

The eye and vision



Lisa Flanagan, Ph.D.
Tayloria Adams, Ph.D.

Departments of Neurology and Biomedical Engineering
University of California Irvine (UCI)



National Science Foundation (NSF)



Our plans for exploring the eye

Week 1 – discuss the eye, game

Week 2 – activity, model eye, game

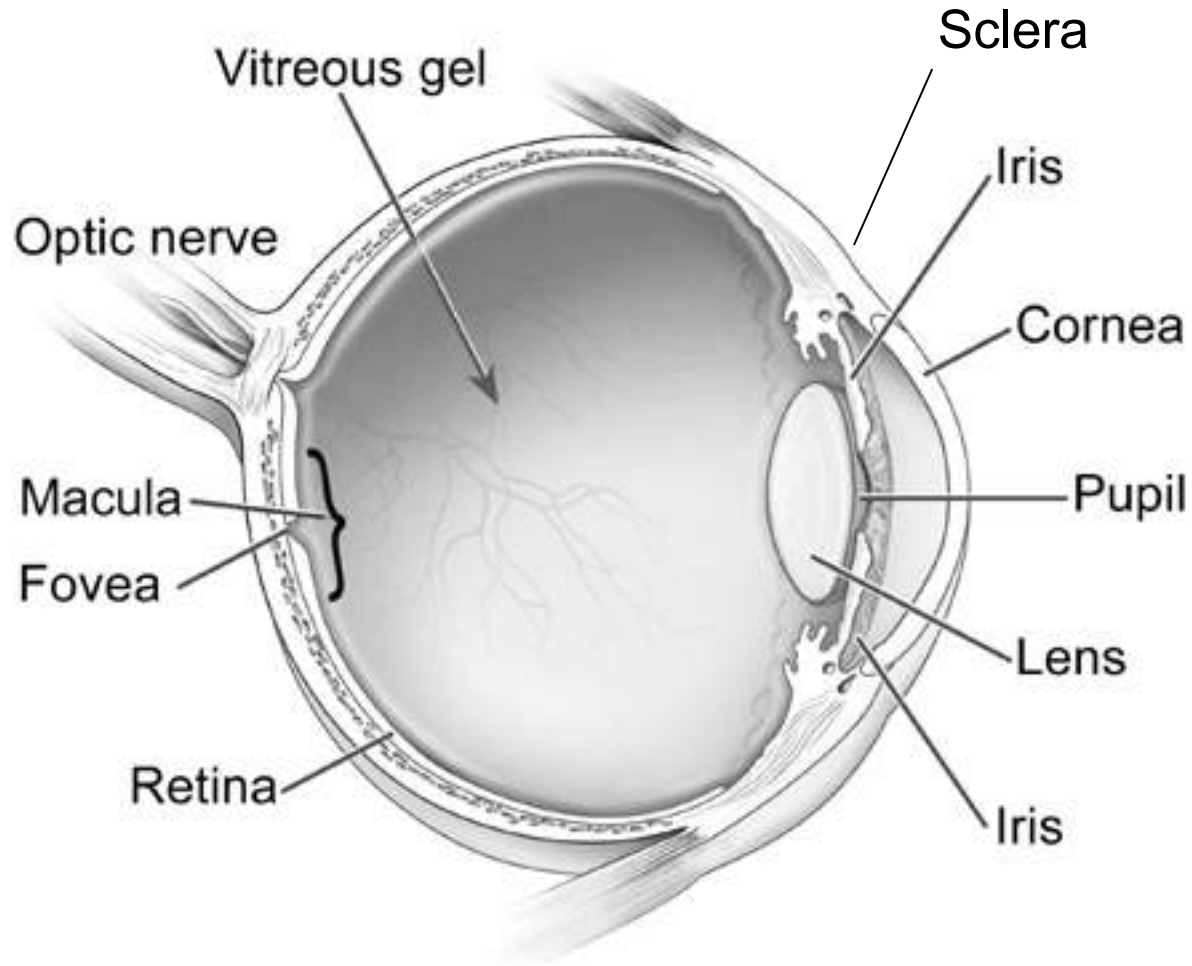
Week 3 – eye dissection

Week 4 – compare results, game or activity

An Exploration of the Eye



Anatomy of the Eye



Images are projected on the retina upside down!

