsening.

50. What does the author think future farms will be like?

A) More and more automated.

B) More and more productive.

C) Larger and larger in scale.

D) Better and better in condition.

Passage Two

Questions 51 to 55 are based on the following passage.

The public must be able to understand the basics of science to make informed decisions. Perhaps the most dramatic example of the negative consequences of poor communication between scientists and the public is the issue of climate change, where a variety of factors, not the least of which is a breakdown in the transmission of fundamental climate data to the general public, has contributed to widespread mistrust and misunderstanding of scientists and their research.

The issue of climate change also illustrates how the public acceptance and understanding of science (or the lack of it) can influence governmental decision-making with regard to regulation, science policy and research funding.

However, the importance of effective communication with a general audience is not limited to hot issues like climate change. It is also critical for socially charged neuroscience issues such as the genetic basis for a particular behavior, the therapeutic potential of stem cell therapy for neurodegenerative diseases, or the use of animal models, areas where the public understanding of science can also influence policy and funding decisions. Furthermore, with continuing advances in individual genome (基因组) sequencing and the advent of personalized medicine, more non-scientists will need to be comfortable analyzing complex scientific information to make decisions that directly affect their quality of life.

Science journalism is the main channel for the popularization of scientific information among the public. Much has been written about how the relationship between scientists and the media can shape the efficient transmission of scientific advances to the public. Good science journalists are specialists in making complex topics accessible to a general audience, while adhering to scientific accuracy.

Unfortunately, pieces of science journalism can also oversimplify and generalize their subject material to the point that the basic information conveyed is obscured or at worst, obviously wrong. The impact of a basic discovery on human health can be exaggerated so that the public thinks a miraculous cure is a few months to years away when in reality the significance of the study is far more limited.

Even though scientists play a part in transmitting information to journalists and ultimately the public, too often the blame for ineffective communication is placed on the side of the journalists. We believe, that at least part of the problem lies in places other than the interaction between scientists and members of the media, and exists because for one thing we underestimate how difficult it is for scientists to communicate effectively with a diversity of audiences, and for another most scientists do not receive formal training in science communication.

51. What does the example of climate change serve to show?

A) The importance of climate data is increasingly recognized.

B) Adequate government funding is vital to scientific research.

C) Government regulation helps the public understand science.

D) Common folks' scientific knowledge can sway policy making.

52. What should non-scientists do to ensure their quality of life?

A) Seek personalized medical assistance from doctors.

B) Acquire a basic understanding of medical science.

C) Have their individual genome sequenced.

D) Make informed use of animal models.

53. Why is it important for scientists to build a good relationship with the media?

A) It helps them to effectively popularize new scientific information.

B) It enables the public to develop a positive attitude toward science.

C) It helps them to establish a more positive public image.

D) It enables them to apply their findings to public health.

54. What does the author say is the problem with science journalism?

A) It is keen on transmitting sensational information.

B) It tends to oversimplify people's health problems.

C) It may give inaccurate or distorted information to the public.

D) It may provide information open to different interpretations.

55. What should scientists do to impart their latest findings to the public more effectively?

A) Give training to science journalists.

B) Stimulate public interest in science.

C) Seek timely assistance from the media.

D) Improve their communication skills.

Surfing the Internet during class doesn't just steal focus from the educator；it also hurts students who're already struggling to \_\_26\_\_ the material. A new study from Michigan State University, though, argues that all students—including high achievers—see a decline in performance when they browse the Internet during class for non-academic purposes.

To measure the effects of Internet-based distractions during class, researchers \_\_27\_\_ 500 students taking an introductory psychology class at Michigan State University. Researchers used ACT scores as a measure of intellectual \_\_28\_\_ Because previous research has shown that people with high intellectual abilities are better at \_\_29\_\_ out distractions, researchers believed students with high ACT scores would not show a \_\_30\_\_ decrease in performance due to their use of digital devices. But students who surfed the web during class did worse on their exams regardless of their ACT scores, suggesting that even the academically smartest students are harmed when they're distracted in class.

