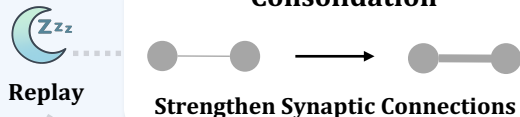# Memory Formation

External event (e.g. movie scene)

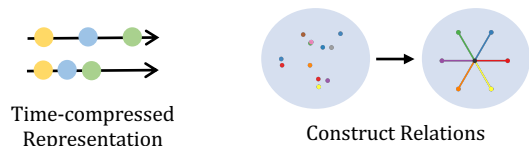## Encoding

Sensory Features (auditory, visual, etc.)
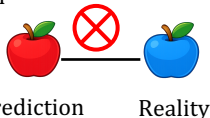
Consolidation

Replay

Strengthen Synaptic Connections

Integration

Time-compressed Representation

Construct Relations

Memory Update

"Apple"

Prediction — Reality

Prediction Error

Integration

Red Apple

Blue Apple

Error

Structured Representation
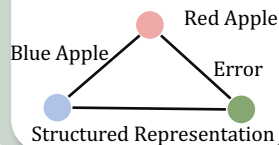
Differentiation

Red Apple   Blue Apple

Repulsive Memory Traces

Updating Mechanisms

Hippocampus → **Abstract Representation** → **Neocortex**

Renders the Memory Trace Labile

Memory Retrieval

Cues — Retrieval

Replay

Hippocampus   **Neocortex**

Event details Reinstatement
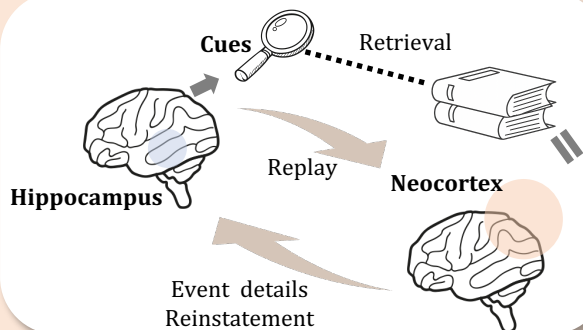
Strengthen/Weaken Memory

Effects

- Destabilizes Memory Storage
- Facilitative Memory Encoding