Name:_____Period:_____

AP Biology Unit 6. Campbell Ch.16-19. 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: CER: How does a change at the molecular level lead to a change in phenotype?	
2. Science skills: Model the lac operon to illustrate gene regulation.	
3. Compare prokaryotic and eukaryotic chromosomes. What are plasmids?	
4. Make a chart comparing purines and pyrimidines.	
5. Name different ways that mutations occur and their results. Include errors in replication, repair, mitosis/meiosis, and environmental factors. Explain.	
6. Compare DNA and RNA structure.	
7. Describe and/or diagram the steps involved in DNA Replication, including all enzymes, leading and lagging strands, and the direction that replication occurs.	
8. Diagram and explain the steps involved in Transcription. Label all molecules and the template (noncoding, minus or antisense) strand.	
9. List the ways eukaryotic cells can modify the original mRNA transcript.	
10. Explain the steps involved in translation. How does translation differ in prokaryotes and eukaryotes? What special step do retroviruses take?	
11. How are the genes in regulated in a Eukaryote, i.e., positive and negative regulation? What are epigenetic changes? What are the results of these regulations and changes? What role do small RNAs play?	
12. Diagram and explain bacterial transformation, transduction, conjugation, and transposition.	
13. What is the evolutionary significance of processes which increase genetic variation?	
14. How are plasmids utilized in Biological Research?	
15. How does electrophoresis work? Explain the process.	
16. What enzymes are required for PCR and why? Is there anything else required?	
17. What does DNA sequencing do?	
TOTAL	