# V-RAY FOR 3DS MAX: SAMPLING

This document gives a basic sample lesson plan for introducing the V-Ray Quick Settings for antialiasing (sampling)

## Lecture

- Sampling (antialiasing) is a complex process and most students find it challenging to understand. However, having a good understanding of the logic behind it is crucial for optimizing render times and noise levels.
- A basic overview of the Ray-tracing process can provide the necessary base on top of which students can develop further knowledge
- Use the diagram provided to discuss the ray tracing process
- The most important part is to distinguish between Primary Rays (aka Camera Rays or AA Rays) and Secondary Rays (aka Shading Rays) and the parts of the image for which they are responsible
- Secondary rays affect all shading effects like shadows, reflections, refractions, GI, translucency and SSS
- Primary Rays affect Antialiasing on the “pixel-level” i.e. geometry edges and curvature and camera effects like Depth of Field and Motion Blur. However, since Secondary Rays are traced for each Primary Ray, Primary Rays indirectly affect all shading effects.
- The proper balance between Primary and Secondary Rays ensures high quality and fast render times.
- Next discuss the briefly options of the V-Ray Quick Settings
- It is important to make the connection between the V-Ray Quick Settings sliders and the Primary and Secondary Rays.
- Shading Quality controls the number of Secondary Rays.
- AA Quality controls the Primary Rays.
- You may decide whether to discuss the “Under the Hood” options based on the level of your students.
- The lecture has all the necessary information presented in a simplified manner. You can find more detailed explanations at our help portal at https://docs.chaosgroup.com/display/VRAY3MAX/

## Demonstration

- In this cycle, you are going to demonstrate how to optimize render times and antialiasing using the V-Ray Quick Settings. You may want to use the provided scene and handout or create your own

- The scene 02 Sampling.max is a full-blown production scene and will take longer to render. Keep that in mind when preparing for your class.

## Activity

- In this cycle, you are going to let your students experiment with the provided scene. You may want to give them the provided handout to use as a guideline