Name:	Period:	

AP Biology Unit 4. Campbell Ch. 11-13. Your task is to create a quick study card for the Exam. MUST be handwritten. Accuracy, Neatness – Use ruler to draw charts, tables, etc. and appropriate use of color. Color needs to be embedded and used appropriately (DO NOT just color large sections different colors.) Title of the Quick Study Card in the Top Center of the page First and Last Name, Date in upper right.	checklist
1. Science skills: Write a CER in response to question 10, Campbell p. 233 (11 th ed).	
2. Science skills: Design an experiment to answer the question, what is the effect of caffeine on the rate of mitosis in frog eggs? Label: hypothesis, null hypothesis, independent and dependent variables, control group. Specify material and time amounts and what you will measure.	
3. Create a chart comparing long and short distance cell communication methods, molecules, and examples.	
4 . Using g protein-linked receptors as examples, diagram and label a signal transduction pathway. Include a second messenger.	
5. What are the possible results/ responses of a signal transduction pathway? What would happen if any component were mutated? Specify. What else could interfere with proper functioning of the pathway?	
6. Create a chart comparing negative and positive feedback mechanisms. Include an example in both a plant and an animal.	
7 . Create a chart of the steps of the cell cycle. Include events and purpose of each step. What is G_0 ?	
8. Describe the roles of cyclins and cyclin-dependent kinases. Give an example of a checkpoint and its importance.	
9. What is apoptosis and why might it occur?	
TOTAL	