第 07 讲　　阅读理解说明文

目录

01 模拟基础练

题型一　科普类说明文的考查

1.（23-24 高三·江西赣州·期中）In 2022, a New Zealand woman became the first to receive a gene-editing treatment to permanently lower her cholesterol (胆固醇). The woman had heart disease, along with an inherited risk for high cholesterol. But scientists behind the experimental treatment are considering how it could help pretty much anyone.

The trial is a potential turning point for CRISPR, the editing tool they used. Since the technology was first programmed to edit genomes (基因组) about a decade ago, we've seen CRISPR from scientific labs made much progress. But the first experimental treatments have focused on rare genetic disorders. They are working on more possibilities treating common disease like high cholesterol.

The cholesterol-lowering treatment, developed by Verve Therapeutics, relies on a form of gene editing called base editing, or "CRISPR 2.0". It's a more targeted approach. Instead of simply making cuts to shut off specific genes, scientists can now exchange a single DNA base for another. In theory, this should be safer because you're less likely to cut an important gene by mistake, and you can be less likely to make mistakes that may occur when DNA repairs itself after being cut.

An even newer form of CRISPR could take things further still. Prime Editing — or "CRISPR 3.0" — allows

scientists to put chunks (块) of DNA into a genome. If it works in people, it could let scientists replace disease-causing genes.

Together, these newer forms of CRISPR could broaden the possibilities of gene editing to take on many conditions — not all of them genetic. Someday, people may have the option to add genes thought to protect against high blood pressure, or certain diseases, to their genetic code.

All CRISPR treatments are experimental at this point, and we don't know if they're safe. Some argue we should focus on treating those with severe diseases in the meantime. But if these new forms of CRISPR do work, they could help many others.

1．What are scientists focusing on in the gene-editing treatment?

A．Its great success.　　B．Its wider application.

C．Its immediate effects.　　D．Its target patients.

2．Why does the author think that CRISPR 2.0 is theoretically safer?

A．It can shut off specific genes.　　B．It can avoid potential errors.

C．It's likely to reduce DNA base damage.　　D．It provides protection for the genome.

3．What could be the innovative practice of Prime Editing?

A．Making cuts to shut off specific genes.　　B．Providing treatment for genetic diseases.

C．Exchanging a single DNA base for another.　　D．Taking the place of disease-causing genes.

4．What can be inferred from the text?

A．CRISPR treatments haven't entered human trials.

B．Prime editing is being tested in the scientific lab.

C．Prime editing targets diseases caused by genetic disorders.

D．Verve's cholesterol-lowering treatments are approved for use.

2.（2024·四川达州·二模）With the ocean covering more than 70% of the Earth's surface, the National Oceanic and Atmospheric Administration (NOAA) said scientists and researchers had depended on sonar (声呐) technologies to understand and map the sea floor which had charted only about 10% of the world's ocean. For the ocean and coastal waters in the US, the number is just around 35%.

We know less about our planet's ocean than what we know about the far side of the moon or the surface of Mars. Part of the reason for the lack of observation is the challenge of powering an underwater camera. Researchers have used ships to recharge cameras or observed with a camera tied to a ship to solve the issue, which is expensive and unsuitable for long-term observations.

Recently, researchers at the Massachusetts Institute of Technology (MIT) have taken a major step to iron out this problem by developing a battery-free, wireless underwater camera that could harvest energy underwater on its own for long periods.

To keep power consumption as low as possible, the researchers used off-the-shelf, ultra-low-power imaging sensors. The device takes color photos, even in dark underwater environments, and sends image data wirelessly

through the water.

The camera is powered by sound. It changes mechanical energy from sound waves traveling through water into electrical energy that powers its imaging and communications equipment. After getting and encoding image data, the camera also uses sound waves to send the data to a receiver that reconstructs the image. Those sound waves could come from any source, like a passing ship or marine life. As it doesn't need a power source, the camera could run for weeks on end before getting it back, enabling scientists to search remote parts of the ocean for new species.

Now that researchers have demonstrated a working prototype (原型), they plan to enhance the device so it is practical in real-world settings. For future application, these cameras may be used to take images of ocean pollution and create more accurate models to monitor climate change to better understand how climate change impacts the underwater world, and advance various undersea scientific fields.

5．What do the data in paragraph 1 mainly show?

A．Undersea exploration is poor in the US.

B．Much of the planet's ocean remains unexplored.

C．The mapping of the sea floor is time-consuming.

