

POWER OF CROWDS

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Every day, people use the Internet to **collaborate** and share information. Today, scientists and archaeologists¹ are using the power of the Internet

- A to **investigate** the past in a new, exciting way. The approach is known as crowdsourcing, and it involves asking the public for help with a project. Crowdsourcing has the **potential** to completely change modern archaeology.

SOLVING A MYSTERY

Scientists in the United States and Mongolia used the Internet to try to solve an 800-year-old mystery: the location of Genghis Khan's tomb. Genghis Khan was the founder of the Mongol Empire, one of the largest empires in history. When he died in 1227, he was buried in an unmarked grave.

- B Experts believe that Genghis Khan's final resting place is somewhere near the Burkhan Khaldun, a sacred² Mongolian mountain. It's a difficult place to get to and covers a huge area, so the scientists had to rely on satellite³ images. However, there were over 85,000 images to study, so they needed a lot of help.

¹An archaeologist is a person who studies human history by digging up items buried underground.

²Something that is sacred is believed to have a special religious purpose or meaning.

³A satellite is a device that is sent into space to collect information, to capture images, or to be part of a communications system.

- D More than 10,000 volunteers or "citizen scientists" joined the **search**. They **logged in** to a website and labeled landmarks⁴ on very detailed satellite images of the area. The landmarks could be roads, rivers, modern structures, or ancient structures. **Participants** also labeled anything else that looked unusual.

According to project leader Albert Lin, humans can often do this kind of work better than computers. "What a computer can't do is look for 'weird things,'" he says. Lin's team used the information from the volunteers to decide on the best places to visit and study. The project has identified more than 50 sites that might be related to Genghis Khan's tomb. The exact location is still unknown, but Lin believes that we are getting closer to finding out this great secret.

PROTECTING TREASURES

- E Crowdsourcing is also being used by National Geographic Explorer and archaeologist Dr. Sarah Parcak. In 2017, Parcak **launched** GlobalXplorer, a citizen science project that aims to find and protect important archaeological sites using satellite images. In particular, it protects sites from looters—people who steal ancient objects and sell them. "If we don't go and find these sites," says Parcak, "looters will." Looting pits are easy to spot in satellite images, so participants can look for signs

of looting and illegal construction. The project launched in Peru, which has large numbers of historical sites from many different cultures.

GlobalXplorer is designed like a game. Participants first watch online videos that teach them how to identify certain **features** on satellite images. Then they study and flag⁵ satellite images on their own. They look at more than 250,000 square kilometers of land, broken into 100 × 100 meter "tiles." Since the participants don't have professional experience, a certain number of them have to agree on the results before the data is considered useful. Once enough volunteers say that they see the same thing, Parcak and her team will check for themselves before passing the information along to archaeologists on the ground. The "players" receive a score based on how **accurate** they are.

"Most people don't get to make scientific **contributions** or discoveries in their everyday lives," Parcak says. "But we're all born explorers ... We want to find out more about other people, and about ourselves and our past." Now, thanks to crowdsourcing projects like GlobalXplorer, anyone with a computer and an Internet connection can be part of a new age of discovery.

⁴A landmark is a building or other place (e.g., a large tree or a statue) that is easily noticed and recognized.

⁵When you flag something, you mark it for attention.

UNDERSTANDING THE READING

 **A** According to the reading passage, the Internet is enabling collaboration through crowdsourcing. How does this work?

- A small group of people connected to the Internet work together on a project.
- A large group of people connected to the Internet contribute toward a shared goal.

 **B** Complete the chart below using information from the reading passage.

Lin's Project	Parcak's Project
studies an area in the country of 1 _____	studies sites in the country of 4 _____
aims to find the tomb of 2 _____	aims to protect sites from 5 _____
Participants look at satellite images and label landmarks and other 3 _____ features.	Participants look at satellite images and flag any signs of looting and 6 _____.

 **C** Work with a partner. What can you infer from each statement from the reading passage? Circle the correct inference.

- More than 10,000 volunteers or "citizen scientists" joined the search.*
 - A lot of people don't know much about Genghis Khan.
 - A lot of people are interested in finding Genghis Khan's tomb.
- [GlobalXplorer] protects sites from looters—people who steal ancient objects and sell them.*
 - Many people don't appreciate the true value of ancient objects.
 - Ancient objects are worth a lot of money.
- The project launched in Peru, which has large numbers of historical sites from many different cultures.*
 - Because of its rich history, Peru is an ideal place to start the project.
 - Peruvians are very proud of their country's rich and diverse history.