Name _____ Date _____



Comparative Ocular Anatomy: **In the Dark and in the Light**

Slide 7. Complete the table with the differences you see in the diagrams of eyes from animals with these three behaviors (Figure 71):

	Nocturnal	Arhythmic	Diurnal
Relative size of cornea			
Lens shape (all are convex)			
Lens size			
Location of the center of the lens			

Slide 9. Complete the table with the differences you note between the nocturnal and diurnal retinas (Figure 72):

Kind of Retinal Nerve Cell	Nocturnal	Diurnal
Number of ganglion cells		
Number of photoreceptor nuclei		
Majority of photoreceptors		

Slide 10. Which animal is nocturnal and which is diurnal?

Flying squirrel	
Ground squirrel	

Slides 16, 18, 20. Unknowns – Identify whether the eye is from a nocturnal animal or a diurnal animal. Record the evidence for your identification:

	Nocturnal or diurnal?	Evidence
Slide 16		
Slide 18		
Slide 20		

Slide 24. Concluding question: You have recently completed the study of the human eye and dissected the bovine eye. Using what you've learned in today's presentation,

a) Identify whether the human (or bovine) eye is nocturnal, arhythmic or diurnal.
b) Give at least 3 pieces of evidence for your identification.
c) What advantages (or disadvantages) does this structure have for human (or bovine) vision?