Lesson 8: Hosting Services

In this lesson, students will explore the concepts of web hosting and cloud services. They will learn about the role of servers in hosting websites and online services, as well as the difference between web servers and clients. The lesson will also introduce the concept of cloud computing, which involves the use of remote servers to store, manage, and process data. Students will have the opportunity to engage in guided practice by completing a scavenger hunt worksheet, where they will explore a Google data center website to find answers to specific questions. Additionally, they will independently research and analyze the environmental impacts of cloud computing, listing its advantages and disadvantages in terms of its environmental impact. The lesson will conclude with an exit ticket, where students will summarize their findings.

## **Objectives:**

By the end of this lesson, students will be able to:

- Describe how servers are used for hosting services across the internet.

- Describe the role of web servers and clients.

- Explain how the cloud provides services for software and storage.

- List the advantages and disadvantages of cloud computing.

## **Materials:**

- Computers or laptops with internet access

- Projector or smartboard

- Scavenger hunt worksheet

- Exit ticket slips

## **Bell-Ringer Activity (5 minutes):**

- Display the following question on the board: "What is web hosting and how does it work?"

- Give students 2 minutes to write down their answers individually.

- After 2 minutes, ask a few students to share their answers with the class.

## **Introduction (10 minutes):**

- Begin by reviewing the concept of web browsers and how web pages are located and presented on devices, as covered in Lesson 7.

- Explain to students that in today's lesson, they will be learning about web hosting and cloud services.

- Discuss the importance of web hosting in providing access to websites and online services.

- Introduce the concept of cloud computing and explain that it involves the use of remote servers to store, manage, and process data instead of using local servers or personal computers.

## **Direct Instruction (20 minutes):**

- Use a projector or smartboard to show students a video tour of a Google data center.

- As they watch the video, explain the different components and processes involved in hosting services in a data center.

- Emphasize the role of servers in hosting websites and other online services.

- Discuss the difference between web servers and clients, and how they interact to deliver web content to users.

## **Guided Practice (20 minutes):**

- Distribute the scavenger hunt worksheet to each student.

- Instruct students to work in pairs or small groups to complete the scavenger hunt by exploring the Google data center website.

- Encourage students to read the provided information and navigate through the website to find the answers to the scavenger hunt questions.

- Monitor the groups and provide assistance as needed.

## **Independent Practice (20 minutes):**

- After completing the scavenger hunt, ask students to individually research and find information about the environmental impacts of cloud computing.

- Instruct them to list the advantages and disadvantages of cloud computing in terms of its environmental impact.

- Students can use search engines, online articles, or other reliable sources to gather information.

- Remind students to take notes and cite their sources.

## **Exit Ticket (10 minutes):**

- Distribute exit ticket slips to each student.

- Ask students to write a short paragraph summarizing their findings about the environmental impacts of cloud computing.

- Collect the exit tickets before the end of the class.

## **Closure (5 minutes):**

- Review the main points covered in the lesson, including the role of servers in web hosting, the concept of cloud computing, and the advantages and disadvantages of cloud computing.

- Emphasize the importance of understanding these concepts in the context of the modern digital world.

- Encourage students to continue exploring and learning about web hosting and cloud services on their own.

**Common Core Standards:**

- CCSS.ELA-LITERACY.RST.9-10.2: Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.

- CCSS.ELA-LITERACY.RST.9-10.4: Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9-10 texts and topics.

- CCSS.ELA-LITERACY.RST.9-10.7: Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.

- CCSS.ELA-LITERACY.RST.9-10.9: Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts.