FIXTURES

The devices that contain light bulbs are known as fixtures. Although it may not seem obvious at first glance, fixture choices can have a significant effect on the usefulness of lighting—which can also affect energy use.

**Surface mount fixtures**
Typically found on ceilings or walls, surface-mounted fixtures are attached directly to an electrical box and often controlled by a wall switch. Usually designed to provide general illumination, these fixtures frequently have some type of diffuser that spreads light throughout the room. Surface-mounted fixtures can be as simple as an open porcelain bulb holder or as complex as a dining room chandelier. Depending on the design of the fixture, acceptable bulbs may include any style that distributes light broadly in all directions.

Track lighting, which can be either standard voltage or low voltage, usually uses surface-mounted fixtures. Often used as accent lighting or to illuminate art, track lighting can also be used to provide focused task lighting in kitchens or work areas.

**Recessed fixtures**
Light fixtures that are recessed into the space above the finished ceiling are commonly known as down lights or can lights. Designed to provide focused light at a particular location, these fixtures are controlled by a wall switch and use reflector bulbs that direct light straight down. Some fixtures may also have partial shields or reflectors that direct the light towards one direction. Because of the risk of heat buildup, it is important to properly match both the size and type of bulbs to the fixture. Recessed light fixtures that enter the attic space are required to be sealed and insulated to avoid air leakage and fire hazards.

**Plug-in fixtures**
Light fixtures that are not directly wired to the home electrical system require a cord to plug into an outlet. These include floor, table, and desk lamps as well as specialty lighting like under-cabinet lamps or picture lights.

The flexibility of many plug-in lamp fixtures makes them a good choice for a variety of lighting needs. However, the use of cords (and extension cords) for plug-in lamp fixtures can present hazards. Cords should run along walls wherever possible and should not extend into traffic areas. Extension cords should be rated by Underwriters Laboratories for the intended use. If cords or plugs are cracked or loose, they should not be used until repaired. Using the proper bulb in plug-in fixtures is also important. Heat buildup from an over-sized bulb can be a fire risk.