6 Facets of Understanding_Hint and Checklist Card
Reference: Miller and Levine Biology p. 991-993

1. *Cooperatively* work with your partner on the assigned task.
2. Use your partner's expertise, textbook and available diagram to clarify *confusion point*.
3. Seek help from the instructor only when there is *no resolution available* within the group.
4. Do not call out. Raise your hand and quietly wait your turn.
5. Be prepared to submit your group's response to the instructor.
6. Be prepared to present your group's response to the class.
7. If you're finish early, attempt the next task.
8. All groups must be finished by _____ to present _____.

Self-Knowledge

1. What is the format of the pre-test and post test?
   a. 3 of 5 questions must be short responses.
   b. At least 2 questions must be diagram based question using the menstrual cycle diagram.
   c. At least 3 questions must address hormone, egg and the uterus.
   c. Answer key must be provided.
2. Use your notes to help you.

Application

1. How will you symbolically represent the shape of the target cell?
   a. Since we are addressing human cells, what shape would be most logically?
   b. Label the cell as target cell and its location.
   c. Use a specific color paper to represent your target cell.
2. How will you symbolically represent the shape of the receptor?
   a. Use the craft scissors to provide a unique shape for the receptor?

b. Label the receptor and tape it to the membrane of the target cell
c. Use a specific color paper to represent your receptor.

3. How will you symbolically represent the shape of the hormone?
   a. Use the craft scissors to provide a unique shape of the hormone.
   b. Will you use the same craft scissors or a different one? Why?
   c. Label the hormone as FSH, LH, estrogen or progesterone.
   d. Use a specific color paper to represent your hormone.
4. How would your hormone interact with a non-target cell?
   a. Come up with your own steps to represent the process for a non-target cell interacting with the same hormone.
   b. Do not forget to label the non-target cell (such as the liver cell), the hormone and receptor of the non-target cell

Perspective

1. Use the colored menstrual diagram to help you with the Interpretation.
2. How does the uterus behave in the presence of high amount of estrogen?
3. How does the uterus behave in the presence of low amount of estrogen?
4. How does the uterus behave in the presence of high amount of progesterone?
5. How does the uterus behave in the presence of low amount of progesterone?

Empathy

1. Start: What structure secretes LH? What region of the body is this occurring?
2. How will LH travel to its destination? What body system is facilitating the transport?
3. What is the destination or target cell of LH?
4. What unique feature causes LH to interact with the target cell?

5. Completion: What will occur when LH binds to its target cell? In other words, what is the function of LH?
6. Phrase your response in an easy to follow sequence.
7. Provide annotated diagrams in your response to clarify the process.

Explanation

1. Use the menstrual cycle diagram to help you.
2. Which hormones begin the menstrual cycle?
   a. Where are they located?
   b. What are the functions of these hormones?
   c. What are the target cells of each hormone?
   d. How do these hormones travel to the target cell?
   e. What causes these hormones to bind to the target cell and prevent binding to a non target cell?
3. How do these hormones *impact the egg*?
   a. What happens to the egg from Day 1 to 28?
   b. How does the egg change throughout the process?
   c. Does the egg causes any hormones to be released? If so, what are they? What are their function?
4. How is the *uterus* impacted?
   a. What hormones causes the change in the uterus?
   b. How does the uterus change in the presence of these hormones from Day 1 to 28?
5. Turn your response into a series of steps that is logical and easy to follow by classmates.
6. Use the menstrual diagram to help you.

Interpretation

1. View the animation "How the Pill Works" at the computer station.
2. Access the animation from the class Moodle site.
3. Complete your responses in colored pencil on the graph template provided.

a. Which are the pituitary hormones?
b. Which are the ovarian hormones?
c. From which perspective is the ovarian cycle referring?

4. Label one version of graph template as Normal Menstrual Cycle and the other as Menstrual Cycle in the Presence of the Pill
5. What are some differences that you notices from the perspective of the hormone?
6. Predict what you think should happen from the perspective of the egg.
7. Predict what you think should happen from the perspective of the uterus.