

UVs Paper: Easy Right?

There's two ways to explain UVs, let's start with the one that melts your brain first, shall we? Quoting from the Wikipedia page on UV mapping, quote, "UV mapping is the 3D modeling process of projecting a 3D model's surface to a 2D image for texture mapping. The letters 'U' and 'V' denote the axes of the 2D texture because 'X', 'Y', and 'Z' are already used to denote the axes of the 3D object in model space."¹

Okay, let's unpack. What does that mean? The easy explanation is this: If you have an object—let's say a ball for this example—the *UV Mapping* is the paper that you use to wrap around that object in order to give it a texture. The texture is irrelevant for understanding UVs, just know that the UV is necessary for creating that texture.

How about something with more edges, something like a cube then? Have you ever made a cube out of paper and seen the cross-like structure that you need to be able to make it? The outside edge of that paper is the UV mapping for the cube. In this way, you can texture that edge before *applying* it to the cube object—or folding the paper into that cube.

For more complex objects, the process is much the same. Break the object into its simpler pieces and cut it up such that you'd be able to wrap the cut pieces onto it much like if those pieces were paper. See? Easy right?

¹ https://en.wikipedia.org/w/index.php?title=UV_mapping&oldid=1196771315, this is a perma-link to the article at date of reference