**Science Home learning**

We hope you are all doing well at home, well done for doing your science work :-). Below are the email addresses for all Science staff. Do not hesitate to contact any of us with any questions. We even have twitter!

Jamie.venning@astreadearne.org, Thomas.bagnall@astreadearne.org, Daniel.cadman@astreadearne.org, sean.guy@astreadearne.org, Kayleigh.smith@astreadearne.org, Robert.gray@astreadearne.org, Vicky.conway@astreadearne.org, dawn.brough@astreadearne.org, Hannah.szabo@astreadearne.org, Richard.white@astreadearne.org, victor.oczadly@astreadearne.org,

Twitter Link: @Dear

**Lesson Title: The menstrual cycle Year: 8**

Topic: Human reproductionUnit: **Variation and human reproduction**

Date Set: 25/01/2021

Information to read / watch:

Online lesson: <https://classroom.thenational.academy/lessons/puberty-and-the-menstrual-cycle-ccw3ec?from_query=menstrual+cycle>

Read: <https://app.senecalearning.com/classroom/course/419c7523-d408-4bc7-9b96-f7f12abdacae/section/037b115a-7932-42be-a27e-d4ae87953522/session>

Application:

Task 1: Define fertilisation

Task 2: Label the key events on the menstrual cycle timeline

Task 3: State where in the menstrual cycle pregnancy is most likely to occur. Justify your answer.

Challenge: Apply knowledge of the menstrual cycle to graphs showing the hormones involved

Misconceptions:

“The menstrual cycle is the same as a period” – The “period”, also known as menstruation, is only the beginning part of the menstrual cycle.

“All of the menstrual cycle hormones are made in the ovaries” – Oestrogen and progesterone are made in the ovaries, however FSH and LH are made in the pituitary gland.

“Only blood is lost during menstruation” – During menstruation, blood is lost, but so is the uterus lining, which breaks down if a fertilized egg has not been implanted.

Additional Websites:

<https://www.bbc.co.uk/bitesize/guides/zcnp7p3/revision/2>

<https://www.bbc.co.uk/bitesize/guides/znxnscw/revision/3>

**Additional Information**

Task 2: Label the key events on the menstrual cycle diagram below:

Challenge: Use the information provided to answer the questions below:

The female menstrual cycle is controlled by a number of hormones. The graph below shows the concentrations of four of these hormones at different times during the menstrual cycle.



          The functions of the four hormones include:

          FSH – stimulates the development of immature cells into eggs in the ovary.

          LH – stimulates the release of the mature egg cell.

          Oestrogen – stimulates production of LH, but inhibits FSH production.

          Progesterone – inhibits production of both LH and FSH.

          Use this information to explain as fully as you can:

**Task:**

1. State the order in which the four hormones are released during the menstrual cycle
2. Which hormones are present when the egg is released. List answer starting with the hormone with highest concentration at the time.
3. Suggest which two hormones could be used to prevent pregnancy, give a reason for your answer.
4. Suggest which hormones could be used to increase the changes of pregnancy. give a reason for your answer.