

CHEERS FOR SPIRIT OF SCIENCE

The new season of CCTV's education quiz show will feature a gravity-defying goal by a Brazilian soccer star, and an aspiring 12-year-old tech entrepreneur, **Wang Kaihao** reports.

Former Brazilian footballer Roberto Carlos was famous for his powerful free kick. Perhaps his most famous goal came in a game against France on June 3, 1997, when he scored by curling the ball so heavily that a ballboy on the touchline instinctively ducked to avoid it.

Yet, within an instant, the ball swung back on target and arched into the back of the net, leaving the dumbfounded French goalkeeper rooted to the spot.

This video clip has been broadcast so many times over the past two decades, that it's often hailed as a goal that most appears to disobey the natural laws of physics.

And when Roberto Carlos took to the stage of China Central Television variety show *Cheers Sciences* to relive his proud moment on screen, he was asked a question by the host.

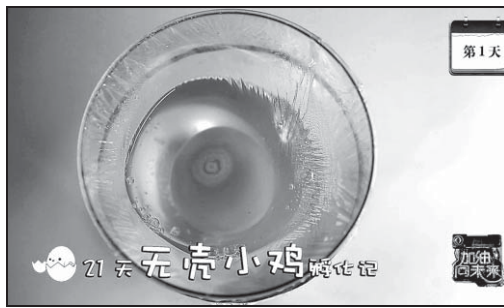
"What forces affected the football when it flew through the air like that? Gravity? The force of the kick from your foot — or both?"

The Brazilian star who was so skillful when it came to handling the ball didn't appear to have a full mental picture of the physics behind the kick — and promptly offered up the wrong answer.

"Many people have an inaccurate impression that a football flies in a straight line due to TV broadcasts," Cao Zexian, a physics researcher at the Chinese Academy of Sciences, explains. "However, a curling trajectory is more common, and Roberto Carlos' goal is a perfect example of physics in action."

"Football is also a science," Cao adds. "It shares some similarities with how rockets work. It's good to take a broad view when we observe this phenomenon."

And with the heat of the FIFA World Cup still lingering over the summer, Roberto



Clockwise from top: Xu Cheng (middle), 12, the youngest competitor in the upcoming third season of *Cheers Sciences*, is in the show with hosts Sa Beining (left) and Nigermi Zechman (right); an egg being incubated in a transparent jar, as shown in the new season; the two hosts of the show do a scientific experiment in the second season. PHOTOS PROVIDED TO CHINA DAILY

Carlos is helping to introduce the world of science to young people through the latest series of the show.

Season three of *Cheers Sciences* is due to return to CCTV on Aug 12. The previous two series scored 8.8 and 8.2 points out of 10 respectively on Douban, a popular Chinese review site.

The host duo from season two, Sa Beining and Nigermi Zechman, will continue to compete the new series, which sees ordinary members of the public mixing with

celebrity contestants as they compete in the quiz, where follow-up scientific experiments prove the answers on set.

Many of the country's national-level scientific institutions, including the Chinese Academy of Sciences, are also on hand to provide support and ensure the accuracy of information.

"Our children spend too much time learning from

books," says Cao. "Hands-on experience is crucial in building up a good understanding of the world."

He notes that people have long been forced to divide knowledge into two different camps — the fields of natural science and the liberal arts. This, in turn, has led people to become defensive about their lack of understanding in either field to cover up the gap in their education.

"But there should be only one criterion: Those things you know and those you don't," Cao continues. "It's better to get rid of any prejudice and always be prepared to gain new knowledge."

In the first season, people were surprised to find that soft

chewing gum could be used to cut open a coconut. And, in the second season, leading Chinese sprinter Zhang Peimeng had a 100-meter race against a J-10 fighter jet as it took off.

Zhang may have lost that particular race, but he won a 50m dash against a training aircraft.

Celebrities often appear larger than life when they appear in the spotlight, but the joy of this show is to see them behave like wide-eyed children when they are genuinely amazed by the scientific explanations behind certain phenomenon.

In the third season, they will witness how a chick is incubated inside a glass jar in an experiment performed by a professor from the China Agri-

cultural University, which aims to show how an embryo develops.

"Science is essentially something fun, not something we're forced to learn by teachers," Zhang Guofei, supervisor of CCTV 1, says. "It has two supportive wings: scientific research and popular science. However, our knowledge of popular science is still not deep enough."

"Shows about popular science are intended to trigger young people's interest and help motivate them about their future studies," he continues. "This will also be the key to China's revival."

A China Association for Science and Technology survey in 2015 showed that only 6.2 out of 100 Chinese people had "basic scientific literacy." However, a similar survey undertaken in the United States in 2000 showed the number to be 17 out of 100, according to Guo Tong, a producer of *Cheers Sciences*.

"It's essential to build up the spirit of science among the young," Guo says. "If children are exposed to TV programs that raise their consciousness, there will be more people like Chen-Ning Yang, Tu Youyou (a female Chinese medical scientist and Nobel Prize winner), and Elon Musk among them."

The production team behind the third season of *Cheers Sciences* is attempting something quite unprecedented: It aims to send an artificial satellite into space on the first rocket launched by a privately owned company in China.

The satellite will be exclusively used for scientific experiments, and all the experiment undertaken on board will be chosen by the public.

"I don't expect *Cheers Sciences* to become a viral success like other variety shows designed purely to be entertainment," Ren Xue'an, a marketing director of CCTV, says. "But I believe this kind of program will gradually nurture a solid fan base and be discussed more widely."