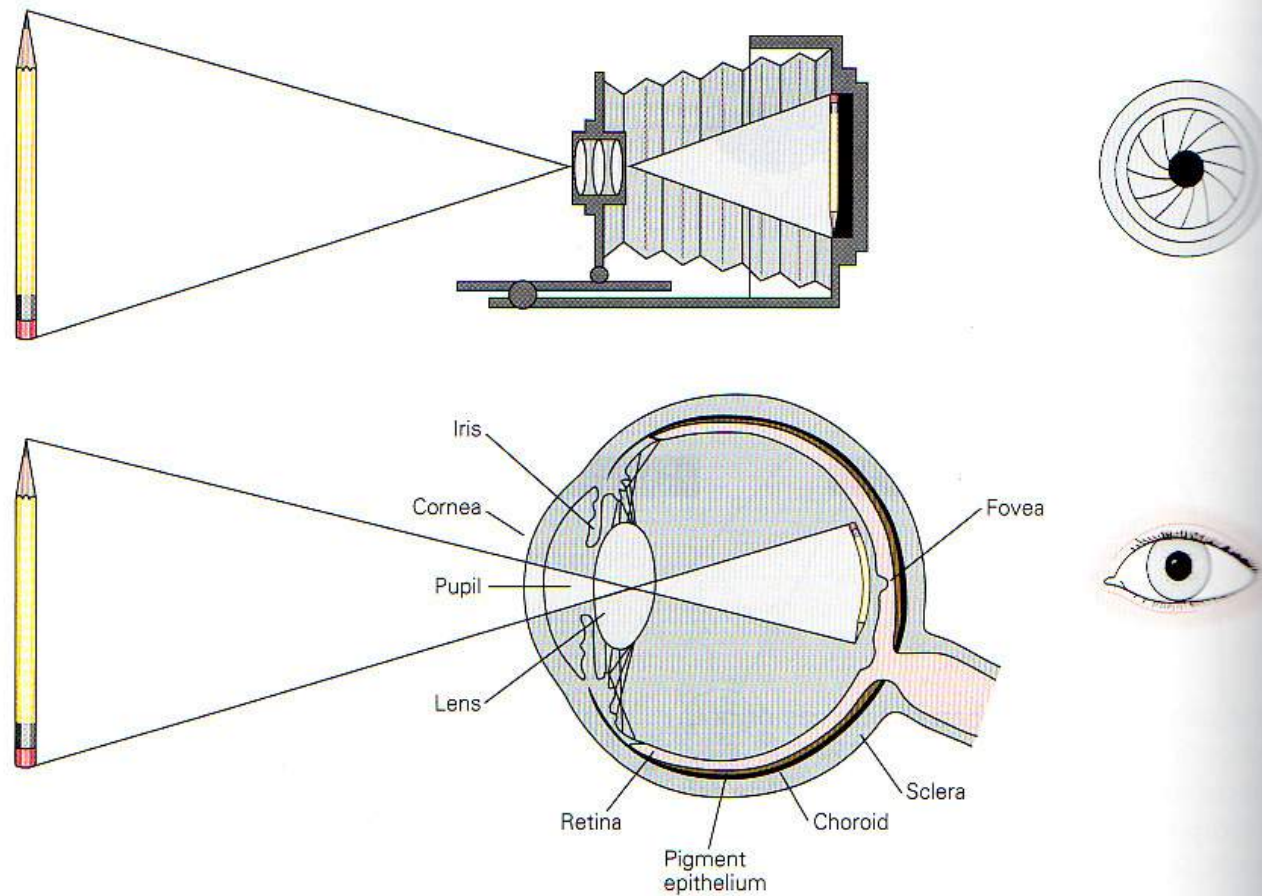
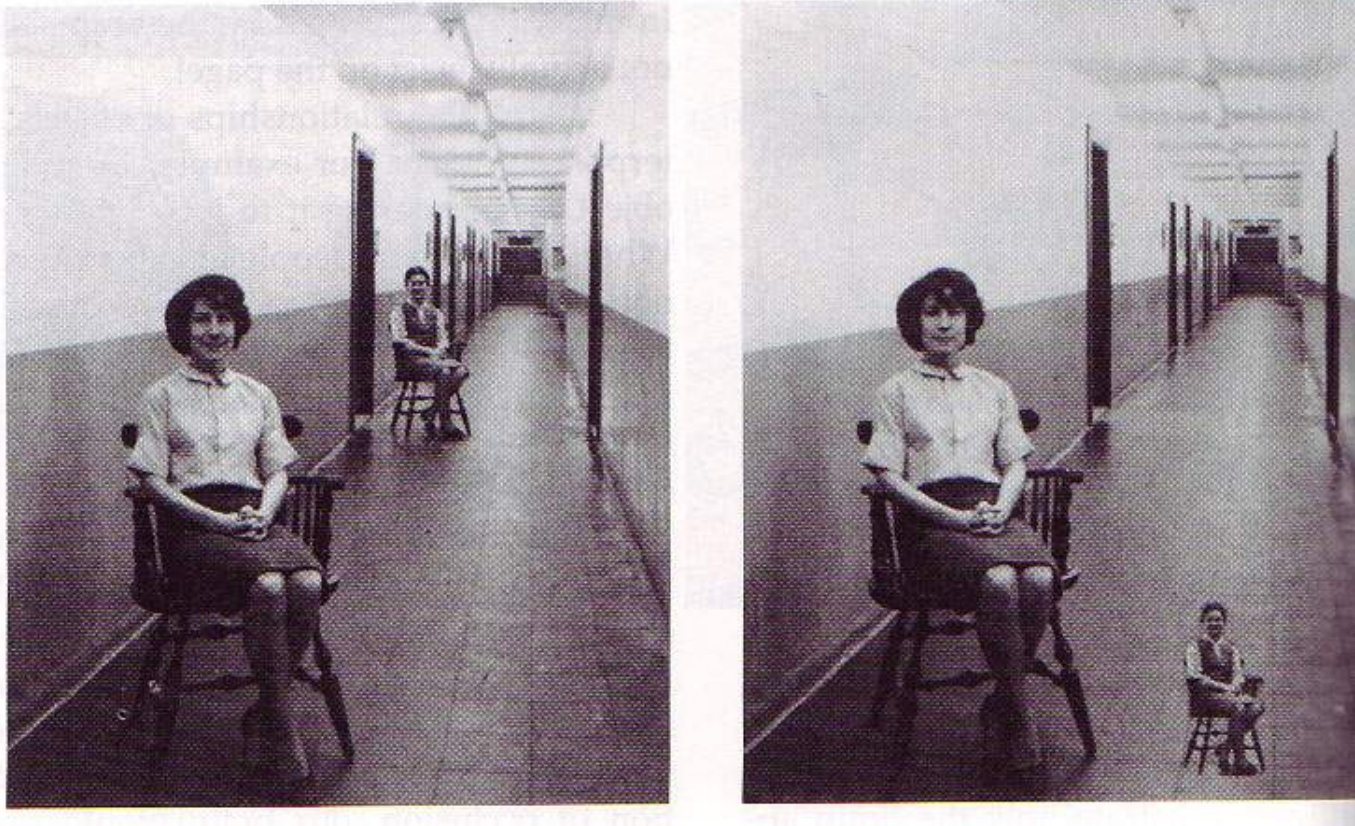


