



Smithsonian

Making a Mummy



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Speaking to the Dead

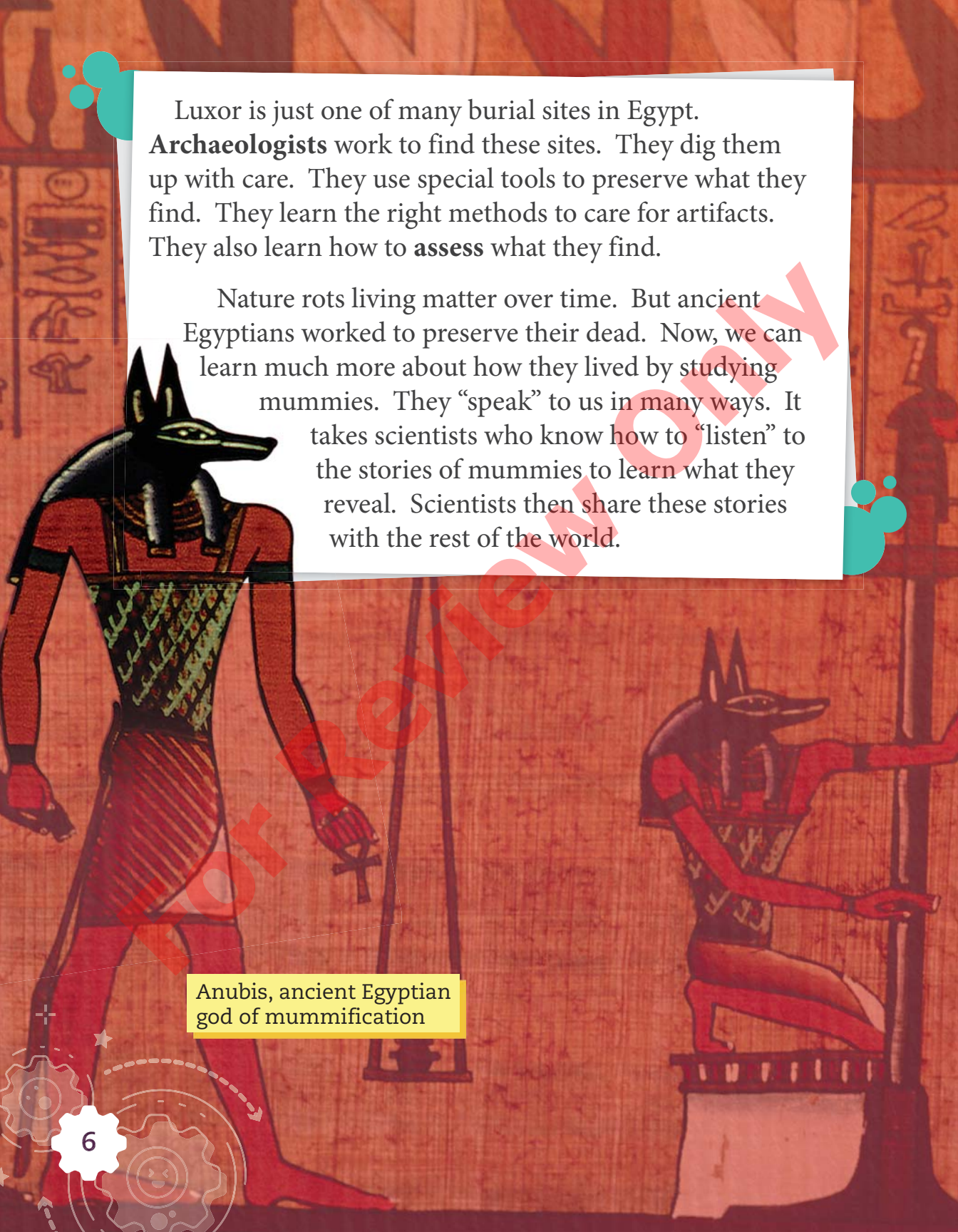
Buried beneath the city of Luxor lies the ancient city of Thebes. Both are in Egypt. One is the present, and one is the past. Luxor tells a story of modern life. But Thebes tells a story, too. The story is found in its **artifacts**. The people left behind also help tell the story.

Scientists today have found a piece of the story of Thebes below Luxor. There, they have **unearthed** mummies from tunnels and tombs. These are parts of a very old burial site. The mummies were so well **preserved** that the bodies look as though they are alive. Scientists know much more about mummies than they did long ago. A lot of the information comes straight from the mummies themselves. The truth is, the dead can tell a gripping story!



Men search for artifacts near Luxor.





Luxor is just one of many burial sites in Egypt. **Archaeologists** work to find these sites. They dig them up with care. They use special tools to preserve what they find. They learn the right methods to care for artifacts. They also learn how to **assess** what they find.

Nature rots living matter over time. But ancient Egyptians worked to preserve their dead. Now, we can learn much more about how they lived by studying mummies. They “speak” to us in many ways. It takes scientists who know how to “listen” to the stories of mummies to learn what they reveal. Scientists then share these stories with the rest of the world.



Anubis, ancient Egyptian god of mummification

An archaeologist and his assistant examine an artifact.



Ancient Egyptians thought the soul needed its body after death. With its body, the soul had a chance at a better life after death.

