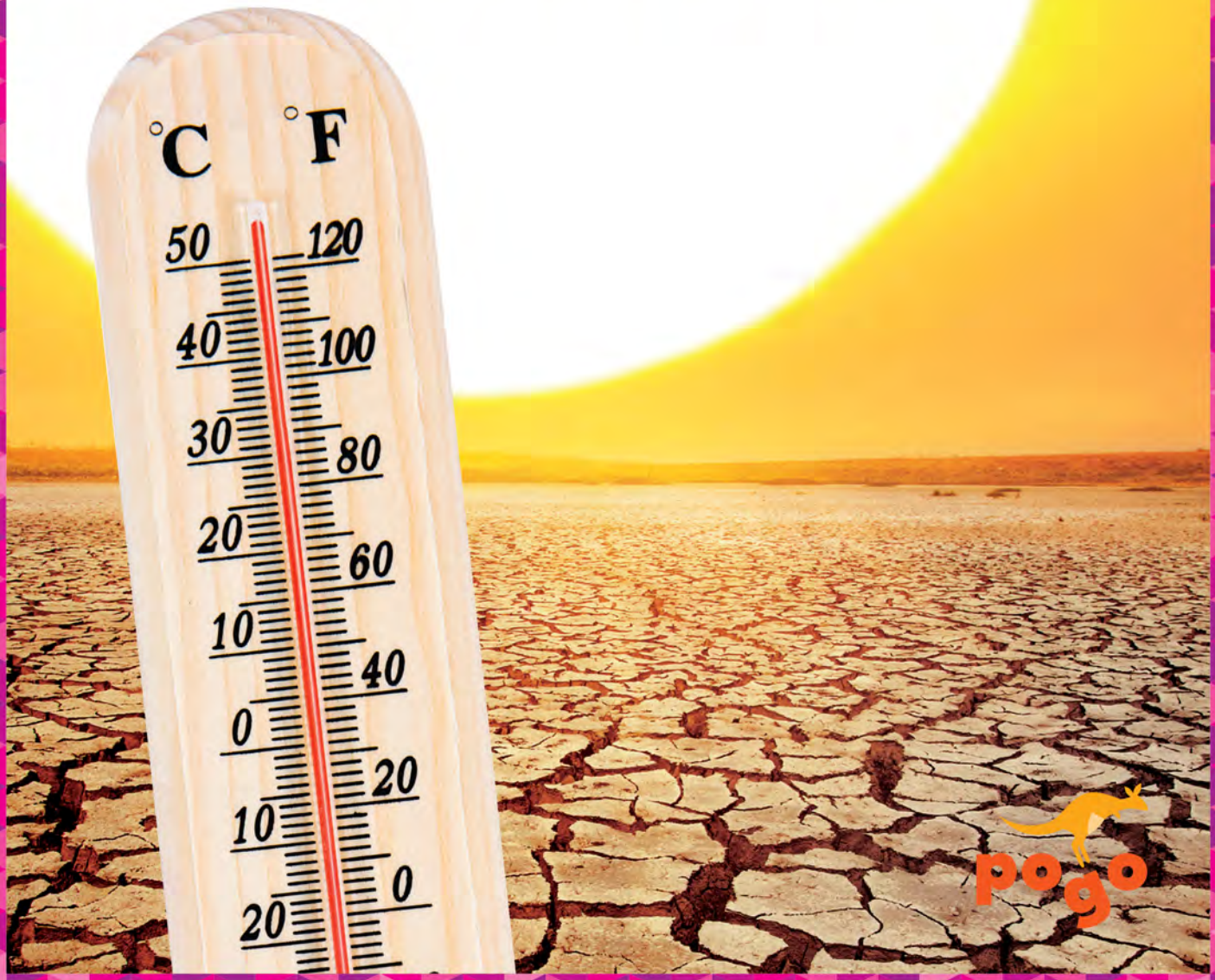
SAFE BY DESIGN

SAFETY IN EXTREME CLIMATES



pogo

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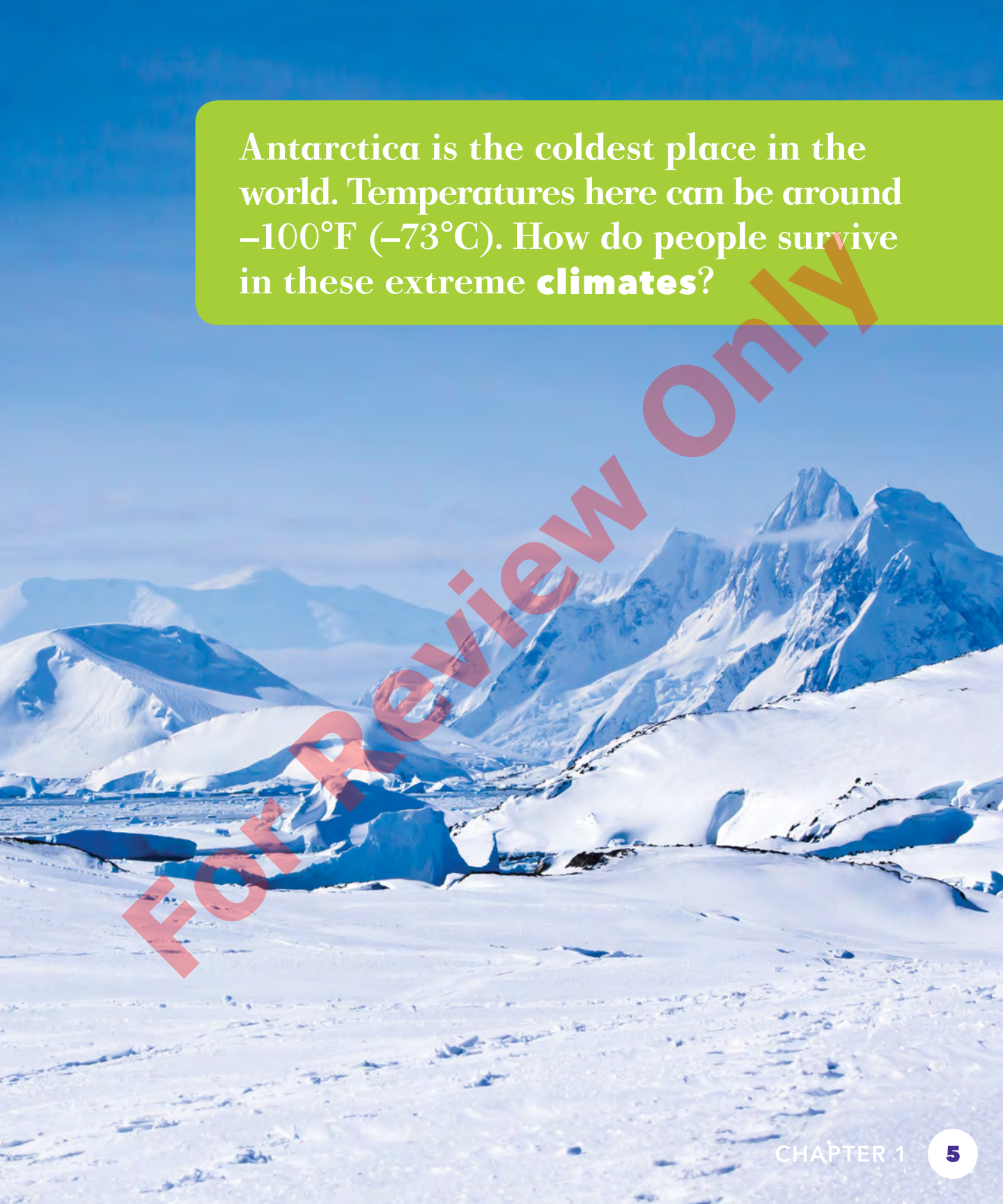
CHAPTER 1

EXTREME TEMPERATURES

It is 134 degrees Fahrenheit (57 degrees Celsius)! Where are we? This is Death Valley in California. It is a desert.



For Review Only



Antarctica is the coldest place in the world. Temperatures here can be around –100°F (–73°C). How do people survive in these extreme **climates**?

For Preview Only

Our bodies have an average body temperature. It is 98.6°F (37°C). We need to keep it safe from extreme heat and cold!

Layers **insulate** the body. Hats help keep body heat in. Almost 20 percent of body heat can be lost without them!

Frostbite is dangerous. It affects fingers and toes most often. Just 30 minutes spent in –10°F (–23.3°C) weather can cause frostbite. Yikes!



For Review Only



For Review Only



For Review only



Heatstroke can happen when the body reaches 104°F (40°C). Water and shade help. These help keep the body cool. Sunscreen protects our skin from the sun.

DID YOU KNOW?

Some days, sunscreen is extra important! Why? The sun's rays can be stronger. Scientists can **predict** their strength.

For Review Only

ACTIVITIES & TOOLS

TRY THIS!

BUILD YOUR OWN BLUBBER

One of the things that keeps an animal warm in cold conditions is blubber. Polar bears, whales, and walruses all have layers of blubber. Make your very own blubber gloves and test them out.

What You Need:

- two one-quart plastic bags
- duct tape
- large bucket of ice water
- rubber gloves
- can of shortening
- foam packing peanuts
- cotton balls or feathers



1. **Fill one of the plastic bags about ¾ full of shortening.**
2. **Put on your gloves.**
3. **Insert one hand into an empty plastic bag and the other into the bag filled with shortening. This is your blubber bag.**
4. **Have an adult help you tape the bags closed around your wrists.**
5. **Put your covered hands into the tub of ice water. Which hand is colder?**
6. **Repeat this experiment with foam peanuts, cotton balls, feathers, or other materials in place of the shortening. Predict which will work best to keep your hand warm. Record your results.**

For Review Only