D．Technology development matters a lot to sea observation.

6．What limits the researchers' undersea exploration according to the text?

A．The complexity of the sea environment.

B．The concern about potential sea pollution.

C．The shortage of investment in ocean exploration.

D．The inability to effectively power underwater cameras.

7．What does the underlined phrase "iron out" in paragraph 3 probably mean?

A．Overcome.　　B．Face.

C．Analyze.　　D．Illustrate.

8．Which of the following can best describe the MIT underwater camera?

A．Secure and stable.　　B．Expensive but effective.

C．Impractical but advanced.　　D．Self-sufficient and energy-saving.

3.（2024·湖北武汉·三模）Scientists have found a way to decode (解码) a stream of words in the brain using MRI scans and artificial intelligence. The system reconstructs the main point of what a person hears or imagines, rather than trying to copy each word, a team reports."It's getting at the ideas behind the words, the meaning, says Alexander Huth, an author of the study."

Previous efforts to decode language have relied on sensors placed directly on the surface of the brain. The sensors detect signals in areas involved in expressing words. But the Texas team's approach is an attempt to "decode more freeform thought," says Marcel Just, a professor of psychology at Carnegie Mellon University.

The new study came about as part of an effort to understand how the brain processes language. Researchers

had three people spend up to 16 hours each in a functional MRI scanner which detects signs of activity across the brain. Participants wore headphones that streamed audio from the Internet. Those streams of words produced activity all over the brain, not just in areas associated with speech and language. After participants listened to hours of stories in the scanner, the MRI data was sent to a computer. It learned to match specific patterns of brain activity with certain streams of words. Then came a paraphrased version of what a participant heard.

The MRI approach is currently slower and less accurate than an experimental communication system being developed for paralyzed people, where people get a sheet of electrical sensors implanted directly on the surface of the brain. With an MRI-based system, no one has to get surgery.

But future versions of MRI scans could raise moral questions. “What if you can read out the word that somebody is just thinking in their head? That’s potentially a harmful thing.” Huth says. This technology can’t really read minds uncontrollably, though. It only works when a participant is actively cooperating with scientists. Still, systems that decode language could someday support people who are unable to speak because of a brain injury or disease. They are also assisting scientists in understanding how the brain processes words and thoughts.

9．What is special about the Texas team’s study?

A．Brain can be reconstructed.　　B．Expression can be perfected.

C．Meanings can be comprehended.　　D．Sensor signals can be improved.

10．What is paragraph 3 mainly about?

A．The process of an experiment.　　B．Patterns of brain activity.

C．Steps of word matching.　　D．The way of speech decoding.

11．What can be implied about MRI scans from the last paragraph?

A．They are a double-edged sword.　　B．They are potentially harmful to life.

C．They are helpful to treat brain disease.　　D．They are well worth researching.

12．Which can be a suitable title for the text?

A．A Decoder That Can Read Your Mind　　B．MRI Scanner: Raise a moral question

C．MRI Scanner: Still a Long Way to Go　　D．A Decoder That Can Convey Meaning

4.（2024 高三·全国·专题练习）

Natural disasters like earthquakes and storms can pull down buildings easily. It's difficult for the search and rescue teams (搜救队) to find those who are trapped (陷于困境) in the fallen buildings.

But an unlikely assistant, mice, is being trained up to help out. The project started by Belgian APOPO, is planning to tie tiny, high-tech backpacks to mice to help search for survivors (幸存者).

“Mice like to explore — and that is key for search and rescue.” said Donna Kean, a scientist and leader of the project.“ Besides, their small size and excellent sense of smell make them perfect for locating (定位) things in

small spaces."

The mice are being trained in a basic environment at present. They must first locate the target (目标) person in an empty room, pull a switch that starts an alarm on their clothes, and then return home, where they are given a treat.

For the next part of training, Kean said the team would create "disaster-similar areas". Once the mice are confident in these areas, the project will move to Turkey for further preparation in more real environments. If that goes well, the mice would probably enter real- life situations.

The mice are still in the early progress of training. And APOPO is working with the Eindhoven University of Technology to develop a backpack with a video camera, a two-way microphone, and a locating tool to help communicate with survivors.

"Together with the backpack and the training, the mice are very useful for search and rescue," said Kean. "Even if our mice find just one survivor, we would be happy to know they have made a difference somewhere."

13．According to the passage, What's the reason for mice to be chosen for search and rescue?

① Because their nature of exploring.

② Because their small sizes.

③ Because their ability to smell something.

