

\_\_\_\_\_, 2019. Londrina, \_\_\_\_\_ de \_\_\_\_\_

Nome: \_\_\_\_\_

Tempo Início: \_\_\_\_\_ Término: \_\_\_\_\_ Total: \_\_\_\_\_

Área do Conhecimento: Inglês

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## ENGLISH HOMEWORK V

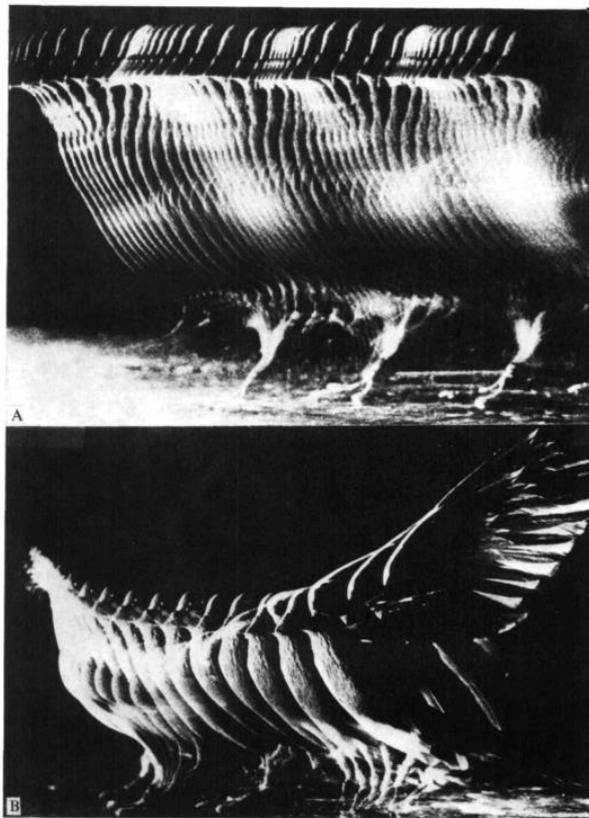
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PET

*Teacher Julia*

1. Look at the picture below. What do you see? What do you think it is and where do you think it came from? Explain.



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2. Now, read the text and find out if your hypothesis was right. Then, answer the questions that follow.

## Why Do Pigeons Bob Their Heads?

By [Emma Bryce - Live Science Contributor](#) 4 days ago [Animals](#)

Are they really wagging their heads up and down? Look a little closer...

In 1978, a group of researchers in a laboratory at Queen's University in Canada clustered around a plexiglass box enclosing a treadmill ... with a pigeon walking on it. The purpose behind this comical scene was to try and answer an age-old question: Why do pigeons bob their heads?

Head-bobbing is as much a feature of pigeons' identity as is their tendency to swarm us at the slightest suggestion that we might be harboring a snack. Bopping their heads as they stalk about pecking the ground for crumbs, these birds seem to be grooving to some secret beat, as if they're all attending a silent disco in the town square. But what's the real purpose behind this seemingly ridiculous motion?

The [1978 treadmill experiment](#) gave us the first crucial insights into that question. And the study overturned one major assumption in the process: Pigeons aren't actually bobbing their heads. Instead, they're pushing them forward. When the researchers in that study reviewed slow-motion footage, they found that there were actually two main parts to a pigeon's head movement, which the scientists called a "thrust" and a "hold" phase.

"In the 'thrust' phase, the head is pushed forward, relative to the body by about 5 centimeters [2 inches]," explained Michael Land, a biologist at Sussex University in the United Kingdom who has studied [eye movements](#) in animals and humans. "This is followed by a 'hold' phase, during which the head is kept still in space, which means that it moves backwards relative to the forward-moving body." What we see as a "bob" is actually the head sliding smoothly forward and then waiting for the body to catch up. We perceive it as a bob because the motion unfolds so rapidly.

The researchers in the landmark treadmill experiment discovered that if a pigeon's visual surroundings stayed relatively stationary around the bird as it strutted on the treadmill, the animal's head didn't bob. Through reverse logic, this led to the central discovery: Head-thrusting helps pigeons to stabilise their view of the moving world around them. "Keeping the head still in space during the 'hold' phases means that the image will not be blurred by motion," Land said.

In other words, a stationary head gives the bird a moment to [visually process](#) its surroundings while it waits for its moving body to catch up; it's like hitting pause on the motion for a fraction of a second. This tactic is useful because it "enables them to see potential food — and possibly, enemies," Land said. If pigeons' heads moved at the same pace as their bodies, "they would have trouble keeping a stable image of the world on their retina," Blaisdell explained; the surrounding scene would swim by in a confusing blur.

Blaisdell also shared an endearing anecdote: During research in his own lab, when he picked up a pigeon and walked forward with it, the bird still bobbed its head, because the world was still moving around the pigeon even though the animal wasn't moving of its own accord.

### 3. GRAMMAR

Use prefixes and suffixes to change the words given and complete the sentences.

I don't think you should trust him with that job. He seems a bit \_\_\_\_\_.  
(RESPONSIBLE)

I can't believe they did that. It was completely \_\_\_\_\_. (MORAL)

She's always fighting with her brothers. They are so \_\_\_\_\_. (MATURE)

He always forgets something. He's so \_\_\_\_\_! (RELY)

### 4. Link the conditions to the consequences:

- |  |                                   |
|--|-----------------------------------|
| A) If they don't leave soon,           | ( ) you would have better grades. |
| B) If I had seen you,                  | ( ) she won't go to the party.    |
| C) If she doesn't finish her homework, | ( ) I will travel in December.    |
| D) If you studied more often,          | ( ) they will be late.            |
| E) If I save enough money,             | ( ) I would have said hello.      |