• **Spongy** (see below)
  - Spongy bone contains **no central canal or osteons**
  - The **lamellae are arranged as rods**
  - The **spaces contain red bone marrow**
  - It is **located at the heads of long bones** and **within the interior of most irregular bones**
    - Such as the **pelvis** and **skull**
  - Its functions:
    - **High metabolic activity** (e.g. calcium exchange)
      - **High surface area**
    - **Produces red blood cells** from red bone marrow
    - **Contains stem cells** in the bone marrow

Bone tissue in general has some specific functions:
- **Support**
  - It maintains the body shape
  - It withstands gravity
- **Movement**
  - It acts as levers to allow movement
- **Protection**
  - **Organs** such as the brain and heart are **encased** by the skull and rib cage
- **The storage of minerals and growth factors**
  - This allows for **bone remodelling**
  - Allows for **regulation of calcium homeostasis**
  - Allows for the **production of osteoblasts and osteocytes**
  - Allows production of **parathyrin and calcitonin**
    - These allow for bone remodelling by the uptake and remodelling of bone
- **It can store fat** for use as an **energy source**
- **It is the site of blood cell and hormone production**
  - Blood synthesis = **haematopoiesis**
  - Produces **osteocalcin**
    - This regulates insulin secretion
    - **Glucose homeostasis**
    - Regulates energy expenditure