④ Because their perfect eyesight in the dark.

A．①②③　　B．①③④　　C．②③④　　D．①②④

14．Which paragraph tells how the mice are trained?

A．Paragraph 1.　　B．Paragraph 2.

C．Paragraph 3.　　D．Paragraph 4.

15．What can we learn from the passage?

A．Donna Kean is a survivor in an earthquake.

B．The mice are being trained in real-life situations.

C．APOPO scientists haven't invented the high-tech backpack.

D．The mice are often given a treat before they complete the task.

16．What does Donna Kean think of the project?

A．Nervous.　　B．Interesting.

C．Hopeful.　　D．Impossible.

5.（2024·河南郑州·三模）Robots doing housework is nothing new with the latest achievements in robotics. Recently, a robot called Mobile Aloha caught the attention of many at the beginning of 2024, with short videos of it cooking at someone's home becoming popular in January.

Developed by a team of researchers at Stanford University in the US, the robot can handle everything for a dish, whether it is cutting vegetables or cracking eggs. It also does well in various household tasks like watering plants, petting cats, cleaning the floor and doing washing. It even knows to shake the pillow (枕头) after putting on

a pillowcase. An Internet user joked under one video that as long as this thing doesn't try to kill him while he is asleep, he is in real need of it.

However, a following video posted by one of the researchers, Tony Zhao, and showing Mobile Aloha's failures proved that the idea of having a robot servant may just be wishful thinking. In the video, Mobile Aloha randomly broke glasses and plates, crashed into cupboards and even burned a pot.

It turns out that Mobile Aloha is not a complete self-learning system that can independently deal with new environments. It relies on demonstrations by human operators in its surroundings, meaning that the robot needs to learn from human behavior before completing each task. Also, according to the team, the robot achieves a 95% success rate in removing red wine stains (污渍), 80% in pushing chairs, and a mere 40% in frying shrimp. In short, it's far from perfect.

The behavioral problems of AI robots have been bothering scientists for decades. Although AI robots do pretty well in things requiring high-level reasoning like math, they perform worse than a one-year-old child when it comes to simple tasks demanding abilities of sense, reflexes (本能反应) and mobility, among others.

As the team observed, the interaction between the arm and the base of Mobile Aloha would get quite complex if more flexibility is required in a task. Even a slight deviation (偏差) in the base settings might lead to significant drift in the arms' motions, resulting in failure to complete the task.

17．What can be known about Mobile Aloha according to paragraph 2?

A．It sells well among housewives.　　B．It can help one to do housework.

C．It was developed by IT scientists.　　D．It is badly needed by Internet users.

18．Why is Tony Zhao's video about Mobile Aloha mentioned?

A．To prove its online popularity.　　B．To display its powerful functions.

C．To show it needs further improvement.　　D．To suggest it should work under one's help.

19．How can Mobile Aloha best complete a new task?

A．By operating independently.　　B．By copying humans' behavior.

C．By learning from previous tasks.　　D．By turning to programmers for help.

20．Which type of task may AI robots be poor at?

A．Deep learning.　　B．Precise calculation.

C．Logical thinking.　　D．Behavioral flexibility.

6.（2024·湖北·一模）Tom is an expert from a robotics company who can communicate smoothly with people through computers, phones, and other means. However, when facing the crowd on site, he will feel uneasy. His boss arranged for Tom to showcase to the audience the innovative work their company is doing. In response to the boss' trust in him, Tom bravely began preparing for this matter.

One day, while watching TV, he happened to see a program where the ventriloquist (腹语术者) Arthur interacted with the audience through a dummy (假人) to convey information. This gave him inspiration. The next day, he discussed his idea with his colleagues in the company and everyone supported his plan. On the day of the

exhibition, they arrived at the scene early and prepared everything, although Tom was still a bit nervous.

The much-anticipated presentation started. The presenter began with a light-hearted joke and then proceeded to share some interesting facts about Reality Robotics Company before revealing the innovative work the company was undertaking. Throughout the presentation, there were no pauses or instances of Tom's dreaded phrase: "but what I really meant to say was." The audience was impressed by the innovative product the presenter described and hoped for a demonstration to see how effective the new invention was. As the presentation drew to a close, the presenter said calmly and confidently, "And now I would like to share this stage with the man who invented me."

