ACTIVITY 3

REPRODUCIBLE MASTER

COMPUTER-GENERATED EFFECTS

From very early computer-generated visual effects in films like *The Empire Strikes Back* (1980) and *Tron* (1982) to those in such recent movies as *The Matrix* and the *Harry Potter* films, computer-generated visual effects have become harder to distinguish from the real thing. Sometimes computer graphics (CG) effects are similar to traditional visual effects. For example, mattes can now be produced using special software. Fantastic or naturalistic backgrounds can be constructed in the computer, rather than painted on glass. Other times, advances in CG technology put things on screen that have never been seen before. Entire characters, such as Gollum in *The Lord of the Rings* trilogy, can be created using CG techniques. A man can slip between bullets as Neo does in *The Matrix*. And instead of wearing cumbersome prosthetics, makeup effects completed in the computer allow actors to perform in relative comfort.

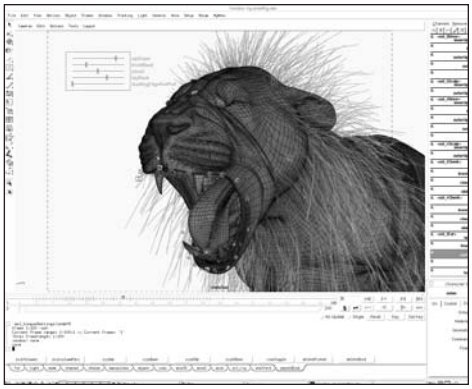
While you watch scenes from the two films your teacher has chosen, pay attention to the different ways the filmmakers decided to tell the same or similar stories.

What visual effects did you notice?

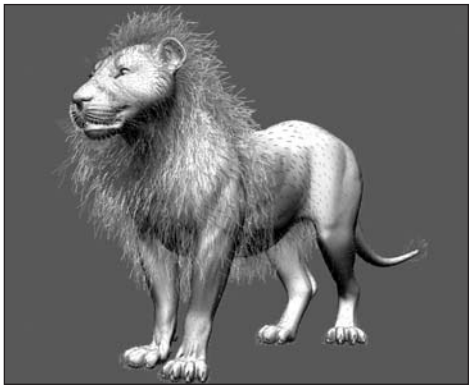
What differences were there between the traditional style of visual effects and the computer-generated visual effects?

Can you spot which effects were filmed live and on the set?

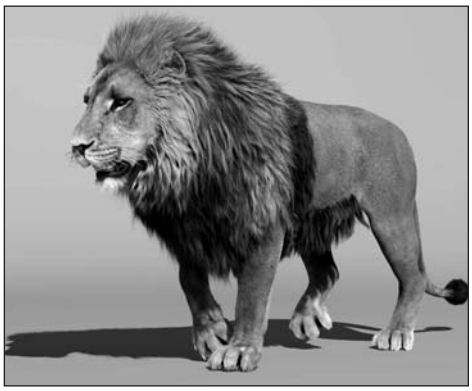
Which effects do you think were created digitally and added in post-production?



1) Screen shot of Aslan model using Rhythm & Hues' animation software. This is a typical computer screen that character animators would use to pose the character.



2) CG model of Aslan with guide hairs for fur and mane. The tech animation team uses these color-coded guides to control the movement of Aslan's mane.



3) Final rendered image of Aslan on neutral background. The lighters and compositors have applied the textures and light source, and now Aslan is ready to be placed in a scene.

COMPUTER-GENERATED EFFECTS TERMS

Blue- or green-screen: An optical process that allows subjects filmed in front of a blue or green background to be combined with a separately filmed background.

Bullet time: Uses multiple cameras to display the passage of time as extremely slow or completely frozen.

Computer Generated Imagery (CGI): Screen images that are created using mathematical formulas and computers.

Morphing: A process that makes one image transform seamlessly into another.

Motion capture: A technique that records the movement of bodies or faces so that it can be used for animation or computer-generated characters.

Motion control: A method of recording or programming the movements of a motion picture camera so that the shot can be repeated exactly.

Pre-visualization: Computer animated scenes that help filmmakers work out shots, camera angles and other visual problems before the scene is shot on the set with actors.