**Grade 7 Resources (Weeks 1–10)**

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| Week | Topic | Study Guide / Hands-On Tutorial | Video Tutorial |
| 1 | Introduction to DevOps & Capstone Kickoff | **Atlassian Git Tutorial**: comprehensive walkthrough of Git basics and workflows ([Atlassian](https://www.atlassian.com/git/tutorials?utm_source=chatgpt.com)) | **freeCodeCamp: Git and GitHub for Beginners** (Crash Course) ([YouTube](https://www.youtube.com/watch?v=RGOj5yH7evk&utm_source=chatgpt.com)) |
| 2 | Git Basics & Version Control I | **Atlassian “Learn Git”**: commands, branching, commit history ([Atlassian](https://www.atlassian.com/git?utm_source=chatgpt.com)) | **freeCodeCamp: Learn the Basics of Git in Under 10 Minutes** ([FreeCodeCamp](https://www.freecodecamp.org/news/learn-the-basics-of-git-in-under-10-minutes-da548267cc91/?utm_source=chatgpt.com" \o "Learn the Basics of Git in Under 10 Minutes - freeCodeCamp)) |
| 3 | Git Collaboration & Version Control II | **Atlassian Git Tutorials – Collaborating with Pull Requests** (pull requests, merges) ([research.it.iastate.edu](https://research.it.iastate.edu/resource/git-workflows-and-tutorials-atlassian-git-tutorial?utm_source=chatgpt.com)) | **GitHub Learning Lab**: interactive, self-paced GitHub exercises (via GitHub.com) |
| 4 | Basic Scripting for Automation | **W3Schools Python Tutorial**: “Try it Yourself” editor for Python basics ([W3Schools.com](https://www.w3schools.com/python/?utm_source=chatgpt.com)) | **W3Schools Python YouTube** channel demos (search “W3Schools Python Tutorial”) |
| 5 | Containers Fundamentals | **Docker “Get Started”** guide: Part 1 containerize an app ([Docker Documentation](https://docs.docker.com/get-started/?utm_source=chatgpt.com)) | **Docker 101 Tutorial** (self-paced) ([Docker](https://www.docker.com/101-tutorial/?utm_source=chatgpt.com)) |
| 6 | Containerizing the Capstone | **Docker Curriculum**: hands-on BusyBox examples ([A Docker Tutorial for Beginners](https://docker-curriculum.com/?utm_source=chatgpt.com)) | **“The Only Docker Tutorial You Need” (YouTube)** ([YouTube](https://www.youtube.com/watch?pp=0gcJCdgAo7VqN5tD&v=DQdB7wFEygo&utm_source=chatgpt.com)) |
| 7 | CI with GitHub Actions I | **GitHub Actions Quickstart**: set up linting/tests workflow ([GitHub Docs](https://docs.github.com/actions/quickstart?utm_source=chatgpt.com)) | **freeCodeCamp: Learn to Use GitHub Actions** (step-by-step) ([FreeCodeCamp](https://www.freecodecamp.org/news/learn-to-use-github-actions-step-by-step-guide/?utm_source=chatgpt.com" \o "Learn to Use GitHub Actions: a Step-by-Step Guide - freeCodeCamp)) |
| 8 | CI with GitHub Actions II | **Codefresh GitHub Actions Examples**: build & push Docker images ([Codefresh](https://codefresh.io/learn/github-actions/github-actions-tutorial-and-examples/?utm_source=chatgpt.com" \o "GitHub Actions Tutorial and Examples - Codefresh)) | **GitHub Actions Basics** (YouTube tutorial) ([YouTube](https://www.youtube.com/watch?v=R8_veQiYBjI&utm_source=chatgpt.com)) |
| 9 | Monitoring & Logging Basics | **Docker Logging Docs**: view, configure container logs ([Docker Documentation](https://docs.docker.com/engine/logging/?utm_source=chatgpt.com)) | **Sematext Guide: Docker Logging 101** ([Sematext](https://sematext.com/guides/docker-logs/?utm_source=chatgpt.com" \o "Docker Logging: 101 Guide to Logs, Best Practices & More - Sematext)) |
| 10 | Project Showcase & Reflection | **Edutopia: Preparing Students for PBL Presentations** (practice, rubric, feedback) ([Edutopia](https://www.edutopia.org/article/how-prepare-students-pbl-presentations/?utm_source=chatgpt.com)) | **Edutopia: “What, Why, How, and How-To” Presentation Framework** ([Edutopia](https://www.edutopia.org/article/how-simple-presentation-framework-helps-students-learn/?utm_source=chatgpt.com)) |