Tom walked onto the stage, looking exactly like the presenter. The "identical twins" took the audience by surprise. Tom then spoke slowly, "What you have just witnessed is a demonstration of the latest invention from the company — a presentation robot." Suddenly it all clicked and the audience erupted in cheers. Tom then explained how the company created such a robot and programmed it to speak. "As you could see and hear, it had the confidence I could never exhibit in such a presentation. We can model it into an exact copy of you." The audience got excited at the prospect. The boss smiled approvingly. Maybe Tom deserved a promotion, he thought.

21．What's Tom's problem?

A．He tended to get nervous easily.

B．He failed to win his boss' recognition.

C．Ho was not confident to speak in front of the public.

D．He can't communicate with people in his daily life.

22．What do we know about the presenter?

A．He was quite serious.

B．He didn't live up to Tom's expectations.

C．He was inspired by the dummy that Arthur worked with.

D．Though confident, he was a bit nervous giving the presentation.

23．What does Tom's company do?

A．It creates innovative robots.　　B．It helps present new ideas.

C．It advertises new products.　　D．It produces ventriloquist's dummies.

24．What mainly contributes to the presentation's success?

A．Luck and humor.　　B．Teamwork and creativity.

C．Caution and responsibility.　　D．Courage and friendliness.

题型二　动植物介绍类说明文的考查

7.（2024·江西·二模）Coastal communities around the world are using coir, material from coconuts (a kind of large fruit), to reduce shoreline erosion (侵蚀). People use coir to build barriers, protecting beaches from getting washed away by the force of waves. The material is common and costs a lot less than barriers made of other materials, like wood, steel or concrete.

One project is being built along part of an eroded riverbank in Neptune, New Jersey. The effort has already greatly improved areas that were badly damaged by erosion during Superstorm Sandy in 2012. “We’re always trying to reduce wave energy while protecting the shoreline,” said Tim Dillingham, the director of the group who runs the project. “And whenever we can, we like to use nature-based solutions.”

The coconut-based material is designed to break down over time. But before it does, it is sometimes pre-seeded with shoreline plants and grasses. The coir material holds the plants in place as they grow, finally breaking down and leaving the established plants in place to keep the shoreline from eroding.

In Boston, Julia Hopkins from Northeastern University is also using coir, wood chips and other material to create barriers to slow the force of waves. A test project has four coconut-based barriers in waterways around Boston. Hopkins is pleased with the results she has seen so far. She said the coconut material is not costly and is actually being recycled rather than thrown away.

The method does not always work, however. In 2016, the Felix Neck Wildlife Sanctuary (a wildlife protection area) in Edgartown, Massachusetts, built barriers around a salt marsh, an area of coastal grassland, that had eroded in the past. While the effort did help reduce erosion for a while, the material did not last long because of strong waves.

“It got blown out many times,” said Suzan Bellincampi, the sanctuary’s director.“ We had it in place for a few years and we decided not to fix it again. The project was really interesting in terms of what we wanted to do and how we changed it. It works in some places; it doesn’t work in all places.”

25．What are communities near the coast doing?

A．They are making use of wave energy.

B．They are building barriers to prepare for storms.

C．They are fighting to stop shoreline erosion.

D．They are developing new materials from coconuts.

26．What might the underlined word “established” in paragraph 3 mean?

A．Well developed. B．Ready to plant. C．Newly planted. D．Hard to find.

27．What is Hopkins’ attitude towards coconut-based barriers?

A．Carefree. B．Favorable. C．Unclear. D．Doubtful.

28．Why is the project in a sanctuary mentioned in the last but one paragraph?

A．To encourage more places to follow the method.

B．To stress the importance of using the method to protect nature.

C．To show that the method is not a one-size-fits-all solution.

D．To explain how to change the method according to local conditions.

8.（2024·辽宁沈阳·三模）Cut into the trunk of a pine tree, and you will see a familiar series of concentric (同中心的) rings. But not all trunks tell the same story. A study published in November reveals that the world’s oldest trees had a very different structure.

Some 370 million years ago, cladoxylopsid trees stood at least eight meters tall, covered by branches instead of leaves. Today their rare remains reveal little about their insides; in most cases their inner structures had rotted before the trees fossilize, and storms had filled them with sand. But the recent find of two well-preserved fossils in China has exposed the trees' inner workings — which are like no other species studied before.

The cladoxylopsid tree was empty inside. Around the edges were thick, vertical strands (绺) containing xylem (木质部), a plant tissue that conducts water and mineral salts from the roots to all other parts. Modern trees add new layers of multiple xylem as they grow, creating a woody trunk with a single set of concentric rings. But in cladoxylopsids, "each strand of xylem had its own growth rings," says scientist Christopher M. Berry of Cardiff University in Wales.