College professors are increasingly \_\_31\_\_ alarm bells about the effects smartphones, laptops, and tablets have on academic performance. One 2013 study of college students found that 80% of students use their phones or laptops during class, with the average student checking their digital device 11 times in a \_\_32\_\_ class. A quarter of students report that their use of digital devices during class causes their grades to \_\_33\_\_.

Professors sometimes implement policies designed to \_\_34\_\_ students' use of digital devices, and world where people are increasingly some instructors even confiscate (没收）tablets and phones. In dependent on their phones, though, such strategies often fail. One international study found that 84% of people say they couldn't go a day without their smartphones. Until students are able to \_\_35\_\_ the pull of social networking, texting, and endlessly surfing the web, they may continue to straggle in their classes.

A) aptitude B) eradication C) evaluated D) evaporated E) filtering F) grasp G) legacy H) minimize I) obscure J) obsess K) raising L) resist M) significant N) suffer O) typical

A Pioneering Woman of Science Re-Emerges after 300 Years

A) Maria Sibylla Merian, like many European women of the 17th century, stayed busy managing a household and rearing children. But on top of that, Merian, a German-born woman who lived in the Netherlands, also managed a successful career as an artist, botanist, naturalist and entomologist (昆虫学家).

B) "She was a scientist on the level with a lot of people we spend a lot of time talking about," said Kay Etheridge, a biologist at Gettysburg College in Pennsylvania who has been studying the scientific history of Merian's work. "She didn't do as much to change biology as Charles Darwin, but she was significant. "

C) At a time when natural history was a valuable tool for discovery, Merian discovered facts about plants and insects that were not previously known. Her observations helped dismiss the popular belief that insects spontaneously emerged from mud. The knowledge she collected over decades didn't just satisfy those curious about nature, but also provided valuable insights into medicine and science. She was the first to bring together insects and their habitats, including food they ate, into a single ecological composition.

D) After years of pleasing a fascinated audience across Europe with books of detailed descriptions and life-size paintings of familiar insects, in 1699 she sailed with her daughter nearly 5, 000 miles from the Netherlands to South America to study insects in the jungles of what is now known as Suriname. She was 52 years old. The result was her masterpiece, Metamorphosis Insectorum Surinamensium.

E) In her work, she revealed a side of nature so exotic, dramatic and valuable to Europeans of the time that she received much acclaim. But a century later, her findings came under scientific criticism. Shoddy（粗糙的）reproductions of her work along with setbacks to women's roles in 18th- and 19th- century Europe resulted in her efforts being largely forgotten. "It was kind of stunning when she sort of dropped off into oblivion（遗忘）," said Dr. Etheridge. "Victorians started putting women in a box, and they're still trying to crawl out of it."

F) Today, the pioneering woman of the sciences has re-emerged. In recent years, feminists，historians and artists have all praised Merian's tenacity（坚韧）, talent and inspirational artistic compositions. And now biologists like Dr. Etheridge are digging into the scientific texts that accompanied her art. Three hundred years after her death, Merian will be celebrated at an international symposium in Amsterdam this June.

G) And last month, Metamorphosis Insectorum Surinamensium was republished. It contains 60 plates (插图）and original descriptions, along with stories about Merian's life and updated scientific descriptions. Before writing Metamorphosis, Merian spent decades documenting European plants and insects that she published in a series of books. She began in her 20s, making textless, decorative paintings of flowers with insects. "Then she got really serious," Dr. Etheridge said. Merian started raising insects at home, mostly butterflies and caterpillars. "She would sit up all night until they came out of the pupa (桶）so she could draw them," she said.

H) The results of her decades' worth of careful observations were detailed paintings and descriptions of European insects, followed by unconventional visuals and stories of insects and animals from a land that most at the time could only imagine. It's possible Merian used a magnifying glass to capture the detail of the split tongues of sphinx moths (斯芬克斯飞蛾）depicted in the painting. She wrote that the two tongues combine to form one tube for drinking nectar (花蜜）. Some criticized this detail later, saying there was just one tongue, but Merian wasn't wrong. She may have observed the adult moth just as it emerged from its pupa. For a brief moment during that stage of its life cycle, the tongue consists of two tiny half-tubes before merging into one.

