Special effects artists make things happen in movies that might not normally occur in real life. When the real thing is too expensive, too dangerous or impossible to shoot, special effects artists are brought in. The term “special effects” first appeared in screen credits in 1926. But, special effects have been part of motion pictures from the beginning.

There are two major types of special effects. Visual effects include all types of image manipulation, whether they take place during principal photography or in postproduction. Physical effects, also called practical effects, are performed live using “real world” elements. These include explosions, weather effects and stunts.

Physical effects are performed in front of the camera during principal photography. They include weather effects, water effects and pyrotechnics. Rather than relying on the weather to perform as needed, filmmakers look to physical effects to generate such atmospheric events as rain, fog, snow and wind. Stunts, bullet hits, explosions and collapsing buildings are also considered physical effects. Physical effects are often quite dangerous both for stunt performers and for the technicians who operate them. Working with stunt coordinators, the physical effects crew devises ways to make stunts as safe as possible. Good editing also makes stunts safer.

Special effects makeup is any three-dimensional makeup process including animatronics and prosthetics. Prosthetic makeup—false limbs and features or other large pieces that are attached to actors—are another way to construct monsters, animals and other creatures.

New computer technology makes it possible to create more and bigger visual effects. While many new kinds of effects have been developed by computer graphics (CG) artists, much of what is accomplished using digital effects duplicates processes from the past. Matte production, for example, is now automated, using preprogrammed software, although it remains a sophisticated process requiring great skill on the part of both the cinematographer and the matte technician. Actors are filmed in front of blue or green screens. The negative is then sent to a computer workstation and is composited, or joined together in the computer, with a previously filmed background shot in miniature or created digitally.

Computer graphics are often used to add fire effects, to create weather effects, to make a small crowd seem larger, and to create makeup effects, for example. Another major recent trend is to create completely computer-generated characters through processes such as motion capture.

An audience expects visual and special effects in fantasy, science fiction or action films. Many of the same techniques are also used in more subtle ways in films that do not have obvious visual effects. It has been said that the best special effects, whether practical, visual, or digital, are the ones that are not noticeable...