

SkillsUSA

2015 Contest Projects

3-D Visualization and Animation

Click the “Print this Section” button above to automatically print the specifications for this contest. Make sure your printer is turned on before pressing the button.

For this practical exercise, you are to pick an object commonly found in a kitchen and bring it to life. The object you chose as your main “character” can be a food item, appliance, fixture, utensil, etc. Pick something that you can model, texture and animate in high quality. Better simple and high quality, than complex and low or even mediocre quality. The “character,” “story” and animation should illicit an emotional response from the audience.

Create and submit a 20-30 second animation, rendering at 1024 by 768 pixel resolution in 16 bit color. In addition, you will need to create and submit three high quality still images at a resolution of 1280 by 1024 pixels in true color (24 or 32 bit color depth) to show the quality of your textures and lighting and two still images at 1280 x 1024 in true color (24 or 32 bit color depth) with wireframe visible to show your underlying models. The full contest scoring criteria is on the back side.

Here is some interesting background information regarding this practical exercise.

Back in the 1930's, the book *The Illusion of Life*, by the “old men of Disney,” Frank Thomas and Ollie Johnston, laid out basic principles of animation. Much of their work in what was then a fledgling art form is still pertinent today, even in computer-based animation. Some of their basic principles are paraphrased below.

Squash and Stretch: These exaggerated deformations in the body of a character give the appearance of weight and volume as it moves.

Anticipation: These small “trigger” motions prepare the audience for the major action that a character is about to perform.

Follow Thru and Overlap: When the main body of a character stops, other parts continue to move. Nothing stops all at once. This enhances the realism.

Slow in-Slow out and Timing: Character movement isn't constant, but slower at the beginning, faster in the middle and slower again at the end of the action. Proper timing in animations maintains the appearance that motions follow the laws of physics.

Arcs: With few exceptions, objects should follow curved paths, not straight lines. This gives animations a more natural action and better flow.

Secondary action: A supplemental action in a scene reinforces the primary action for the audience and give the scene greater depth.

Exaggeration: Stay true to reality, but present it in a more wild or extreme form.

Staging: The presentation of an idea or “story” so that it is clear to the audience.

Appeal: Motions do not distract from the story, but are pleasing to viewer's eye.

Thank you and good luck!

Items Evaluated	Possible Points
Planning & Teamwork	100
Design and Modeling	250
Textures and Lighting	250
Animation Quality and Rendering	250
Written Test	150
Résumé Penalty	0 or -10 only
Clothing Penalty	Up to -50
Total Possible Points	1,000