I) It may not have been ladylike to depict a giant spider devouring a hummingbird, but when Merian did it at the turn of the 18th century, surprisingly, nobody objected. Dr. Etheridge called it revolutionary. The image, which also contained novel descriptions of ants, fascinated a European audience that was more concerned with the exotic story unfolding before them than the gender of the person who painted it.

J) "All of these things shook up their nice, neat little view," Dr. Etheridge said. But later, people of the Victorian era thought differently. Her work had been reproduced, sometimes incorrectly. A few observations were deemed impossible. "She'd been called a silly woman for saying that a spider could eat a bird," Dr. Etheridge said. But Henry Walter Bates, a friend of Charles Darwin, observed it and put it in book in 1863, proving Merian was correct.

K) In the same plate, Merian depicted and described leaf-cutter ants for the first time. "In America there are large ants which can eat whole trees bare as a broom handle in a single night, she wrote in the description. Merian noted how the ants took the leaves below ground to their young. And she wouldn't have known this at the time, but the ants use the leaves to farm fungi (菌类）underground to feed their developing babies.

L) Merian was correct about the giant bird-eating spiders, ants building bridges with their bodies and other details. But in the same drawing, she incorrectly lumped together army and leaf-cutter ants. And instead of showing just the typical pair of eggs in a hummingbird nest, she painted four. She made other mistakes in Metamorphosis Insectorum Surinamensium as well: not every caterpillar and butterfly matched.

M) Perhaps one explanation for her mistakes is that she cut short her Suriname trip after getting sick, and completed the book at home in Amsterdam. And errors are common among some of history's most- celebrated scientific minds, too. "These errors no more invalidate Ms. Merian's work than do well- known misconceptions published by Charles Darwin or Isaac Newton, " Dr. Etheridge wrote in a paper that argued that too many have wrongly focused on the mistakes of her work.

N) Merian's paintings inspired artists and ecologists. In an 1801 drawing from his book, General Zoology Amphibia, George Shaw, an English botanist and zoologist, credited Merian for describing a frog in the account of her South American expedition, and named the young tree frog after her in his portrayal of it. It wouldn't be fair to give Merian all the credit. She received assistance naming plants, making sketches and referencing the work of others. Her daughters helped her color her drawings.

O) Merian also made note of the help she received from the natives of Suriname, as well as slaves or servants that assisted her. In some instances she wrote moving passages that included her helpers in descriptions. As she wrote in her description of the peacock flower, "The Indians, who are not treated well by their Dutch masters, use the seeds to abort their children, so that they will not become slaves like themselves. The black slaves from Guinea and Angola have demanded to be well treated, threatening to refuse to have children. In fact, they sometimes take their own lives because they are treated so badly, and because they believe they will be born again, free and living in their own land. They told me this themselves. "

P) Londa Schiebinger, a professor of the history of science at Stanford University, called this passage rather astonishing. It's particularly striking centuries later when these issues are still prominent in public discussions about social justice and women's rights. "She was ahead of her time," Dr. Etheridge said.

36. Merian was the first scientist to study a type of American ant.

37. The European audience was more interested in Merian's drawings than her gender.

38. Merian's masterpiece came under attack a century after its publication.

39. Merian's mistakes in her drawings may be attributed to her shortened stay in South America.

40. Merian often sat up the whole night through to observe and draw insects.

41. Merian acknowledged the help she got from natives of South America.

42. Merian contributed greatly to people's better understanding of medicine and science.

43. Merian occasionally made mistakes in her drawings of insects and birds.

44. Now, Merian's role as a female forerunner in sciences has been re-established.

45. Merian made a long voyage to South America to study jungle insects over three centuries ago.

Passage One

Questions 46 to 50 are based on the following passage.

While human achievements in mathematics continue to reach new levels of complexity, many of us who aren't mathematicians at heart (or engineers by trade) may struggle to remember the last time we used calculus (微积分）.

It's a fact not lost on American educators, who amid rising math failure rates are debating how math can better meet the real-life needs of students. Should we change the way math is taught in schools, or eliminate some courses entirely?