**Grade 8 Resources (Weeks 1–10)**

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| Week | Topic | Study Guide / Hands-On Tutorial | Video Tutorial |
| 1 | DevOps Culture & Capstone Kickoff | **Azure Boards Quickstart & Docs**: agile work items, Kanban/Scrum tools ([Microsoft Learn](https://learn.microsoft.com/en-us/azure/devops/boards/?view=azure-devops&utm_source=chatgpt.com)) | **Getting Started with Azure Boards** (YouTube) ([YouTube](https://www.youtube.com/watch?v=5VMY-0tVCNQ&utm_source=chatgpt.com)) |
| 2 | Advanced Git Workflows | **Atlassian Comparing Workflows**: GitFlow, GitHub-flow, trunk-based ([research.it.iastate.edu](https://research.it.iastate.edu/resource/git-workflows-and-tutorials-atlassian-git-tutorial?utm_source=chatgpt.com)) | **Atlassian Git Workflows Video** (search “Git Workflows Atlassian”) |
| 3 | Infrastructure as Code I | **HashiCorp Terraform Tutorials**: core IaC workflows (VM provisioning) ([HashiCorp Developer](https://developer.hashicorp.com/terraform/tutorials?utm_source=chatgpt.com" \o "Tutorials | Terraform - HashiCorp Developer)) | **Spacelift Terraform Tutorial** ([Spacelift](https://spacelift.io/blog/terraform-tutorial?utm_source=chatgpt.com" \o "Terraform Tutorial - Getting Started with Step-by-Step Guide - Spacelift)) |
| 4 | Infrastructure as Code II | **Terraform Remote Backends & Modules** (HashiCorp docs) ([HashiCorp Developer](https://developer.hashicorp.com/terraform/tutorials/aws-get-started?utm_source=chatgpt.com" \o "AWS | Terraform - HashiCorp Developer)) | **“From Beginner to Pro: Terraform” (YouTube)** ([YouTube](https://www.youtube.com/watch?v=7xngnjfIlK4&utm_source=chatgpt.com)) |
| 5 | CI with Jenkins | **Jenkins “Hello World” Pipeline Tour**: create your first Jenkinsfile ([Jenkins](https://www.jenkins.io/doc/pipeline/tour/hello-world/?utm_source=chatgpt.com)) | **LambdaTest: Jenkins Pipeline Tutorial** ([LambdaTest](https://www.lambdatest.com/blog/jenkins-pipeline-tutorial/?utm_source=chatgpt.com" \o "Jenkins Pipeline: Getting Started Tutorial For Beginners - LambdaTest)) |
| 6 | CD with Azure DevOps Pipelines | **Azure Pipelines Create-First Guide** (YAML pipelines) ([Microsoft Learn](https://learn.microsoft.com/en-us/azure/devops/pipelines/create-first-pipeline?view=azure-devops&utm_source=chatgpt.com)) | **Azure DevOps CI/CD Tutorial** (TechWorld with Nana) ([YouTube](https://www.youtube.com/watch?v=4BibQ69MD8c&utm_source=chatgpt.com)) |
| 7 | Configuration Management with Ansible | **Ansible Getting Started**: inventories, playbooks, modules ([Ansible Documentation](https://docs.ansible.com/ansible/latest/getting_started/index.html?utm_source=chatgpt.com)) | **Red Hat: Learning Ansible** (interactive labs) ([The world's open source leader](https://www.redhat.com/en/topics/automation/learning-ansible-tutorial?utm_source=chatgpt.com)) |
| 8 | Container Orchestration | **Kubernetes Basics Interactive Tutorial** (kubernetes.io) ([Kubernetes](https://kubernetes.io/docs/tutorials/kubernetes-basics/?utm_source=chatgpt.com)) | **“Kubernetes Crash Course for Absolute Beginners” (YouTube)** ([YouTube](https://www.youtube.com/watch?v=s_o8dwzRlu4&utm_source=chatgpt.com)) |
| 9 | Monitoring, Alerts & Rollbacks | **Prometheus “Hello World” Tutorial**: scrape example app ([prometheus.io](https://prometheus.io/docs/prometheus/latest/getting_started/?utm_source=chatgpt.com)) | **Grafana+Prometheus Dashboard Guide** ([Grafana Labs](https://grafana.com/docs/grafana/latest/getting-started/get-started-grafana-prometheus/?utm_source=chatgpt.com)) |
| 10 | Project Showcase & Peer Review | **Edutopia PBL Presentation Prep**: rehearsal, audience engagement ([Edutopia](https://www.edutopia.org/article/how-prepare-students-pbl-presentations/?utm_source=chatgpt.com)) | **Edutopia Presentations Framework** (“What, Why, How, How-To”) ([Edutopia](https://www.edutopia.org/article/how-simple-presentation-framework-helps-students-learn/?utm_source=chatgpt.com)) |