**Hands-On Activity: Installing Docker for Windows**

The objective of this activity is to guide students through the installation and configuration of Docker Desktop on Windows. By the end of this activity, students should be able to:

* Successfully install Docker Desktop on a Windows machine.
* Configure Docker to run both Linux and Windows containers.
* Run a test container to verify Docker’s functionality.
* Understand the benefits of Docker Desktop’s integration with WSL 2.

**Prerequisites**

* Windows 10 64-bit (Pro, Enterprise, or Education) or Windows 11.
* Ensure that the Windows Subsystem for Linux (WSL) is enabled. If you plan to use WSL 2, WSL 2 must also be enabled.

**Step-by-Step Instructions**

**Enable Windows Subsystem for Linux (WSL) and WSL 2**

1. **Open PowerShell as Administrator**
   * Right-click on the Start menu, select **Windows PowerShell (Admin)**.
2. **Enable WSL**
   * Run the following command to enable WSL:

**Command:**

wsl --install

* This will install WSL, set WSL 2 as the default version, and download a Linux distribution for you. If WSL is already installed, it will skip this step.

1. **Set WSL 2 as the Default Version** (if necessary)

* To confirm or set WSL 2 as the default, run:

**Command:**

wsl --set-default-version 2

1. **Install a Linux Distribution** (if not automatically installed)

* You can download a preferred Linux distribution (e.g., Ubuntu) from the Microsoft Store if it wasn’t automatically installed during the WSL setup.

**2. Download Docker Desktop**

1. **Visit the Docker Desktop Website**

* Go to [Docker Desktop for Windows](https://docs.docker.com/desktop/setup/install/windows-install/) and download the installer.

1. **Run the Installer**

* Open the downloaded Docker Desktop Installer.exe and follow the prompts.

1. **Choose WSL 2 or Hyper-V**

* During installation, you will be prompted to select between using WSL 2 or Hyper-V. Select **WSL 2** for faster performance and better integration with Linux containers.

1. **Finish the Installation**

* Complete the installation by following the remaining prompts. Once installed, Docker Desktop will start automatically.