Over a tree's lifetime the strands would weave and cross. "It's just incredibly complex," Berry says. He likens these networks of flexible tissues and structures to the Eiffel Tower—if tower could grow, extend and split itself apart over time.

Although the cladoxylopsid tree has no living descendants today, it is very important. Brigitte Meyer-Berthaud, a scientist, explains that these trees were among "the major carbon reservoirs of the Paleozoic", a time period from 542 million to 251 million years ago. Cladoxylopsids made up our planet's first forests, capturing carbon from the atmosphere and playing a part in adjusting Earth's climate. Given this fact, maybe we should study these trees for the forests.

29．What makes it hard to study cladoxylopsid trees?

A．Their thick leaves.　　B．Their amazing height.

C．Their poorly preserved remains.　　D．Their fossilized inner structures.

30．What do we know about cladoxylopsid trees?

A．They had many separate growth rings.

B．Their solid cores contributed to their growth.

C．They had a single set of regular concentric rings.

D．Their roots needed more mineral salts than water.

31．Why does the author mention "the Eiffel Tower" in paragraph 4?

A．To stress the beauty of the Eiffel Tower.

B．To prove the economic status of the tree.

C．To disclose how limited the tree's lifetime is.

D．To show how complex the tree's networks are.

32．Why should we study cladoxylopsid trees?

A．They were the only trees present during the Paleozoic era.

B．They helped scientists better protect rich historical culture.

C．They played a significant role in shaping the Earth as it is.

D．They determined the carbon content in the Earth's atmosphere.

9.（2024·江西·二模）Inside a large room at the International Center for Agricultural Research in the Dry Areas (ICARDA), tens of thousands of seeds are stored at a constant temperature of -20℃. Some of them may hold keys to helping us face the future.

"Our center holds as many as 120,000 varieties of seeds. Many of them come from crops as old as agriculture itself. Other seeds were selected by researchers who've hiked in the past four decades through forests and mountains in the Middle East, Asia and North Africa, searching for wild relatives of wheat, rice, legumes and other crops that are important to the human diet," says Mariana Yazbek, who manages the research center.

The research center, formed in the 1970s, once mostly helped farmers in poorer countries in hot and dry climates. But now it also sends seeds to scientists in Europe, Canada and the United States, to improve certain crops' resistance to the effects of climate change.

"What we are collecting is a sample of the diversity that we have in nature," adds Yazbek. "We save seeds in case extreme droughts, floods or other catastrophic events should wipe out plant species. These wild relatives of crops have witnessed so many different climates. The qualities that help them adapt and survive in these conditions are stored in their DNA．We have this diversity and it can be a tool to help us face the future."

Yazbek says scientists are particularly interested in crops like the legume because it absorbs a lot of greenhouse gas CO_2 from the atmosphere. It also releases N into the soil, meaning the farmers have to use less chemical fertilizer. And the legume takes very little water to grow because it produces sugar alcohols that act as humectants, a substance that attracts and absorbs water and saves the plant from freezing or drying out.

In another case, a wild wheat seed collected in Iran has allowed scientists in the US to develop new wheat varieties resistant to the Hessian fly, a harmful insect that causes tens of millions of dollars in damage to American crops every year.

33．What can be learned about ICARDA?

A．It has a complete collection of seeds.

B．It just helps the undeveloped countries.

C．It used to develop seeds for rich countries.

D．It focuses on saving ancient and wild seeds.

34．Which is closest in meaning to the underlined word "catastrophic" in paragraph 4?

A．Important.　　B．Wasteful.　　C．Terrible.　　D．Unforgettable.

35．What can be inferred about the legume?

A．It will grow much better in wet areas.

B．It is friendly to the environment and soil.

C．It will become the main crop for humans.

D．It has difficulty in adapting to cold climate.

36．Which of the following is a suitable title for the text?

A．Seeds Stored at ICARDA May Help Us Improve Our Crops

B．A New Invaluable Seed Bank Is Constructed at ICARDA

C．Scientists Have Made Breakthroughs in Ancient Seed Study

D．New Seeds Are Successfully Developed for North America

10.（2024·江苏盐城·模拟预测）The male western tanager (唐纳雀) looks like a little flame, while females are less showy, a dusty yellow. In the spring, they prepare to move thousands of miles to the Mountain West of Central America, flying through grasslands, deserts, and occasionally, suburban yards.