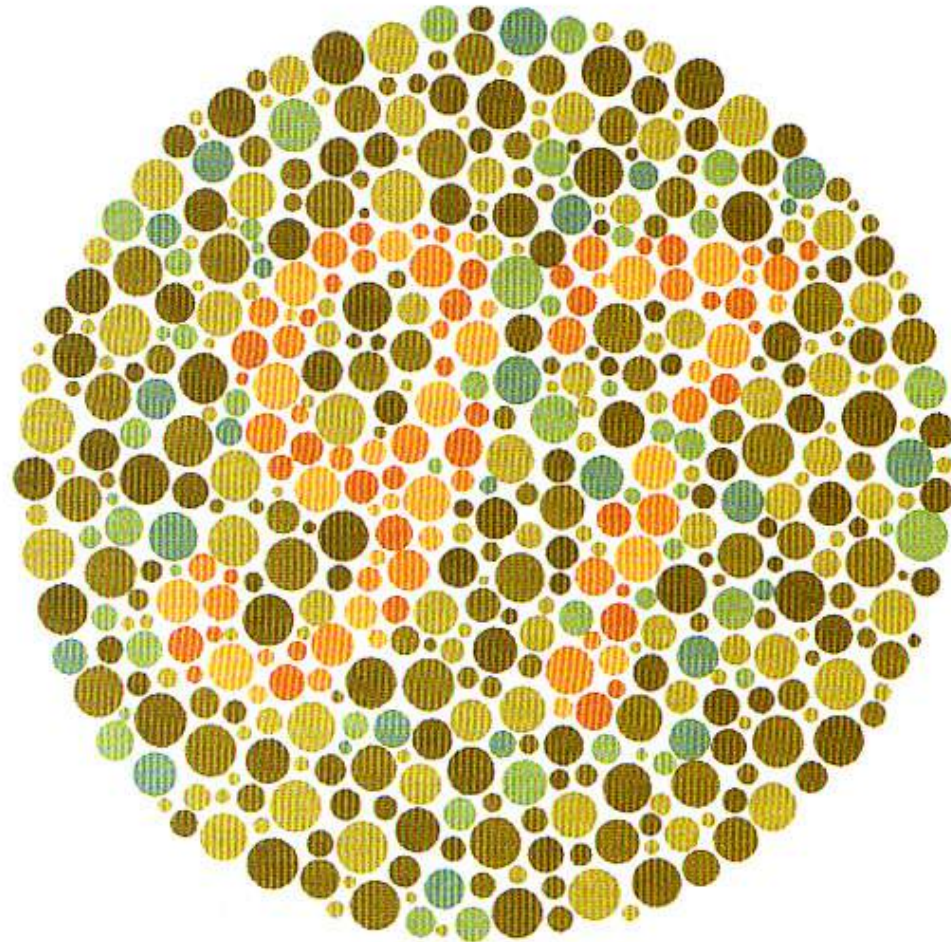
Figure 27-3 The lens of the eye projects an inverted image on the retina in the same way as a camera. (Adapted from Groves and Schlesinger 1979.)

