PE Summer Work

When you begin Y12 PE in September you will need to draw and extend some of your GCSE PE knowledge. To prepare for this I would like you to complete the following tasks:

Task 1:

1. Research the axial and appendicular skeleton.
2. Find a diagram of the skeleton.
3. Shade the axial skeleton in one colour and the appendicular skeleton another

Task 2:

1. Research the 5 different sections of the vertebrae
2. Create a poster showing and explaining the different sections.

Task 3:

Below is a table outlining the key characteristics of synovial joints.

Structure	**Description and function**
Articular cartilage	Reduces friction between bones by having a smooth / glossy and hard consistency which allows them to move against each other without friction.
Ligaments	Attaches bone to bone to provide joint stability while enabling movement. Strong and elastic.
Synovial membrane	A layer that lines the synovial joint, which produces synovial fluid within it.
Synovial fluid	Thick fluid which helps reduce friction by lubricating the joint. Movement of the joint promotes secretion of the synovial fluid. The fluid becomes less viscous as the joint warms up and the range of movement at a joint increase.
Meniscus	Additional cartilage to stabilise joints. Pads of tissue which lie between the articular cartilage and sit within synovial fluid.
Pads of Fat	They act as shock absorbers, reducing impact on bone ends. They sometimes fill larges spaces in joints e.g., in the knee they fill the space below the patella and the ends of the femur and tibia.
Bursae	Small sacks filled with fluid. They are located where skin, ligaments or bones could cause friction. Therefore, they reduce friction between tissues e.g. between the patella and the front of the knee.
Joint capsule	The protective layer around a joint. It encloses the joint.

1. Create a working model of one of the following types of joint:
    a. Hinge
    b. Ball and socket
    c. Pivot
    d. Condyloid
    e. Saddle
    f. Gliding

It can be as simple or complex as you want to make it. It needs to:

- Move
- Clearly be identifiable as the joint it is meant to be.
- Labelled; bones and structures of a synovial joint.

Examples can be seen in the diagram below.