To fuel them on their lengthy journey, western tanagers fill up on insects and berries. But as global climate change causes spring to start earlier, birds such as western tanagers are arriving at their destination after what's known as "green-up", when flowers begin blooming and insects emerge. According to a study published in early March in the journal PNAS, this kind of timing mismatch between migrants (迁移动物) and their food sources, which is happening across North America, could have serious consequences for migratory birds' survival. "In discussing climate change, we often focus on warming," says Scott Loss, a co-author of the study. "But the length and timing of seasons — like when winter ends and spring begins — are some of the most dramatic effects of climate change."

Loss and his colleagues used satellite imagery from 2002 to 2021 to calculate the average start of spring green-up along the typical migration routes of 150 North American bird species, then compared that timing with the current green-up. They found that spring is indeed beginning earlier along birds' migration routes. "By contrary, previous studies have mainly focused on songbirds in Eastern North America," says Morgan Tingley, an ornithologist at UCLA, "but this new investigation shows that bird species in the West and at different levels of the food web might be just as vulnerable (脆弱的)."

"Part of it is knowing which species are vulnerable to various threats," Loss says. "This adds to the knowledge about vulnerability of a wide range of bird species." And he hopes that the information will serve to highlight the urgent need to lower greenhouse-gas emissions as fast as possible. "It's really important, if we can't address climate change immediately, to try to stop habitat loss as much as we can."

37．What may pose a direct threat to western tanagers' survival?

A．Global warming.　　B．The duration of changing seasons.

C．Loss of habitats due to human activities.　　D．Decreased access to foods during migration.

38．What is unique about the new study on birds like western tanagers?

A．It covers a wider geographic range.　　B．It reveals the decline in bird populations.

C．It centers on the adaptation of bird species.　　D．It ensures the existence of a timing mismatch.

39．What does Loss suggest we do to safeguard migratory birds?

A．Lessen the effects of climate change.　　B．Preserve ecosystems for bird species.

C．Address emissions and habitat loss.　　D．Expand researches on threats to birds.

40．Where is the text most likely from?

A．A scientific journal.　　B．A bird-watching guidebook.

C．A website about climate change.　　D．A magazine about wildlife conservation.

11.（24-25 高三·广西柳州·开学考试）The humble beaver (海狸) could hold the key to saving our water, according to a new research at has found how their da m building skills protect the rivers threatened by climate change.

The research, done on the rivers in Colorado, found the wooden banners built by beavers raise water level upstream. As it builds up, the water flows into surrounding soils and secondary waterways. These acts separate out extra nutrients and pollutants before water reenters the main channel downstream.

Extreme weather events, such as severe storms, impact water quality in major river systems. Droughts and floods are becoming more frequent, and the scientists have also found they are contributing to an increase in the American beaver in the US, and consequently an explosion of dam building.

The team chose to monitor a 40-kilometer stretch of the East River. They reviewed data on water levels gathered hourly by sensors fixed in the river and the areas along the river.

They also collected water samples, including from below the ground's surface to monitor nutrient and pollutant levels. The researchers compared water quality along the stretch during a historically dry year, to water quality the following year when water levels were unusually high. They also compared these year-long datasets to water quality during the nearly three-month period, starting in late July2018, when the beaver dam blocked the river.

The study revealed the dams increased nitrate (硝酸盐) by nearly 50% by increasing the pressure of the water flow upstream 10 times over, which pushed more water out into the surrounding areas. The nitrates are absorbed and digested by tiny organisms in the soil. This helped increase the oxygen content and quality in the rivers.

Beavers' hard work is responsible for the land they love.

41．What do the wooden barriers created by beavers act as?

A．Waterways.　　B．Samples.

C．Dams.　　D．Sensors.

42．What is the direct result of frequent droughts and floods in Colorado?

A．More dams emerge on the rivers.

B．More American beavers appear in the US.

C．More pollutants are removed from the rivers.

D．More oxygen is created in the rivers.

43．Why did the researchers collect water samples from below the ground's surface?

A．To keep an eye on the water quality.

B．To improve the nutrient of the stretch.

C．To remove pollutants from the river.

D．To decrease the effect caused by the flood.

44．What is the main idea of the text?

A．Dams do good to water quality.

B．Beavers contribute to climate change.

C．Extreme weather catches researchers' eyes.

D．Beavers help protect rivers against climate change.

