North Carolina CTE

3D Modeling & Animation I: Grades 9-12

Understand the career pathways and career opportunities in 3D Modeling and Animation 1.00	1	**Understand career opportunities in 3D Modeling and Animation.** 1.01
	2	**Understand opportunities in the Technology Student Association.** 1.02
Apply durable employability skills 2.00	1	**Recognize durable employability skills and their importance.** 2.01
	2	**Apply durable employability skills.** 2.02
Understand 3D modeling software and asset production workflow. 3.00	1	**Understand the capabilities and interface of 3D modeling software.** 3.01
	2	**Understand 3D asset production and workflow.** 3.02
Apply basic modeling techniques. 4.00	1	**Understand transformations in 3D space and subdivisions to edit geometry.** 4.01
	2	**Implement tools to edit 3D meshes.** 4.02
	3	**Implement techniques to produce 3D models.** 4.03
Understand the use and purpose of materials and textures. 5.00	1	**Understand the material editor and material components.** 5.01
	2	**Apply UV mapping and custom materials to a 3D mesh.** 5.02
Apply basic lighting and rendering. 6.00	1	**Understand lights, light attributes, and render settings.** 6.01
	2	**Implement lighting techniques and composition.** 6.02
	3	**Execute a scene with realistic lighting.** 6.03
Understand the basics of animation. 7.00	1	**Understand keyframing, timing, and interpolation.** 7.01
	2	**Implement constraints and hierarchy.** 7.02
		xecute a scene with animated assets. 7.03

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Apply the use of virtual cameras. 8.00

1 **Implement the use of virtual camera movements.** 8.01

2 **Execute a scene with camera movement.** 8.02