

HOW DOES IT WORK?

HELICOPTERS



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CHAPTER 1

AMAZING AIRCRAFT

Helicopters are unique flying machines. They can **hover**.





They can fly straight up. They can even fly backward. How can a helicopter do such amazing things? And how does a pilot control it?

It comes down to the **rotor**. That's the huge set of spinning **blades** on top. The rotor creates **lift**. Lift pushes the heavy craft up into the air.

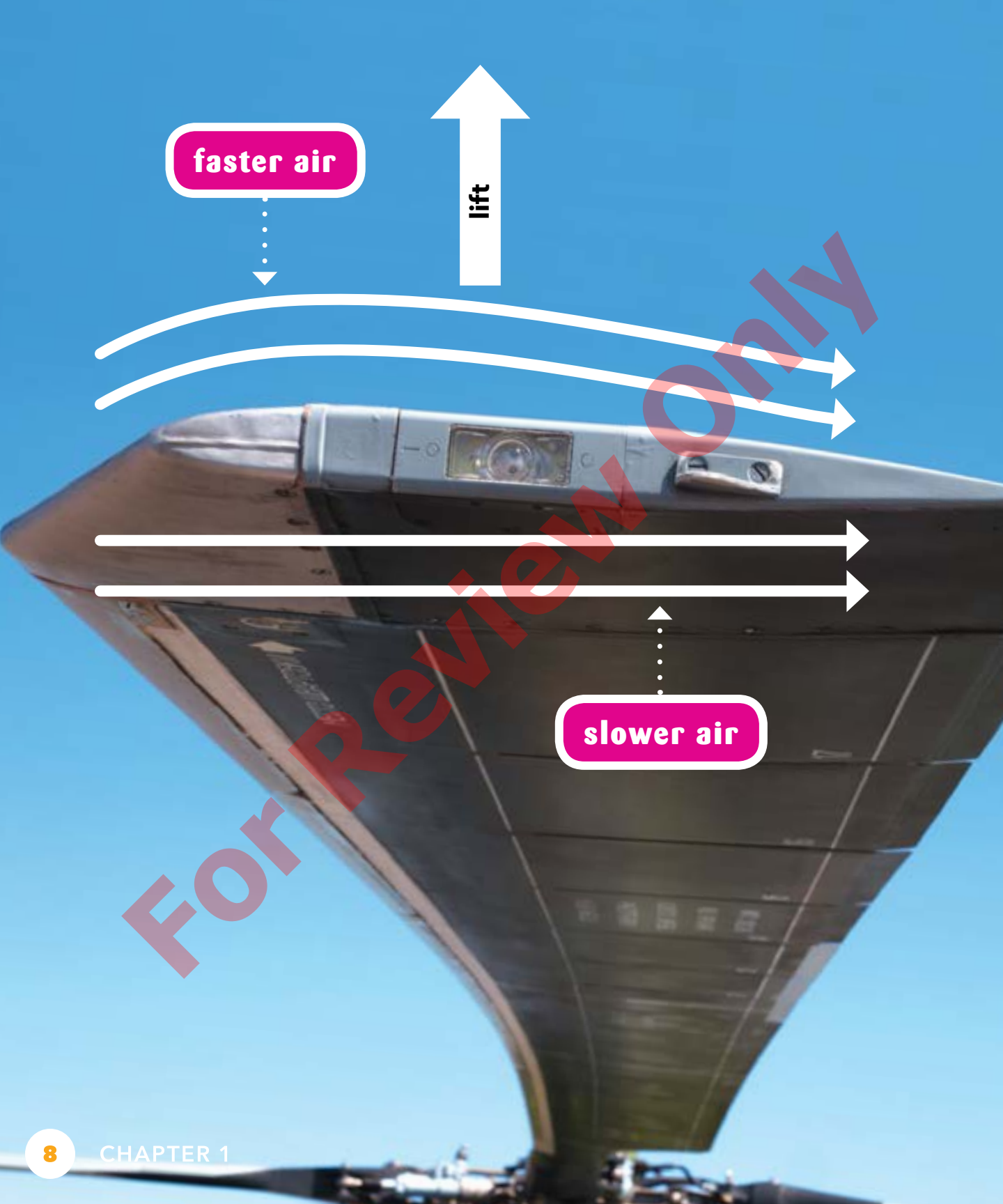
DID YOU KNOW?

Helicopters are often called choppers. Why? The rotor blades chop air to produce lift.



rotor





faster air

lift

slower air

The rotor blades have a shape. It is called an **airfoil**. This shape increases lift. How? It causes air above the blades to move faster than the air below the blades. This changes the **air pressure** around the blades. Less **force** is pushing down on the craft.

DID YOU KNOW?

Many choppers have **turboshaft engines**. Engines create **exhaust**. But the exhaust does not push the craft forward. Instead it spins a machine. The machine powers the rotor.