Andrew Hacker, Queens College political science professor, thinks that advanced algebra and other higher-level math should be cut from curricula in favor of courses with more routine usefulness, like statistics.

"We hear on all sides that we're not teaching enough mathematics, and the Chinese are running rings around us," Hacker says. "I'm suggesting we're teaching too much mathematics to too many people. . . not everybody has to know calculus. If you're going to become an aeronautical (航空的）engineer, fine. But most of us aren't."

Instead, Hacker is pushing for more courses like the one he teaches at Queens College： Numeracy 101. There, his students of "citizen statistics" learn to analyze public information like the federal budget and corporate reports. Such courses, Hacker argues, are a remedy for the numerical illiteracy of adults who have completed high-level math like algebra but are unable to calculate the price of, say, a carpet by area.

Hacker's argument has met with opposition from other math educators who say what's needed is to help students develop a better relationship with math earlier, rather than teaching them less math altogether.

Maria Droujkova is a founder of Natural Math, and has taught basic calculus concepts to 5-year-olds. For Droujkova, high-level math is important, and what it could use in American classrooms is an injection of childlike wonder.

"Make mathematics more available," Droujkova says. "Redesign it so it's more accessible to more kinds of people: young children, adults who worry about it, adults who may have had bad experiences. "

Pamela Harris, a lecturer at the University of Texas at Austin, has a similar perspective. Harris says that American education is suffering from an epidemic of "fake math"一an emphasis on rote memorization (死记硬背）of formulas and steps, rather than an understanding of how math can influence the ways we see the world.

Andrew Hacker, for the record, remains skeptical.

"I'm going to leave it to those who are in mathematics to work out the ways to make their subject interesting and exciting so students want to take it," Hacker says. "All that I ask is that alternatives be offered instead of putting all of us on the road to calculus. "

46. What does the author say about ordinary Americans?

A) They struggle to solve math problems.

B) They think math is a complex subject.

C) They find high-level math of little use.

D) They work hard to learn high-level math.

47. What is the general complaint about America's math education according to Hacker?

A) America is not doing as well as China.

B) Math professors are not doing a good job.

C) It doesn't help students develop their literacy.

D) There has hardly been any innovation for years.

48. What does Andrew Hacker's Numeracy 101 aim to do?

A) Allow students to learn high-level math step by step.

B) Enable students to make practical use of basic math.

C) Lay a solid foundation for advanced math studies.

D) Help students to develop their analytical abilities.

49. What does Maria Droujkova suggest math teachers do in class?

A) Make complex concepts easy to understand.

B) Start teaching children math at an early age.

C) Help children work wonders with calculus.

D) Try to arouse students' curiosity in math.

50. What does Pamela Harris think should be the goal of math education?

A) To enable learners to understand the world better.

B) To help learners to tell fake math from real math.

C) To broaden Americans' perspectives on math.

D) To exert influence on world development.

Passage Two

Questions 51 to 55 are based on the following passage.

For years, the U. S. has experienced a shortage of registered nurses. The Bureau of Labor Statistics projects that while the number of nurses will increase by 19 percent by 2022, demand will grow faster than supply, and that there will be over one million unfilled nursing jobs by then.

So what's the solution? Robots.

Japan is ahead of the curve when it comes to this trend. Toyohashi University of Technology has developed Terapio, a robotic medical cart that can make hospital rounds, deliver medications and other items, and retrieve records. It follows a specific individual, such as a doctor or nurse, who can use it to record and access patient data. This type of robot will likely be one of the first to be implemented in hospitals because it has fairly minimal patient contact.

Robots capable of social engagement help with loneliness as well as cognitive functioning, but the robot itself doesn't have to engage directly—it can serve as an intermediary for human communication. Telepresence robots such as MantaroBot, Vgo, and Giraff can be controlled through a computer, smartphone, or tablet, allowing family members or doctors to remotely monitor patients or Skype them, often via a screen where the robot's ' face' would be. If you can't get to the nursing home to visit grandma, you can use a telepresence robot to hang out with her. A 2016 study found that users had a "consistently positive attitude" about the Giraff robot's ability to enhance communication and decrease feelings of loneliness.

