Name: Period:

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| **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 (11th 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 Go? |  |
| **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** |  |