



## How Do Birds Fly Without Flapping? | Science of Gliding for Kids

### Description

Have you ever watched a bird soaring high in the skyâ??barely flapping its wings? It looks like itâ??s just **floating on air!**

So how do birds stay in the sky without constantly flapping? Letâ??s uncover the science behind this incredible flying trick!

## First, How Do Birds Fly at All?

Birds fly using the same basic forces as airplanes:

- **Lift** pushes them up
- **Gravity** pulls them down
- **Thrust** moves them forward
- **Drag** slows them down

When birds flap their wings, they create **thrust and lift**. But flapping all the time would take a lot of energy!

So birds have a smarter way!

## What Is Gliding?

**Gliding** means flying **without flapping wings**.

Instead of using energy, birds:

- Stretch their wings wide
- Use air movement to stay up

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It's like sliding through the sky! «

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## • The Secret: Rising Air (Thermals)

Here's the real magic: **warm rising air**, called **thermals**.

### How thermals work:

- The Sun heats the ground •
- Warm air rises upward
- Birds catch this rising air like an elevator

So instead of flapping, birds:

• Ride the air currents upward

• Then glide forward

Eagles, hawks, and vultures are experts at this!

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## Another Trick: Wind Currents

Some birds use **wind over oceans or hills**.

### Example:

- Wind hits a mountain and moves upward
- Birds glide along that rising wind

The **albatross** can glide for hours over the ocean without flapping!

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## ½ Why Wings Matter

Bird wings are perfectly shaped for gliding:

- Long and wide wings = better lift
- Curved shape helps air move faster on top
- This creates pressure difference and keeps them in the air

Some birds are built for gliding more than others!

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## Saving Energy Like a Pro

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Flapping takes energy like running •  
Gliding saves energy like sliding downhill •

Birds use a smart strategy:

1. Flap to gain height
2. Glide to rest
3. Repeat

This helps them fly **long distances without getting tired!**

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## DO YOU KNOW?

- The **albatross** can travel thousands of kilometers without much flapping!
  - Eagles can soar for hours using thermals.
  - Some birds sleep while gliding in the air!
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## FUN SCIENCE FACTS!

Gliding birds often fly in circles to stay inside rising air columns.  
Bigger birds glide better because they can catch more air.  
Humans copied this idea to build **gliders and airplanes!**

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## QUIZ TIME! (Test Your Flight Skills)

**Bird Flight Quiz** Can You Master Gliding Science?  
8 fun questions about how birds fly without flapping!

1. What is it called when birds fly without flapping their wings?

Running

Gliding

Jumping

Floating

2. What helps birds rise into the air without flapping?

Cold air

Warm rising air (thermals)

Rain clouds

Fog

3. Why do birds glide instead of flapping all the time?

To look cool

To save energy

To fly faster

To sleep

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4. What force helps keep birds in the air?

Heat

Lift

Sound

Light

5. Which bird is famous for gliding long distances?

Sparrow

Albatross

Pigeon

Parrot

6. What shape of wings helps birds glide better?

Short and round

Long and wide

Tiny and thin

Square

7. What do birds often do to stay inside rising air?

Fly straight

Fly in circles

Stop moving

Dive down

8. What is drag?

Force pushing up

Force pulling down

Air resistance slowing movement

Heat from the sun

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Try Again!

## TRY THIS!

### Paper Glider Experiment

You need:

- Paper

Steps:

1. Make a paper airplane
2. Throw it gently
3. Watch it glide

Try changing wing shapes

Which one glides farther?

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## Encouragement to Explore

Next time you see a bird soaring in the sky, look closely!  
Is it flapping or gliding?

You're not just watching a bird  
you're watching **physics in action!**

Keep observing, keep asking, and keep exploring  
because science is flying all around you!

### Category

1. SCIENCE AROUND US

### Tags

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