Muscular System and Movement

Big idea: The body systems and their impact on physical activity.

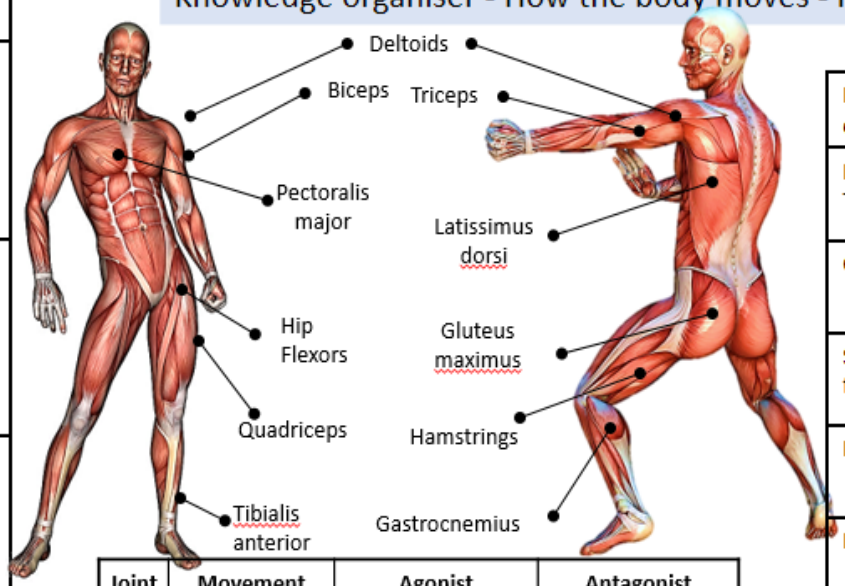
Muscle Contraction	Characteristics
Isometric	1. Muscle contracts but NO MOVEMENT takes places 2. Example: ski sit, tug of war, handstand
Concentric	1. Muscle contracts and movement takes place 2. All movements except stationary ones and ones going down 3. Example: kicking a ball, throwing, shooting
Eccentric	1. Muscle contracts and lengthens when tensed 2. All movements that go against gravity eg. Downwards 3. Example: downwards part of press up.

Antagonistic Muscle Pairs

Definition: Muscles work in pairs- when one contracts the other relaxes

- Agonist- muscle that contracts to cause movement
- Antagonist- muscle that relaxes during movement

Knowledge organiser - How the body moves - Muscles



Joint	Movement	Agonist	Antagonist
Hip	Flexion	Hip flexors	Gluteus maximus
	Extension	Gluteus maximus	Hip flexors
Knee	Flexion	Hamstrings	Quadriceps
	Extension	Quadriceps	Hamstrings
Ankle	Plantar flexion	Gastrocnemius	Tibialis anterior
	Dorsiflexion	Tibialis anterior	Gastrocnemius
Elbow	Flexion	Biceps	Triceps
	Extension	Triceps	Biceps

Key definitions	
Ligament **Tendon**	• Joins bone to bone • Joins muscle to bone
Cartilage	• Covers the ends of bones; prevents friction
Synovial fluid	• Lubricates the joint
Flexion	• Decreasing the angle at a joint
Extension	• Increasing angle at a joint
Abduction	• Movement away from the midline of the body
Adduction	• Movement towards the midline of the body
Plantar-flexion	• Pointing your toes
Dorsi-flexion	• Curling your toes upwards
Rotation	• Circular movement at a joint