A robot's appearance affects its ability to successfully interact with humans, which is why the RIKEN-TRI Collaboration Center for Human-Interactive Robot Research decided to develop a robotic nurse that looks like a huge teddy bear. RIBA (Robot for Interactive Body Assistance), also known as ‘Robear', can help patients into and out of wheelchairs and beds with its strong arms.

On the less cute and more scary side there is Actroid F, which is so human-like that some patients may not know the difference. This conversational robot companion has cameras in its eyes, which allow it to track patients and use appropriate facial expressions and body language in its interactions. During a month- long hospital trial, researchers asked 70 patients how they felt being around the robot and "only three or four said they didn't like having it around."

It's important to note that robotic nurses don't decide courses of treatment or make diagnoses (though robot doctors and surgeons may not be far off). Instead, they perform routine and laborious tasks, freeing nurses up to attend to patients with immediate needs. This is one industry where it seems the integration of robots will lead to collaboration, not replacement.

51. What does the author say about Japan?

A) It delivers the best medications for the elderly.

B) It takes the lead in providing robotic care.

C) It provides retraining for registered nurses.

D) It sets the trend in future robotics technology.

52. What do we learn about the robot Terapio?

A) It has been put to use in many Japanese hospitals.

B) It provides specific individualized care to patients.

C) It does not have much direct contact with patients.

D) It has not revolutionized medical service in Japan.

53. What are telepresence robots designed to do?

A) Directly interact with patients to prevent them from feeling lonely.

B) Cater to the needs of patients for recovering their cognitive capacity.

C) Closely monitor the patients' movements and conditions around the clock.

D) Facilitate communication between patients and doctors or family members.

54. What is one special feature of the robot Actroid F?

A) It interacts with patients just like a human companion.

B) It operates quietly without patients realizing its presence.

C) It likes to engage in everyday conversations with patients.

D) It uses body language even more effectively than words.

55. What can we infer from the last paragraph?

A) Doctors and surgeons will soon be laid off.

B) The robotics industry will soon take off.

C) Robots will not make nurses redundant.

D) Collaboration will not replace competition.

In what's probably the craziest headline I've ever written, I've reported that \_\_26\_\_ in livestock protection are happening with scientists painting eyes on the butts of cows. The experiment is based upon the idea that farmers who're protecting their herd from lions would shoot and kill lions in an effort to protect their livestock. While this makes a lot of sense, it results in many lion deaths that \_\_27\_\_ would have been unnecessary. Researchers in Australia have been \_\_28\_\_ and testing a method of trickery to make lions think they are being watched by the painted eyes on cow butts.

This idea is based on the principle that lions and other \_\_29\_\_ are far less likely to attack when they feel they are being watched. As conservation areas become smaller, lions are increasingly coming into contact with human populations，which are expanding to the \_\_30\_\_ of these protected areas.

Efforts like painting eyes on cow butts may seem crazy at first, but they could make actual headway in the fight for conservation. "If the method works, it could provide farmers in Botswana -- and \_\_31\_\_ -- with a low-cost, sustainable tool to protect their livestock, and a way to keep lions safe from being killed." Lions are \_\_32\_\_ ambush （埋伏）hunters, so when they feel their prey has \_\_33\_\_ them, they usually give up on the hunt. Researchers are \_\_34\_\_ testing their idea on a select herd of cattle. They have painted half of the cows with eyes and left the other half as normal. Through satellite tracking of both the herd and the lions in the area, they will be able to \_\_35\_\_ if their psychological trickery will work to help keep farmers from shooting lions.

A) advances B) boundaries C) challenging D) currently E) determine F) devising G) elsewhere H) nevertheless I) otherwise J) predators K) primarily L) retorted M) spotted N) testimonies O) wrestle

Resilience Is About How You Recharge, Not How You Endure

A) As constant travelers and parents of a 2-year-old, we sometimes fantasize about how much work we can do when one of us gets on a plane, undistracted by phones, friends, or movies. We race to get all our ground work done: packing, going through security, doing a last-minute work call, calling each other, then boarding the plane. Then, when we try to have that amazing work session in flight, we get nothing done. Even worse, after refreshing our email or reading the same studies over and over, we are too exhausted when we land to soldier on with (继续处理）the emails that have inevitably still piled up.

