Process	Organisms
Requires Light?	Genetic Pathway
Energy Source	Real-Life Function
Molecules or Proteins Involved	

Glowing mushrooms and bacteria	Parrots and corals
Seen under UV light only	Visible even in complete darkness
Used for mating and attracting prey	Fluorescein dye
Internal reaction produces light	Produces its own light
Chromophore	Requires UV or blue light

Jellyfish	Needs chemical energy (ATP)
Involves a chemical reaction	Needs light energy
Absorbs one color, emits another	Firefly
External light source required	GloFish ©
Deep-sea anglerfish	Green Fluorescent Protein (GFP)

Luciferase enzyme	Used for camouflage and communication
DNA → RNA → Protein	Bioluminescence
Biofluorescence	Luciferin + oxygen = light