

The Cell Membrane

Biology

The fluid mosaic model, and what crosses it how.

Transport across the membrane, by mechanism.

Mechanism	Needs ATP?	Moves
Simple diffusion	No	Small, non-polar: O ₂ , CO ₂
Facilitated diffusion	No	Via channel or carrier proteins
Osmosis	No	Water, down its potential gradient
Active transport	Yes	Against the gradient, via a pump
Endocytosis	Yes	Bulk material in
Exocytosis	Yes	Bulk material out

The sodium-potassium pump moves 3 Na⁺ out and 2 K⁺ in per ATP, and consumes a large share of a cell's energy budget.