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Unit 3 - Intro to Lighting,Texturing & Rendering

Lesson #4 - UV Unwrapping

CG Cookie Videos used in this lesson
Videos for this unit are available within the [Fundamentals of Texturing](#) download, and or are Included within the [Educator Blender Bundle](#).
- Fundamentals of Texturing - Accessing UV's
- Fundamentals of Texturing - UV Mapping
- Fundamentals of Texturing - UV Unwrapping

Key Training
- Creating a workspace to Accessing UV's
- Create an UV-Unwrap of an Objects.

Instructor Focus and Tips
- Before working with UV's you can start a demonstrate how an UV works by taking an orange and peel it. Take the peelings and lay out on a piece of paper. If you feel creative you can give the students oranges and pieces of paper and have them do it along with you. Have them tape the orange peels to the paper and keep at their desk while working thru the lesson.(Warning: this can get messy).
  - Another option would be to find a graphic foil wrapped piece of candy. Plenty of these around the holidays, but unwrapping the foil with the picture on it helps connect how UVs work to a 3D Object.
- When working with UV and students give the warning that they should have a completed model before the start the UV Mapping and Unwrapping process. Explain to the students how that if they change their model that they will have to unwrap again so make sure they have the model the way they want it before Unwrapping.
- While it is important to know about stretching when working with UVs, focus on the Unwrapping process. Some students have trouble adjusting their UV maps for stretching.

Student Activities and Assignments

- Have the students create a simple scene with three monkeys. Name the objects Monkey1, Monkey2 and Monkey3. Have the student UV-Unwrap each monkey with a different set of marked seams. Each unwrap should be drastically different than the other 2 monkeys. *Have them save the project for the next lesson.*
- Have the students take one of their previous projects and UV-Unwrap it. Save it for the next lesson.

Blender Terminology, Commands and Hotkeys Introduced
- Object data properties menu
- UV/Image Editor Window
- UV Mapping Tool - (Hotkey: U while in edit mode)
- Mark and Unmark Seam (Hotkey: Ctrl-E while in edge is selected)

BellRInger Prompts and Ideas
- What would a dice look like if your were to flatten it out. Have the students draw out what it would look like.

Exit Ticket Prompts and Ideas
- What is the difference between the 3D-Editor and the UV-Editor?

Learning Targets
- Student can set up their Blender scene for UV-unwrapping.
- Student can UV-Unwrap a blender model and prepare it for texture painting.

Rubric

	Beginning	**Developing**	**Accomplished**	**Exemplary**
UV Mapping	Student has received a demonstration on the different ways to create UV maps.	Student can create a UV Map with assistance.	Student can create a UV Map.	Student uses different ways to create a UV Map.
UV Wrapping	Student has received a demonstration on the different ways to UV	Student is able to Unwrap UVs with marked seams with assistance.	Student is able to Unwrap UVs with marked seams.	Student is able to Unwrap UVs with marked seams and

	Unwrap a model.			adjust for stretching.

Standards

Standard 4: Surface Materials

- **Objective 1: Surface Material Terminology**
  - o Indicator 1: Know surface material terminology
  - o Indicator 2: Identify parts of the 3d application interface used with surface materials
- **Objective 2: Create, apply and edit UV mapping**
  - o Indicator 1: Prepare model for UV Mapping
  - o Indicator 2: Create and edit UV Mapping