Can you draw a heart diagram?

**Heart Diagram**

- Aorta
- Pulmonary artery
- Vena cava
- Semilunar valves
- Right atrium
- Left atrium
- Bicuspid valve
- Mitral valve

**William Harvey**

- Challenged Galen's ideas about heart
- Proved through experiments that...

**Blood vessel**

- Platelets detect damage
- Prothrombin -> thrombin
- Promotes fibrinogen -> fibrin
- Which traps RBC in a net form

**Steps in the formation of a blood clot:**
- Platelets detect damage
- Prothrombin -> thrombin
- Promotes fibrinogen -> fibrin
- Which traps RBC in a net form

**The role of the skin:**
- As a physical barrier to bacteria/pathogens. It also contains glands which produce the mucus for mucus...

**Production of antibodies:**
- Lympocyte
- Their function is to...

**Florey and Chain's experiments found:**
- In their tests on penicillin on bacterial infections in...
- That penicillin was not toxic to mice, and that it had antibacterial properties in mice infected with staphylococci

**Parts of the lungs which help ventilation and gas exchange:**

- **Type I pneumocytes**
  - Thin cells form the wall of...
- **Type II pneumocytes**
  - Capable of cell division, more rounded shape, replace damaged...

**Trachea & Bronchi:**

- Tubes with cilia and cartilage rings - carry air to ...

**Capillaries:**

- Thin blood vessels - carry oxygen away from alveoli and CO2 to...

**Intercostal muscles:**

- Move the rib cage up (internal) and down (external) to help...

**Diaphragm & abdominal muscles:**

- Diaphragm contracts, moves down and increases thorax...

**DIGESTION:**

- Contraction of circular and longitudinal muscles causes peristalsis - the...
- The pancreas secretes digestive enzymes in the intestines, and insulin glucagon into...

**Villi increase surface area of the...**

**Membrane transport is required to...**

**Compare the structure and function of arteries and veins:**

<table>
<thead>
<tr>
<th>Arteries</th>
<th>Veins</th>
</tr>
</thead>
<tbody>
<tr>
<td>thick elastic walls, thinner walls</td>
<td>thinner walls, thicker walls</td>
</tr>
<tr>
<td>smaller lumen larger lumen</td>
<td>larger lumen, smaller lumen</td>
</tr>
<tr>
<td>high pressure blood in pulse, blood at lower pressure, no pulse</td>
<td>low pressure blood in pulse, blood at lower pressure, no pulse</td>
</tr>
</tbody>
</table>

**Increasing and decreasing heart rate:**

- **Epinephrine**
  - Hormone released by adrenal gland
- **Nerves from the medulla**
  - The heart rate can be increased or decreased through impulses in two nerves from the Medulla

**Explain the role of the SA node:**

- SA node produces a regular depolarization in the walls of the heart, which is transmitted in cardiac muscle.
- Epinephrine can increase the rate of these depolarizations.
- Nerves from the medulla also affect the rate of the heart pacemaker (SA node).
- Heart is myogenic because of the function of the...

**Hormones and their function:**

<table>
<thead>
<tr>
<th>Hormone</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insulin</td>
<td>Targets organs, absorbs glucose from the blood, lowering glucose</td>
</tr>
<tr>
<td>Glucagon</td>
<td>Target liver to release glucose</td>
</tr>
<tr>
<td>Thyroxin</td>
<td>Regulates metabolic rate &amp; partly controls body weight</td>
</tr>
<tr>
<td>Leptin</td>
<td>Secreted by adipose cells, acts on the hypothalamus of the brain to inhibit appetite</td>
</tr>
</tbody>
</table>

**The roles of FSH, LH, estrogen and progesterone in the menstrual cycle are:**

- FSH: Follicle stimulating hormone - promotes the maturation of a follicle in the ovary.
- LH: Luteinizing hormone - promotes the maturation of a follicle in the ovary.
- Estrogen: Promotes ovulation and the formation of the corpus luteum in the ovary.