

Operation systems and application systems

Lesson_05 The Operating System

NOTE: This lesson will taught over 2 classes (90 minutes)

Lesson Title: Operating Systems

Lesson 2.1.6 Describe the main functions of an operating system.

SWBAT/IB Teaching Standard for Assessment: This is confined to a single-user operating system. Technical details are not needed. For example, memory management should be described but how this is handled in a multitasking environment is not expected.

Do Now / Coding Component (2 minutes) - no coding component for this lesson. A coding task will be assigned at the end of the lesson.

Part A. Introducing the Lesson (20 minutes)

The whole class will watch this video "[Why DOS was \(and is\) a Thing](https://youtu.be/3E5Hog5OnIM)" (<https://youtu.be/3E5Hog5OnIM>) and interactively discuss the topics at specific breakpoints or when there is a question raised by the student. The discussion protocol is Harkness.

Part B. Student Centered Activity. (20 minutes) Each group will be assigned the task of preparing a presentation on the companies and the related OS, specifically focusing on the evolution of each OS and the computing reason for the OS. Presentation will cover the pros and cons of each OS. Research and presentations will cover 2 days of lessons.

Group 1: Microsoft Group

Group 2: UNIX

Group 3: Google Group

Group 4: Linux Group

Part C. Whole Group Lesson Component /Harkness Protocol (15 minutes) - this component will be built into the presentations of the previous section as each group takes turns with their presentation.

Part D. Individual Tasks. Each student will prepare a reflection paper on the comparison of the 4 OS Companies and the student will be required to select a "best" OS choice and argue their case on their reflection. **This is an ATL and TOK IB Component.**

Resources:

<https://homepage.cs.uri.edu/faculty/wolfe/book/Readings/Reading07.htm#:~:text=An%20operating%20system%20has%20three,provide%20services%20for%20applications%20software.>

<https://www.toppr.com/guides/computer-science/computer-fundamentals/operating-system/functions-of-operating-system/>

<https://www.geeksforgeeks.org/functions-of-operating-system/>