"The country's TV producers need to insist on looking for what is truly valuable," he says.

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Chinese sprinter

Zhang Peimeng had a racing competition with J-10 fighter jet in the previous season of *Cheers Sciences*.



Film focuses on heroic efforts of one man to fight drought

By **WANG RU** and **XU FAN**

More than 100 people walk near the edge of a cliff, and some of them are extremely frightened.

They are the cast of the upcoming film *Sky Stream*, based on the story of Huang Dafa, Party chief of the village of Caowangba in Zunyi, Guizhou province.

Huang, who turns 83 in November, spent more than 30 years leading locals to chisel an irrigation channel measuring 9,400 meters long into the sides of three karst mountains.

The project was initiated in the 1960s, but the first 13-year effort ended up in vain due to torrential rain and a lack of expertise. Then, Huang decided to learn about water conservation before restarting work on the project.

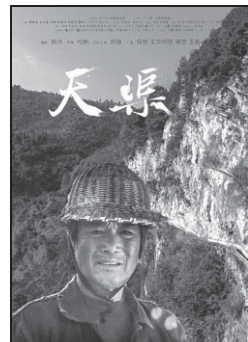
The project was finally completed after 36 years, ending Caowangba's hard times caused by frequent droughts.

To mark Huang's contribution, villagers named the project after Huang, who won one of this year's 10 "Touching China" awards, an annual honor by state broadcaster China Central Television, which pays tribute to role models.

"Simplicity and sincerity were the guiding principles for those of us working on this film," says director Bo Lin at a promotional event in Beijing on Aug 3.

"From my perspective, Huang is a small figure who achieved something great."

"We didn't want to overstate how great Huang was, in case the audience didn't like it. We just wanted to tell the story in a simple way," adds Bo, who



A poster for the movie *Sky Stream*, with protagonist Huang Dafa played by actor Zheng Qiang.

decided to make the film in November 2017.

In the film, the audience can see how Huang puts his heart into his work. Even though his daughter falls ill, Huang delays



A still from the film in which Caowangba village Party chief Huang Dafa takes the lead to chisel the ditch on the edge of a cliff.

PHOTOS PROVIDED TO CHINA DAILY

taking her to see a doctor. Finally, his daughter dies at the age of just 23.

When the project is finally complete, Huang takes a bowl of clean water from the

ditch to his daughter's grave, sits on a rock and cries.

In another scene from the film, when a person has to be lowered from the top of a mountain to perform a deli-

cate operation, Huang bravely volunteers to do it.

Then, when he gets tired, he tells his son to continue, saying: "If you do this, I do not have to seek compensation even if something happens to you."

Speaking about the film, Zheng Qiang, the actor who plays Huang, says: "As a father, I was shocked to read this in the script."

According to Bo, when Huang was invited to watch the film for the first time he found it rather emotionally demanding. The film will be released in mainland theaters in September.

"I hope the spirit of Huang will be passed on through this film," says Bo.

Contact the writers through wangru@chinadaily.com.cn

NEW YORK — An exhibition to explore the role of empresses in China's last dynasty — the Qing Dynasty (1644-1911) — will be on view from Aug 18 in the United States.

The Empresses of China's Forbidden City, which runs through Feb 10, 2019, at the Peabody Essex Museum in Salem, Massachusetts, includes nearly 200 artworks such as imperial portraits, jewelry, garments, Buddhist sculptures and decorative art objects from the Palace Museum in Beijing.

The exhibition is being organized by the Palace Museum in conjunction with the 219-year-old PEM and the Smithsonian's Freer and Arthur M. Sackler Galleries in Washington, DC, to mark the 40th anniversary of the establishment of US-China diplomatic relations.

The exhibition focuses on three key figures — Empress Dowager Chongqing, Empress Xiaoxian and Empress Dowager Cixi — who shaped the long history of the dynasty. Their life experiences revolve around six core themes: imperial weddings, power and status, family roles, lifestyle, religion and political influence.

An international team of experts spent four years in the Forbidden City to investigate the largely hidden world of the women inside. Some of the rare treasures showcased in this exhibition have not been on view in the United States before, while some have never been publicly displayed at all.

Visitors will also discover in-gallery interactive experiences, such as being able to create an empress's robe. Other programs include immersive videos and opera performances, as well as English and Chinese language labels, text and guided tours.

In November 2018, halfway through the six-month exhibition at PEM, an additional 30 artworks from the Palace Museum will be introduced in the galleries, including magnificent paintings and imperial robes.

Founded in 1799, PEM, located just north of Boston, is the oldest continuously operating museum in the nation. Its architecture collection of 22 noted historic structures includes Yin Yu Tang, the only complete antique Chinese house located outside China.

The Smithsonian's Freer Gallery of Art and the adjacent Arthur M. Sackler Gallery, located on the National Mall in Washington, together comprise the nation's museums of Asian art. The Freer/Sackler is part of the Smithsonian Institution, the world's largest museum, education and research complex.

Established in 1925, the Palace Museum is located in the imperial palace of the consecutive Ming (1368-1644) and Qing dynasties. The magnificent architectural complex, also known as the Forbidden City, and the vast holdings of paintings, calligraphy, ceramics and antiquities of the imperial collections make it one of the most prestigious museums in China and the world.

In 1961, the State Council designated the former imperial residence as one of China's foremost-protected cultural heritage sites, and in 1987 it was listed as a UNESCO World Heritage site.

Qing era art set to wow US

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