

# Neuroanatomy: the Inferior Temporal Cortex (IT)

- Cells sensitive to specific types of high-level features
  - For example cells that fire when a face is present in the visual field

# Functional Pathways

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graph LR; Light[Light] --> Cornea[Cornea]; Cornea --> Lens[Lens]; Lens --> Retina[Retina]; Retina --> ON[Optic Nerve]; ON --> SN[Suprachiasmatic Nucleus]; SN --> LGN[Lateral Geniculate Nucleus]; LGN --> V1a[V1]; LGN --> V2a[V2]; LGN --> V3a[V3]; V1a --> V2b[V2]; V1a --> V4a[V4]; V1a --> V5a[V5]; V1a --> V6a[V6]; V2b --> V1b[V1]; V2b --> V2c[V2]; V2b --> V3b[V3]; V2b --> V4b[V4]; V2b --> V5b[V5]; V3a --> V1c[V1]; V3a --> V2d[V2]; V3a --> ITg[Inferior Temporal Gyrus]; V1b --> ITg; V1b --> AG[Angular Gyrus]; V1b --> V6A[V6A]; V2c --> V4c[V4]; V2c --> V5A[V5A]; V2c --> V6b[V6]; V2c --> FE[Frontal Eye Field]; V2c --> LIP[Lateral Intraparietal Area]; V6A --> PC[Premotor Cortex];
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The diagram illustrates the functional pathways of the visual system. It begins with Light entering the Cornea, passing through the Lens, and reaching the Retina. The signal then travels through the Optic Nerve to the Suprachiasmatic Nucleus, which connects to the Lateral Geniculate Nucleus. From the Lateral Geniculate Nucleus, the pathway branches into three main streams: V1, V2, and V3. Each stream further branches into specific cortical areas, including V2, V4, V5, V6, V6A, V1, V2, V3, V4, V5, V5A, V6, Frontal Eye Field, Lateral Intraparietal Area, and the Inferior Temporal Gyrus. The V6A area connects to the Premotor Cortex.

