[**Vulkan** is a next-generation graphics and compute API that provides high-efficiency, cross-platform access to modern GPUs used in PCs, consoles, mobile phones, and embedded platforms](https://www.vulkan.org/) [1](https://www.vulkan.org/)[2](https://developer.nvidia.com/vulkan).

Here are **five free resources** to help you learn Vulkan:

1. **Vulkan Documentation Website**: This comprehensive resource includes the Vulkan specification, guides, tutorials, and code samples. [You can find it at](https://www.vulkan.org/) [docs.vulkan.org3](https://www.vulkan.org/learn).
2. **Sascha Willems Samples & Tutorials**: Sascha has developed a collection of open-source C++ examples for Vulkan. [These cover everything from drawing your first triangle to key constructs like pipelines and descriptor sets](https://www.vulkan.org/) [3](https://www.vulkan.org/learn).
3. **Khronos Vulkan Tutorial**: If you’re new to Vulkan, this tutorial will introduce you to the basics of using the Vulkan graphics and compute API. [It’s fully cross-platform, allowing development for Windows, Linux, and Android simultaneously](https://www.vulkan.org/) [3](https://www.vulkan.org/learn).
4. [**Vulkan in 30 Minutes (Advanced)**: For those familiar with existing APIs (like D3D11 and GL), this resource provides a whirlwind tour of Vulkan concepts, including multithreading, resource staging, and synchronization](https://www.vulkan.org/) [3](https://www.vulkan.org/learn).
5. **Introduction to Computer Graphics and the Vulkan API**: This practical guide by Kenwright introduces computer graphics using Vulkan. [It’s a great starting point for understanding the API and its programming techniques](https://www.vulkan.org/) [4](https://github.com/vinjn/awesome-vulkan).

Happy learning! 🚀🎮