B) Why should flying deplete us? We're just sitting there doing nothing. Why can't we be tougher, more resilient (有复原力的）and determined in our work so we can accomplish all of the goals we set for ourselves? Based on our current research, we have come to realize that the problem is not our hectic schedule or the plane travel itself; the problem comes from a misconception of what it means to be resilient, and the resulting impact of overworking.

C) We often take a militaristic, "tough" approach to resilience and determination like a Marine pulling himself through the mud, a boxer going one more round, or a football player picking himself up off the ground for one more play. We believe that the longer we tough it out, the tougher we are, and therefore the more successful we will be. However, this entire conception is scientifically inaccurate.

D) The very lack of a recovery period is dramatically holding back our collective ability to be resilient and successful. Research has found that there is a direct correlation between lack of recovery and increased incidence of health and safety problems. And lack of recovery-whether by disrupting sleep with thoughts of work or having continuous cognitive arousal by watching our phones-is costing our companies $62 billion a year in lost productivity.

E) And just because work stops, it doesn't mean we are recovering. We "stop" work sometimes at 5pm, but then we spend the night wrestling with solutions to work problems, talking about our work over dinner, and falling asleep thinking about how much work we'll do tomorrow. In a study just released, researchers from Norway found that 7. 8% of Norwegians have become workaholics (工作狂）. The scientists cite a definition of "workaholism" as "being overly concerned about work, driven by an uncontrollable work motivation, and investing so much time and effort in work that it impairs other important life areas."

F) We believe that the number of people who fit that definition includes the majority of American workers, which prompted us to begin a study of workaholism in the U. S. Our study will use a large corporate dataset from a major medical company to examine how technology extends our working hours and thus interferes with necessary cognitive recovery, resulting in huge health care costs and turnover costs for employers.

G) The misconception of resilience is often bred from an early age. Parents trying to teach their children resilience might celebrate a high school student staying up until 3am to finish a science fair project.

What a distortion of resilience! A resilient child is a well-rested one. When an exhausted student goes to school, he risks hurting everyone on the road with his impaired driving; he doesn't have the cognitive resources to do well on his English test; he has lower self-control with his friends; and at home, he is moody with his parents. Overwork and exhaustion are the opposite of resilience and the bad habits we acquire when we're young only magnify when we hit the workforce.

H) As Jim Loehr and Tony Schwartz have written, if you have too much time in the performance zone, you need more time in the recovery zone, otherwise you risk burnout. Gathering your resources to "try hard" requires burning energy in order to overcome your currently low arousal level. It also worsens exhaustion. Thus the more imbalanced we become due to overworking, the more value there is in activities that allow us to return to a state of balance. The value of a recovery period rises in proportion to the amount of work required of us.

I) So how do we recover and build resilience? Most people assume that if you stop doing a task like answering emails or writing a paper, your brain will naturally recover, so that when you start again later in the day or the next morning, you'll have your energy back. But surely everyone reading this has had times when you lie in bed for hours, unable to fall asleep because your brain is thinking about work. If you lie in bed for eight hours, you may have rested, but you can still feel exhausted the next day. That's because rest and recovery are not the same thing.

J) If you're trying to build resilience at work, you need adequate internal and external recovery periods. As researchers Zijlstra, Cropley and Rydstedt write in their 2014 paper: "Internal recovery refers to the shorter periods of relaxation that take place within the frames of the work day or the work setting in the form of short scheduled or unscheduled breaks, by shifting attention or changing to other work tasks when the mental or physical resources required for the initial task are temporarily depleted or exhausted. External recovery refers to actions that take place outside of work-e.g. in the free time between the work days, and during weekends, holidays or vacations. " If after work you lie around on your bed and get irritated by political commentary on your phone or get stressed thinking about decisions about how to renovate your home, your brain has not received a break from high mental arousal states. Our brains need a rest as much as our bodies do.

