## Reading 3

**Skills**:

- Details
- Make inferences
- Author's purpose
- Understand referents
- Associate information
- Understand negative facts

**Getting started**: What are some essential conditions to establish an internet connection?

### PROCESSES: THE INTERNET





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Dear Claire,

If you wrote me a physical letter, it would take a few days to reach me. You put the letter in your mailbox. A postal worker picks it up. Then it travels between different post offices on its journey from you to me. But within seconds of you sending this question over the Internet, it was sitting in my inbox. How can this be?

The whole internet works like the mail system—but much faster. That's what I learned from Adam Hahn, an Assistant Professor of Computer Science at Washington State University. You can think _____ the internet as one big network connecting different devices. They're all able to "talk" to each other because they follow the same rules, called protocols. Computers all have their own address, called an "IP address." An IP address is a long combination of letters and numbers.
On the internet, information is carried through electronic signals, which are invisible to you. But, of course, it needs physical things to carry these signals. Special devices called "routers" pick **them** up and push them to their destination using wires and cables.

Some computers play a special role as "servers." Servers are like filing cabinets, keeping all the information of a particular website. They receive your request for information, find the right file, and send it back to you. When you search for something, your request goes from your IP address to the nearest router. That router bounces it to another router, and so on, until it reaches the server. The server sends information back to your IP address the same way, through the router network.

But what are those electronic signals made of? **[7A]** All the information on the internet travels in the form of "packets." Packets are broken-up pieces of a file. **They** are written in a language of 1s and 0s, which computers can read. **[7B]** Everything you send or receive is made of packets—whether it's a question, a Google search, or even a video call with family far away. "You can think of a packet like an envelope, and your IP address like a zip code or mailing address," Hahn explained. **[7C]** However, on the Internet, your message travels as lots of packets. **[7D]**

Imagine writing a letter, cutting it into tiny pieces, and sending them in their own individual envelopes. When the letter arrives, it would have to be taped back together! On the internet, information travels faster sliced into pieces. Packets take different routes to arrive _____ the same place. When all the



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packets arrive, your computer puts them all back together like a puzzle. This all happens in under a second.

I'm glad the internet does this work for us. There's nothing more exciting to me than reading your curious questions. Thanks to the internet, I don't have to wait too long to see them.

Regards,

David

**Adapted from https://askdruniverse.wsu.edu/2020/04/24/how-does-the-internet-work/*

**Answer the following questions:**

1. What kind of question has probably Claire asked David?
    a. If he ever worked as a mailman.
    b. Whether he likes the internet or not.
    c. She has asked him how the internet works.
    d. She wonders how long it takes him to answer an email.

2. Why does the author talk about the process of sending a physical letter?
    a. He needs Claire to understand why he doesn't like to receive physical letters.
    b. He uses this example as a comparison to explain how the internet works.
    c. He wants to make clear that being a mailman is a very difficult job.
    d. He explains how the mail system in the United States operates.

3. What preposition should you insert in the gap in paragraph 2?
    a. of
    b. in
    c. to
    d. as

4. The word **them** in paragraph 3 refers to
    a. wires
    b. routers
    c. things
    d. signals



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5. What is NOT stated about servers in paragraph 4? **Choose Two**
    a. They are also called IP addresses.
    b. They store information from web pages.
    c. They can work properly without a router.
    d. They work as a bridge to receive and send information.

6. The word **they** in paragraph 5 refers to
    a. signals
    b. packets
    c. pieces
    d. 1s and 0s

7. Look at the squares in paragraph 5. Where can you insert this sentence: **If you wrote me a letter, you'd send it in a single envelope.**
    a. 7A
    b. 7B
    c. 7C
    d. 7D

8. What preposition should you insert in the gap in paragraph 6?
    a. to
    b. by
    c. in
    d. at

9. What is stated in paragraph 6?
    a. Information is never divided while it goes around the web.
    b. How information travels on the internet is a big mystery.
    c. Information travels more quickly if it's split in little parts.
    d. It takes a PC some time to compile the information it received.

## What do you think?

Think of something the internet is missing today. What would you add? How would it work?



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