Preserving the Body

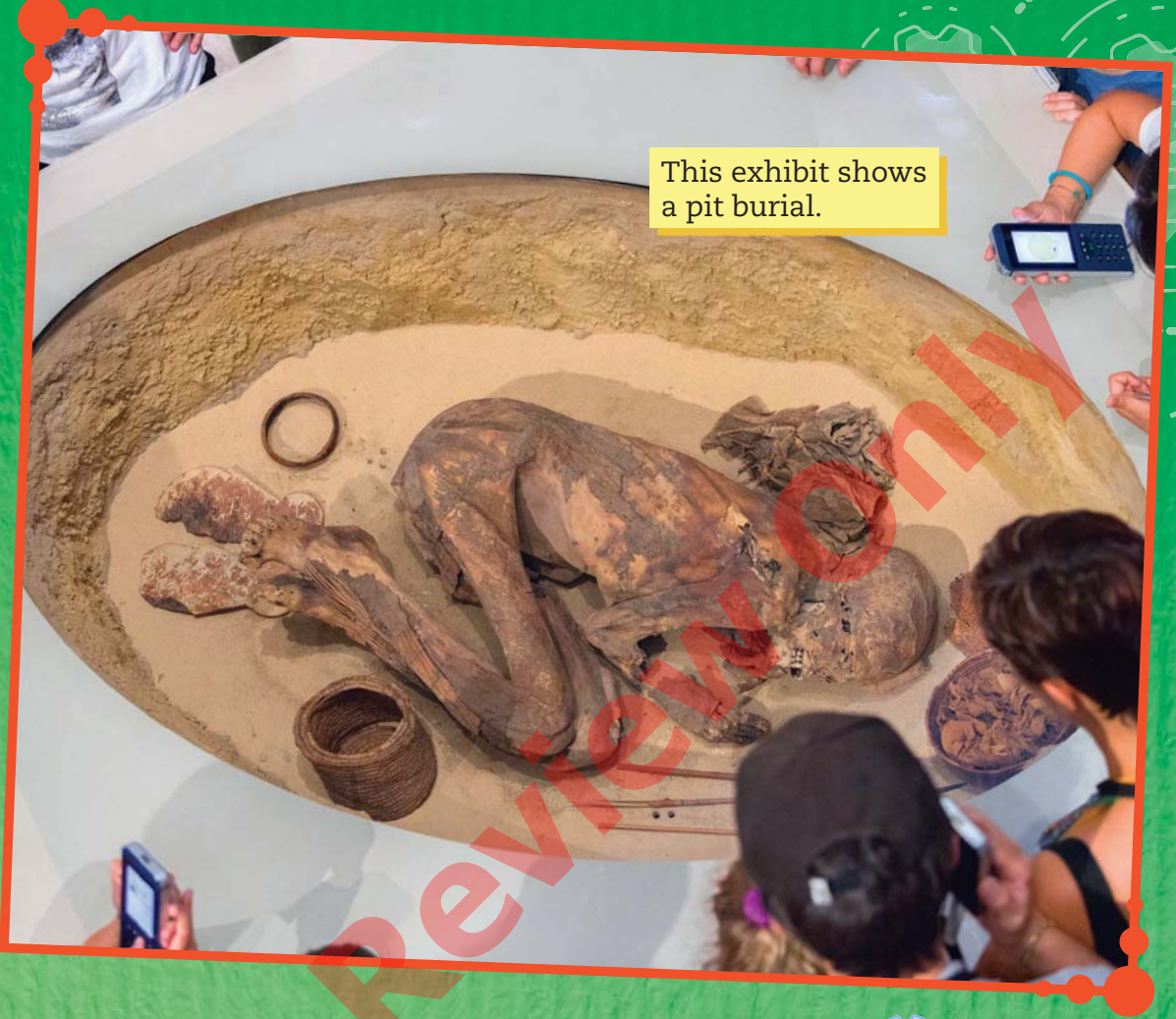
Living things decay when they die. *Decay* means “to break down.” The body is eaten by other living things. These include bacteria. Bacteria are tiny **organisms**. They are made of a single cell and are so small that they cannot be seen. But they exist all over the world in large numbers.

A mummy is a body that has been preserved. This means that things were done by people or in nature to keep the body whole. At first, Egyptians buried their dead in pits in the desert sand. This is known as a pit burial. The dry heat preserved the bodies. Bacteria do not live well there. So there is nothing to decay the body. It may shrink and darken, but it does not decay.

Egyptians saw what happened to the dead. They wondered whether there were other ways to get the same result.



bacteria



This exhibit shows a pit burial.

SCIENCE

Keeping Decay Away

The bacteria that decay bodies do not grow well in hot, dry areas or extremely cold, icy places. They do not grow well in swampy **bogs** either. Mosses that grow in these bogs keep bacteria away. Bacteria also need oxygen to survive. If a body is kept in an airtight place, it will not decay. Mummies have been found in each of these areas.

STEAM CHALLENGE

Define the Problem

A mummified cat has been found near the ancient city of Thebes. You have been hired to build a box to ship the mummy safely to a museum. Before the mummy is shipped, you must test your model to prove it will protect the mummy.



Constraints: Use no more than five materials, such as cardboard pieces, tape, glue, packing peanuts, straws, toothpicks, foam pieces, or scrap paper.



Criteria: Your model must protect a fragile item when dropped from a height of 1 meter (3 feet).





Research and Brainstorm

Why would a mummy need to be shipped in a special box? How will your box protect a mummy?



Design and Build

Sketch your design. What purpose will each part serve? What materials will work best? Build the model.



Test and Improve

Place a fragile item in your model. Drop it from 1 m (3 ft.) above the ground. Was the fragile item kept safe? Modify your design, and try again.



Reflect and Share

Was your design successful? How do you know?