K) If you really want to build resilience, you can start by strategically stopping. Give yourself the resources to be tough by creating internal and external recovery periods. Amy Blankson describes how to strategically stop during the day by using technology to control overworking. She suggests downloading the Instant or Moment apps to see how many times you turn on your phone each day. You can also use apps like Offtime or Unplugged to create tech free zones by strategically scheduling automatic airplane modes. The average person turns on their phone 150 times every day. If every distraction took only 1 minute, that would account for 2. 5 hours a day.

L) In addition, you can take a cognitive break every 90 minutes to charge your batteries. Try to not have lunch at your desk, but instead spend time outside or with your friends-not talking about work. Take all of your paid time off, which not only gives you recovery periods, but raises your productivity and likelihood of promotion.

M) As for us, we've started using our plane time as a work-free zone, and thus time to dip into the recovery phase. The results have been fantastic. We are usually tired already by the time we get on a plane, and the crowded space and unstable internet connection make work more challenging. Now, instead of swimming upstream, we relax, sleep, watch movies, or listen to music. And when we get off the plane, instead of being depleted, we feel recovered and ready to return to the performance zone.

36.It has been found that inadequate recovery often leads to poor health and accidents.

37.Mental relaxation is much needed, just as physical relaxation is.

38.Adequate rest not only helps one recover, but also increases one's work efficiency.

39.The author always has a hectic time before taking a flight.

40.Recovery may not take place even if one seems to have stopped working.

41.It is advised that technology be used to prevent people from overworking.

42.Contrary to popular belief, rest does not equal recovery.

43.The author has come to see that his problem results from a misunderstanding of the meaning of resilience.

44.People's distorted view about resilience may have developed from their upbringing.

45.People tend to think the more determined they are, the greater their success will be.

Passage One

Questions 46 to 50 are based on the following passage.

Children with attention problems in early childhood were 40% less likely to graduate from high school, says a new study from Duke University.

The study included 386 kindergarteners from schools in the Fast Track Project, a multi-site clinical trial in the U. S. that in 1991 began tracking how children developed across their lives.

With this study, researchers examined early academic attention and socio-emotional skills and how each contributed to academic success into young adulthood.

They found that early attention skills were the most consistent predictor of academic success, and that likability by peers also had a modest effect on academic performance.

By fifth grade, children with early attention difficulties had lower grades and reading achievement scores than their peers. As fifth-graders, children with early attention problems obtained average reading scores at least 3% lower than their contemporaries' and grades at least 8% lower than those of their peers. This was after controlling for IQ, socio-economic status and academic skills at school entry.

Although these may not seem like large effects, the impact of early attention problems continued throughout the children's academic careers. Lower reading achievement scores and grades in fifth grade contributed to reduced grades in middle school and thereby contributed to a 40% lower high school graduation rate.

"The children we identified as having attention difficulties were not diagnosed with attention deficit hyperactivity disorder (注意力缺乏多动症）(ADHD), although some may have had the disorder. Our findings suggest that even more modest attention difficulties can increase the risk of negative academic outcomes", said David Rabiner, an associate dean of Duke's Trinity College of Arts &amp; Sciences, whose research has focused on ADHD and interventions to improve academic performance in children with attention difficulties.

Social acceptance by peers in early childhood also predicted grades in fifth grade. Children not as liked by their first-grade peers had slightly lower grades in fifth grade, while those with higher social acceptance had higher grades.

"This study shows the importance of so-called ‘non-cognitive' or soft skills in contributing to children's positive peer relationships, which, in turn, contribute to their academic success, " said Kenneth Dodge, director of the Duke Center for Child and Family Policy.

The results highlight the need to develop effective early interventions to help those with attention problems stay on track academically and for educators to encourage positive peer relationships, the researchers said.

"We're learning that student success requires a more comprehensive approach, one that incorporates not only academic skills but also social, self-regulatory and attention skills, " Dodge said. "If we neglect any of these areas, the child's development lags. If we attend to these areas, a child's success may reinforce itself with positive feedback loops. "

46. What is the focus of the new study from Duke University?

A) The contributors to children's early attention.

B) The predictors of children's academic success.

C) The factors that affect children's emotional well-being.

D) The determinants of children's development of social skills.

