Malaria in the 21st Century

Overview of the malaria life cycle. Notice the differential use of the definitive host (*Anopheles* mosquito) and intermediate host (human), and the transmission between hosts. Also notice the complexity of the life cycle, as *Plasmodium* adopts a number of forms.

Q1 – Vaccination and treatment of malaria is not very effective. What is the best way to prevent malaria infections?

Viral Replication

Overview of the various life cycles of a virus. Study both the lytic and lysogenic cycles of bacteriophages. For eukaryotic viruses, focus on the general process (attachment, synthesis, assembly/release). Look at the different types viruses (ssDNA, dsDNA, retrovirus, etc …), but don't get lost in details.

Q1 – Compare and contrast the lytic and lysogenic cycle of a bacteriophage.
Q2 – Of the lytic and lysogenic cycles, which of these would you expect to confer additional abilities to a host cell (transduction)? Why?
Q3 – Compare and contrast attachment for naked viruses, enveloped viruses, and those that induce phagocytosis.
Q4 – Compare and contrast release for naked and enveloped viruses.

Flu Attack!

3D rendering of the life cycle of the flu virus. Notice the many recognizable stages of the life cycle, and the stuctures that they use. They "dumb it down" quite a bit, but it's a good opportunity to review what you know. Also notice how scientists are generally not funny.

Q1 – What are the following structures the video refers to?

- Little yellow knobby thingy
- Purply stick uppy things
- The welcoming committee (what is happening?)
- Yellow noodly things (The secret recipe)
- Big pink copy machine
- Blue peanuty things