Visual processing in the brain



depth perception and size

Color Vision



Rods and Cones

Rod



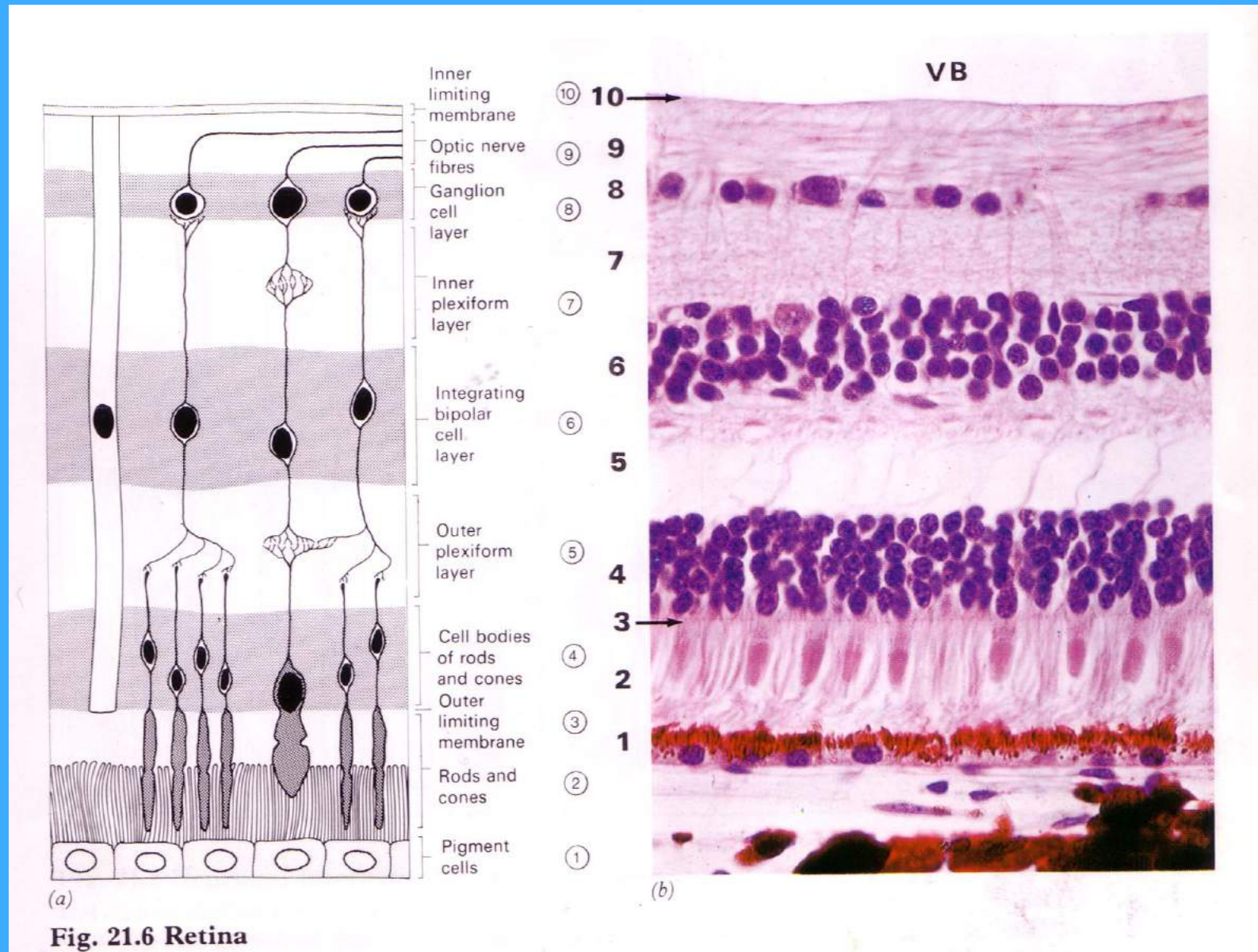
black and white
concentrated at edges
of retina