12.（2024·湖北襄阳·三模）Medicine is not exclusively a human invention. Many other animals, from insects to birds to nonhuman primates, have been known to self-medicate with plants and minerals for infections and other conditions.

Behavioral ecologist Helen Morrogh-Bernard of the Borneo Nature Foundation has spent decades studying the island's orangutans (猩猩) and says she has now found evidence they use plants in a previously unseen medicinal way.

During more than 20, 000 hours of formal observation, Morrogh-Bernard and her colleagues watched 10 orangutans occasionally chew a particular plant (which is not part of their normal diet) into a foamy lather (泡沫) and then rub it into their fur. The apes spent up to 45 minutes at a time massaging the mixture onto their upper arms or legs. The researchers believe this behavior is the first known example of a nonhuman animal using a topical painkiller.

Local people use the same plant Dracaena cantleyi, an unremarkable-looking plant with stalked leaves-to treat aches and pains. Morrogh-Bernard's co-authors studied its chemistry. They added extracts (提出物) from the plant to human cells that had been grown in a dish and had been artificially stimulated to produce cytokines, an immune system response that causes inflammation (炎症) and discomfort. The plant extract reduced the production of several types of cytokines, the scientists reported the finding in a study published last November in Scientific Reports.

The results suggest that orangutans use the plant to reduce inflammation and treat pam. Such findings could help identify plants and chemicals that might be useful for human medications.

In creatures such as insects, the ability to self-medicate is almost certainly innate: woolly bear caterpillars infected with flies seek out and eat plant substances that are poisonous to the flies. But more complex animals may learn such tricks after an initial discovery by one member of their group.

For example, an orangutan may have rubbed the plant on its skin to try to treat parasites and realized that it also had a pleasant pain-killing effect. That behavior may then have been passed on to other orangutans. Because this type of-self-medication is seen only in south-central Borneo, Morrogh-Bernard says, it was probably learned locally.

45．What do we know about Dracaena cantleyi?

A．It can serve as a pain killer.　　B．It is orangutans normal diet.

C．It is a plant with a foamy lather.　　D．L can function as building materials.

46．How did Morrogh-Bernard's team prove the plant's healing properties?

A．By studying the plant's chemistry.　　B．By observing apes eating the plant.

C．By extracting cytokines from the plant.　D．By watching local people using the plant.

47．What is the significance of the findings?

A．Botanists can better understand plants.

B．Scientists can find a new way to study apes.

C．Doctors may have the power to cure more diseases.

D．Drug companies may find new materials for medicine.

48．What can we learn according to the passage?

A．Medicine is a human unique invention.　B．Plant extracts are the best to treat-pain.

C．Humans and animals have a lot in common.　D．Insects have the natural ability to self medication.

题型三　社会文化类说明文的考查

13.（24-25 高三·湖北武汉·阶段练习）It's one of the most common questions adults ask children: what do you want to be when you grow up? Although childhood is supposed to be fun, kids also discuss important topics regarding their futures. Now, a new study finds that children who set big goals regarding their future status and education often set themselves up for success as they age.

The findings, published in the Journal of Personality and Social Psychology, are the first to reveal a connection between life goal development and future success in school or the workplace. Rodica Damian, an associate professor of psychology at the University of Houston, and other researchers discovered that as children grow up, their goals naturally begin to change. However, as some childhood goals fall away, other goals related to a family stay strong. These include being close to relatives, building more friendships or finding a romantic partner, and even becoming more involved in your community or helping others.

During the study, researchers compared how their goals evolved as children moved from adolescence to adulthood and how a person's goals impacted their success in school and as an employee later on. Overall, a child's goals focusing on their education and future status were the most consistent predictors (预测因素) of income in adulthood. Simply put, when a child dreams big about doing well in school or achieving great success as an adult, these goals accurately paint a picture of how successful these children will be. So, the message is simple: dream big and dream of success, kids! Those goals can drive you to success when you grow up!

"Our work proves a strong connection between a child's life goals, educational achievement, and future occupational outcomes. This information is valuable for parents and educators who can use it to encourage children to set ambitious goals. Additionally, it helps develop strategies to support individuals in achieving their goals and reaching their full potential," Damian concludes.

49．What does the study mainly focus on?

A．Why children change their dreams over time.

B．Whether childhood goals relate to future success.

C．Whether early education determines future career.

D．How childhood experiences impact a person's choice.

50．Which of the following goals remains strong as children grow up?

A．Connecting with others.

B．Achieving academic success.

C．Hunting for a high-salary job

D．Improving personal social status.

