

# Navigating Operating Systems

**ISTE Standard:** ISTE Standard 5: Computational Thinker (5b)

**Grade Level:** 6th–7th

**Project Objective:**

Students will explore the basic functionalities of three operating systems (Windows, Mac, and Linux) and develop their computational thinking by completing navigation tasks on each system.

**Materials Needed:**

- Computers with Windows, Mac, and Linux operating systems installed
  - User guide handouts for each OS
  - USB flash drives (optional, for file-saving tasks)
  - Worksheet with operating system tasks
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**Project Tasks:**

1. **Introduction to Operating Systems:**
    - Review what an operating system is and why it is essential for computer use.
  2. **Exploration of Features:**
    - **Windows:** Open a file, create a folder, and change the desktop wallpaper.
    - **Mac:** Locate Finder, create a text document, and check system preferences.
    - **Linux:** Open the terminal, run a basic command (e.g., `ls`), and create a new folder.
  3. **Hands-On Navigation:**
    - Rotate through stations to practice on each operating system.
    - Complete a series of tasks to explore functionality and user interfaces.
  4. **Comparison Activity:**
    - Reflect on and document differences between the operating systems (e.g., user interface, ease of use, key features).
  5. **Presentation:**
    - Groups will share insights and demonstrate tasks from one operating system of their choice.
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**Project Steps:**

**Day 1: Introduction and Exploration**

1. Introduce the operating systems (Windows, Mac, Linux) through a short presentation.
2. Split students into three groups, assigning each group one OS.
3. Provide task worksheets and guide each group as they complete basic navigation tasks.

**Day 2: Practice and Presentation**

1. Rotate groups so every student works on all three operating systems.
  2. Assist students with completing tasks and understanding system features.
  3. Conclude with group presentations comparing the systems and sharing insights.
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**Assessment Criteria:**

1. Completion of navigation tasks for all three operating systems.
  2. Quality and clarity of group presentation.
  3. Participation in group and class discussions.
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**Safety Notes:**

Ensure all students handle computers responsibly, avoiding changes to critical system settings that may disrupt functionality. Emphasize the importance of logging out and securing personal information during the project.

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**Accommodations for Diverse Learners:**

- For ELL students, provide visual aids, translated guides, or pairing with a bilingual peer.
- ESE students may benefit from additional time, simplified tasks, or hands-on guidance from the teacher or assistant.
- Allow advanced learners to explore additional features, such as system customization or advanced commands in Linux.