SAFE BY DESIGN

SAFE SPORTS EQUIPMENT



pogo

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CHAPTER 1

MADE FOR SAFETY



Can you imagine soccer without shin guards? What about football without helmets? Sports can be dangerous.

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Without safety gear, athletes can get hurt. These injuries can be painful.

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Contact sports are intense. Players **tackle**. They hit. They crash. They can get hit by balls, pucks, and more.

Engineers design **equipment**. It lowers the **impact** of these hits. We wear special items for each sport. Helmets, pads, guards, and shoes keep us safe.

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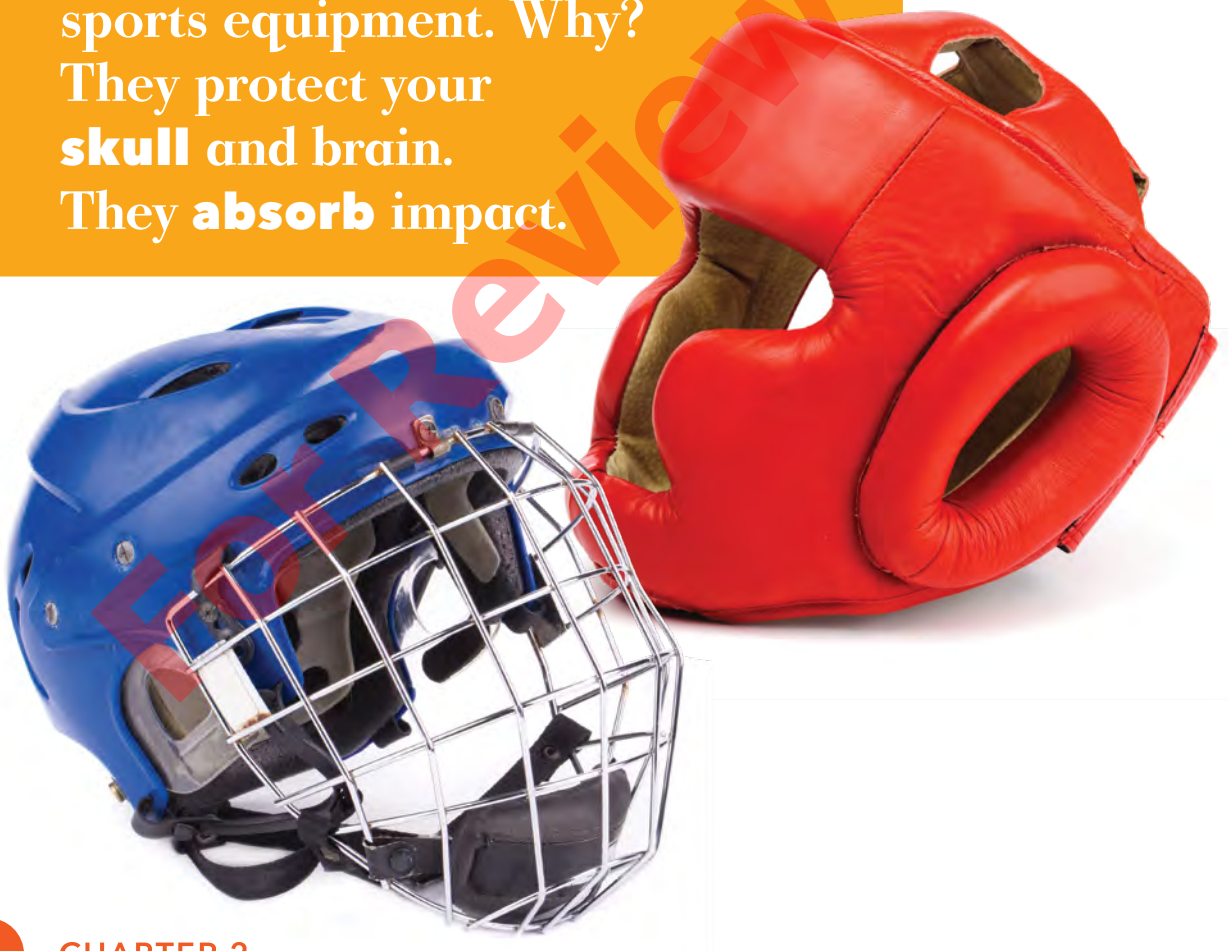
DID YOU KNOW?

Helmets, pads, and guards are not new. Warriors wore them in ancient Rome and Greece! They were made of metal.

CHAPTER 2

KEEP YOUR HEAD IN THE GAME

Helmets are the most important sports equipment. Why? They protect your **skull** and brain. They **absorb** impact.



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What happens without a helmet? Your skull and brain absorb the impact. This can cause a **concussion**. Ouch!

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ACTIVITIES & TOOLS

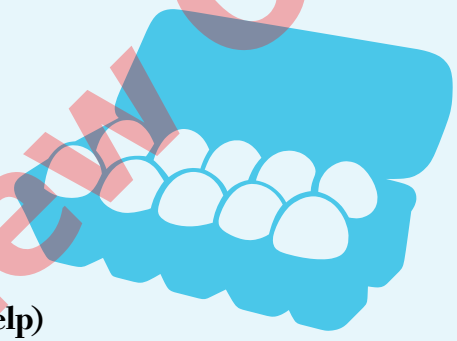
TRY THIS!

EGG HELMET

Helmets are designed to keep your brain from getting hurt. In this activity, design a helmet to keep an egg from cracking!

What You Need:

- one carton of eggs
- scissors
- masking tape
- old newspapers
- plastic bags
- cardboard tubes
- straws
- a short ladder (and an adult to help)



1. **Use your materials to design a helmet or guards and pads for your egg that will keep it from breaking when dropped.**
2. **Go outside. Set up your ladder on a flat surface. Now drop your egg from four feet (1.2 meters) above the ground. What happens? Does the egg break?**
3. **If the egg broke, try a new design. Record your results. Which materials and designs lessen the impact on the egg?**

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