51．What message does the author convey in paragraph 3?

A．Dreaming big is potentially associated with success.

B．Childhood achievement s greatly affect future careers.

C．Educational goals may be more achievable than others.

D．Adjusting goals can create new opportunities for success.

52．What is the purpose of the last paragraph?

A．To explain the purpose of the study.　　B．To offer suggestions for future studies.

C．To stress the significance of the study.　　D．To point out the limitations of the study.

14.（24-25 高三·浙江宁波·开学考试）The Nobel Prize is one of the most prestigious awards in the world. It was established by Alfred Nobel, a Swedish chemist, engineer, and inventor. Nobel was known for inventing dynamite. However, he was concerned about how his inventions could be used for destructive purposes in war. Thus, in his will, he stipulated that his fortune be used to establish prizes in physics, chemistry, physiology or medicine, literature, and peace.

The first Nobel Prizes were awarded in 1901. Since then, the Nobel Prize has been awarded to countless outstanding individuals who have made significant contributions to their respective fields. The Nobel Prize in Physics and Chemistry often recognizes revolutionary discoveries and advancements in science. The Nobel Prize in Physiology or Medicine honors breakthroughs in the understanding and treatment of diseases. The Nobel Prize in Literature rewards outstanding literary works that have a profound impact on humanity. The Nobel Peace Prize is given to those who have worked tirelessly to promote peace and resolve conflicts.

Winning a Nobel Prize is not only a great honor but also brings attention to the important work being done in various fields. It inspires future generations of scientists, writers, and peacemakers to strive for excellence and make the world a better place.

53．Who established the Nobel Prize?

A．A Swedish physicist.　　B．A Swedish chemist.

C．A Swedish engineer.　　D．A Swedish inventor.

54．What was Alfred Nobel known for inventing?

A．Gunpowder.　B．Dynamite.　C．Electricity.　D．The telephone.

55．How many fields does the Nobel Prize cover?

A．Three.　B．Four.　C．Five.　D．Six.

56．Which field does the Nobel Prize in Physiology or Medicine honor?

A．Discoveries in physics.　　B．Breakthroughs in treating diseases.

C．Outstanding literary works.　　D．Efforts to promote peace.

15.（2024·四川成都·模拟预测）Minimizing the environmental damage that new roads cause is generally regarded as a good thing. But to do that, it helps to understand just how new roads cause the damage of which they are accused.

Recently, a group of researchers led by Dr. Gonzalez conducted an experiment and proved that immigration is good for the health of animal populations. A road destroys only a small part of the habitat, thus destroying just a few local populations of creatures. So the argument that road-building itself is bad for biodiversity is not self-evidently correct. Those who nevertheless hold this view say that apparently separate local populations of animals are, in fact, parts of much larger populations connected via migration.

According to this theory, when a local population struggles to move about — because of an epidemic, for example — individuals from neighboring communities can fill the gaps.

The implications of the theory are straightforward. Cut local populations off from each other and each is more likely to disappear. And roads are good at doing just that. Testing the theory with experimental roads, however, would be expensive. Dr. Gonzalez's brainwave was to do the whole thing on a much smaller scale.

The team studied moss-covered rocks. On some rocks the researchers left the moss untouched; on others they made "roadways" across to leave the moss isolated. After waiting six months, they found that in the disturbed habitats nearly all the bug population had declined compared with undisturbed moss, and 40% of the species had become extinct.

The real test came in the second part of the experiment. In this, the researchers removed moss much as before, but they left narrow moss paths to bridge the no-bug's-land between islands. The islands with bridges did far better than isolated islands — a result that supports the notion that population exchange is necessary to keep an ecosystem healthy.

Whether these results can be translated to large-scale ecosystems remains uncertain. But if they can, they would cause more, not less, concern about the ecological effects of road-building. On the other hand, they also suggest a way out. In Britain, tunnels are often built under roads for animals of regular habits, such as badgers (獾), to be able to travel their traditional routes without having to fight with traffic. Extending that principle, perhaps special bridges might be a cheap way of letting man and nature rub along a bit better.

57．What's the main idea of the passage?

A．Calling on us to stop building roads for a healthy ecosystem.

B．Warning us of potential dangers of animal immigration.

C．Informing us of the environmental damage caused by new roads.

D．Suggesting a new way to avoid the damage caused by new roads.

58．Dr. Gonzalez's experiment found that _____.

A．building roads is expensive

B．immigration is good for animals

C．roads cut off animal immigration