Cone

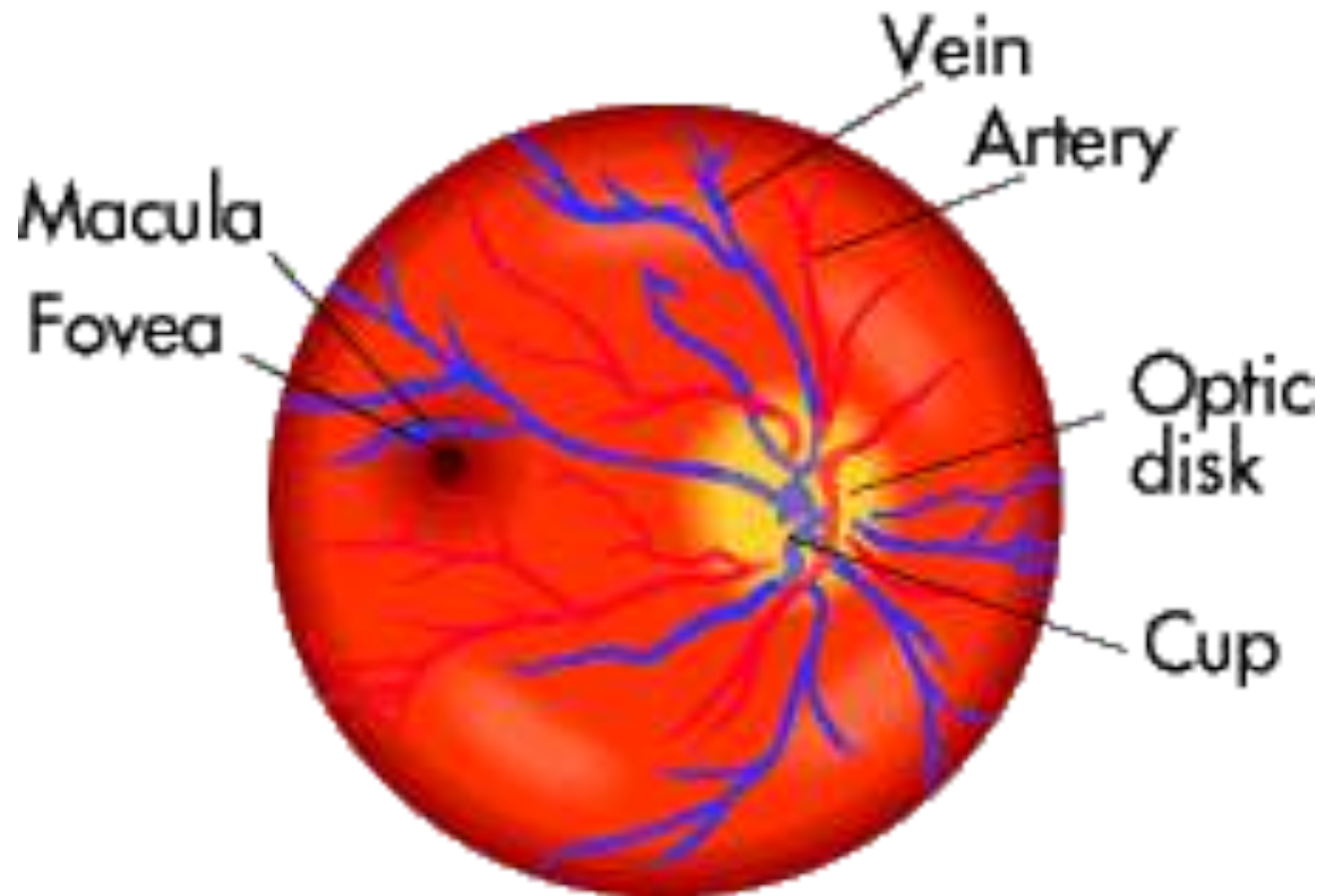


color vision
concentrated at middle
of retina (fovea)

The Retina



Ophthalmoscope View



Game – Who am eye?

Tag on back

Yes or no questions

Can't ask directly "am I the ___?"
or "do I start with a ___?"

Once figured out, line up
for picture in correct order