47. How did the researchers ensure that their findings are valid?

A) By attaching equal importance to all possible variables examined.

B) By collecting as many typical samples as were necessary.

C) By preventing them from being affected by factors not under study.

D) By focusing on the family background of the children being studied.

48. What do we learn from the findings of the Duke study?

A) Modest students are generally more attentive thаn their contemporaries.

B) There are more children with attention difficulties than previously thought.

C) Attention deficit hyperactivity disorder accounts for most academic failures.

D) Children's academic performance may suffer from even slight inattention.

49. What does the Duke study find about children better accepted by peers?

A) They do better academically. C) They are teachers' favorites.

B) They are easy to get on with. D) They care less about grades.

50. What can we conclude from the Duke study?

A) Children's success is related to their learning environment.

B) School curriculum should cover a greater variety of subjects.

C) Social skills are playing a key role in children's development.

D) An all-round approach should be adopted in school education.

Passage Two

Questions 51 to 55 are based on the following passage.

On Jan. 9, 2007, Steve Jobs formally announced Apple's "revolutionary mobile phone"—a device that combined the functionality of an iPod, phone and Internet communication into a single unit, navigated by touch.

It was a huge milestone in the development of smartphones, which are now owned by a majority of American adults and are increasingly common across the globe.

As smartphones have multiplied, so have questions about their impact on how we live and how we work. Often the advantages of convenient, mobile technology are both obvious and taken for granted, leaving more subtle topics for concerned discussion:Are smartphones disturbing children's sleep? Is an inability to get away from work having a negative impact on health? And what are the implications for privacy?

But today, on the 10th anniversary of the iPhone, let's take a moment to consider a less obvious advantage: the potential for smartphone technology to revolutionize behavioral science. That's because, for the first time in human history, a large proportion of the species is in continuous contact with technology that can record key features of an individual's behavior and environment.

Researchers have already begun to use smartphones in social scientific research, either to query people regularly as they engage in their normal lives or to record activity using the device's built-in sensors. These studies are confirming, challenging and extending what's been found using more traditional approaches, in which people report how they behaved in real life or participate in relatively short and artificial laboratory-based tasks.

Such studies are just first steps. As more data are collected and methods for analysis improve, researchers will be in a better position to identify how different experiences, behaviors and environments relate to each other and evolve over time, with the potential to improve people's productivity and wellbeing in a variety of domains. Beyond revealing population-wide patterns, the right combination of data and analysis can also help individuals identify unique characteristics of their own behavior, including conditions that could indicate the need for some form of intervention—such as an unusual increase in behaviors that signal a period of depression. Smartphone-based data collection comes at an appropriate time in the evolution of psychological science. Today, the field is in transition, moving away from a focus on laboratory studies with undergraduate participants towards more complex, real-world situations studied with more diverse groups of people. Smartphones offer new tools for achieving these ambitions, providing rich data about everyday behaviors in a variety of contexts.

So here's another way in which smartphones might transform the way we live and work: by offering insights into human psychology and behavior and, thus, supporting smarter social science.

51. What does the author say about the negative impact of smartphones?

A) It has been overshadowed by the positive impact.

B) It has more often than not been taken for granted.

C) It is not so obvious but has caused some concern.

D) It is subtle but should by no means be overstated.

52. What is considered a less obvious advantage of smartphone technology?

A) It systematically records real human interactions.

B) It helps people benefit from technological advances.

C) It brings people into closer contact with each other.

D) It greatly improves research on human behavior.

53. What characterizes traditional psychological research?

A) It is based on huge amounts of carefully collected data.

B) It relies on lab observations and participants' reports.

C) It makes use of the questionnaire method.

D) It is often expensive and time-consuming.

54. How will future psychological studies benefit individuals?

A) By helping them pin down their unusual behaviors.

B) By helping them maintain a positive state of mind.

C) By helping them live their lives in a unique way.

D) By helping them cope with abnormal situations.

55. What do we learn about current psychological studies?

A) They are going through a period of painful transition.

B) They are increasingly focused on real-life situations.

C) They are conducted in a more rigorous manner.

D) They are mainly targeted towards undergraduates.