■ Quick Guide: Checking, Testing, and Safely Removing a Disk from Terminal

1. Check Disk Size and Usage

Linux
`df -h` — Shows disk usage
`lsblk` — Lists all disks and partitions

Windows
```
Get-PSDrive -PSProvider FileSystem
```

macOS
```
df -h
diskutil list
```

2. Install Disk Test Tools (Linux)

Ubuntu / Debian / Mint
```
sudo apt update
sudo apt install smartmontools hdparm
```

Fedora / CentOS / RHEL
```
sudo dnf install smartmontools hdparm
```

Arch / Manjaro
```
sudo pacman -S smartmontools hdparm
```

3. Test Disk Health

```
sudo smartctl -a /dev/sda
sudo smartctl -t long /dev/sda
```
■ Look for: **SMART overall-health self-assessment test result: PASSED**

4. Test Disk Speed

```
sudo hdparm -Tt /dev/sda
```

Manual write test:
```
dd if=/dev/zero of=testfile bs=1G count=1 oflag=dsync
rm testfile
```

5. Check and Repair Filesystem

```
sudo fsck -f /dev/sda1
```
■■ Do not run on a mounted root filesystem.

6. Safely Remove / Eject Disk

`lsblk` — Identify your disk
`sudo umount /dev/sdb1` — Unmount
`sudo umount -l /dev/sdb1` — Lazy unmount if busy
`sudo udisksctl power-off -b /dev/sdb` — Power off safely

■ Summary Table

Task	Command
Check space	df -h, lsblk
Install tools	sudo apt install smartmontools hdparm
Health test	sudo smartctl -a /dev/sda
Speed test	sudo hdparm -Tt /dev/sda
Filesystem check	sudo fsck -f /dev/sda1
Safe remove	sudo umount /dev/sdb1 && sudo udisksctl power-off -b /dev/sdb