

Exercise 02565-02	Object and Camera Animation - Function Curves
Readings	UG-A page 3-26 and UG-M page 13-52.
Purpose	The purpose of the exercise is to demonstrate the principles of object animation using key frames and in-between and the principles of camera animation using camera paths. Especially, the principles of setting up the projection parameters for determining the final pictures are treated. The exercise, furthermore, demonstrates the use of function curves for editing the animation. Finally, the process of rendering and play back of the flip book is demonstrated.
Part 1	Carry out exercise 2 "Jewel" from the manual Softimage 3D - Quick Start.
Part 2	Retrieve "The Head" from a previous exercise and carry out more complicated animations using rotations, translations and scaling. For instance, try to animate the lips.
Part 3	Make the exercise "Roller Coaster" from the manual Softimage 3D - Quick Start.
Part 4	Carry out experiments editing the animation from part 2 and 3 by changing the function curves.
Part 5	Make a cube of edges 4 units. Make several copies of the cube so you get a cubic figure that contains $4 \times 4 \times 4 = 64$ cubes. The centre of the figure is at origin of the world coordinate system and the distance between the cubes in the figure is 1 unit. Copy the figure and edit the figure so that it is not symmetrical relative to any of the main coordinate axes any more. Carry out an experiment with the two figures using the Camera>Setting menu and the other camera menus. Change the position of the Eye point (Camera) and the Point of Sight. Make Front and X-perspective views and axonometric views such as isometric and special dimetric.
Part 6	Use the figure in an animation in which the camera is moved away and toward the figure keeping a front perspective view. The exercise could also be solved using a room supplied with simple furniture such as a table and a couple of chairs. Make an animation in which you move around outside (or inside) the figure keeping an X-perspective view.