Because I used DQ's, I have stuggled how to create a key that will not undermine the textbook DQ's. Therefore, I have decided to simply describe the type of information I was looking for. If you have specific questions about your test, please come see me.

Chapter 2 #55.
You had to find the right gene.
You had to note the differences, benefits, and drawbacks for both database searches.
You had to explain why you thought this was an essential gene based on its name.

Chapter 2 #70.
These genes are tricky and I wanted you to see the complexity in the database and to document what you found. Screenshots with your words describing what you saw were crucial.

Chapter 2 #76.
You had to find the name.
You had to link the phenotype to the name.
You had to document the number of mRNAs. Screenshot helpful.
You needed to document the diversity of orthologs.

Chapter 3 #13.
You had to connect the reading to this sequence.
You had to demonstrate which reads and how much of them you trusted, and why.

Chapter 3 #18.
You had to fill in the table correctly.

Chapter 3 #78.
The key was thinking about genomic diversity and how you would search for that and how you might find new diversity in the clinic.

Exploration Question 1
a. UCP-1 *Sus scrofa domestica*, or the domestic pig.
b. You had to find the true orthologs and note their differences.
c. You had to note the inefficiency of this allele and how this helps pigs stay warm and even helps explain their nest-building behavior which is unusual for a mammal. This was easiest to do if you found the PLoS Biology paper that went with this sequence.

Exploration Question 2
a. OPN4 from *Gallus gallus*, chicken. This mRNA is also called melanopsin or OPN4.
b. You had to find the true paralog that is on a different chromosome.

c. You had to find the orthologs Opn4x and Opn4m.

d. You had to find the story that eutherian mammals have lost one of the two paralogs which suggests that non-mammals may have a different way to maintain circadian rhythm.