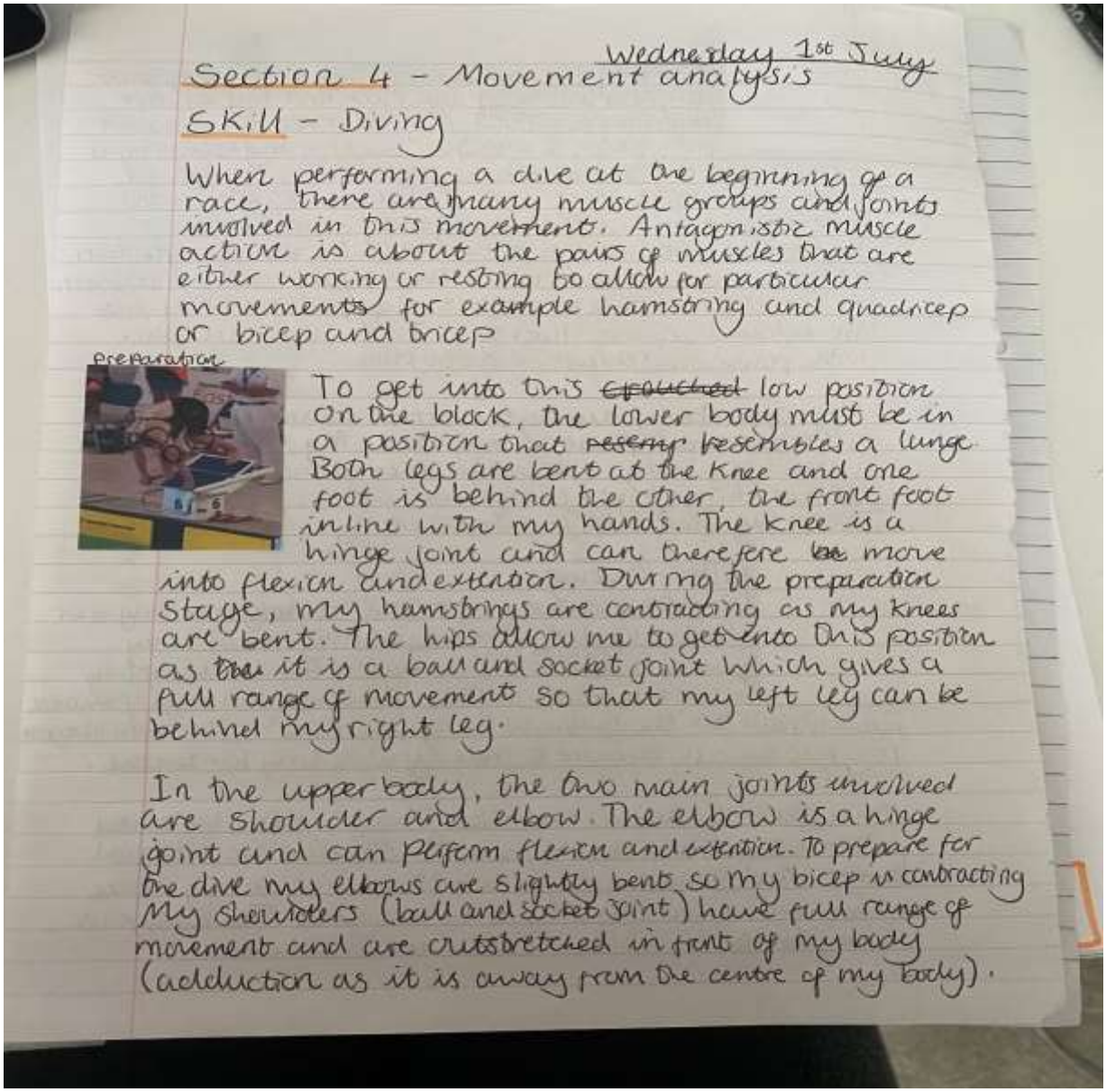


Wednesday 1st July

Section 4 - Movement analysis

SKill - Diving

When performing a dive at the beginning of a race, there are many muscle groups and joints involved in this movement. Antagonistic muscle action is about the pairs of muscles that are either working or resting to allow for particular movements for example hamstring and quadricep or bicep and tricep

Preparation

To get into this ~~crouched~~ low position on the block, the lower body must be in a position that ~~resemb~~ resembles a lunge. Both legs are bent at the knee and one foot is behind the other, the front foot in line with my hands. The knee is a hinge joint and can therefore be move into flexion and extension. During the preparation stage, my hamstrings are contracting as my knees are bent. The hips allow me to get into this position as they it is a ball and socket joint which gives a full range of movement so that my left leg can be behind my right leg.

In the upper body, the two main joints involved are shoulder and elbow. The elbow is a hinge joint and can perform flexion and extention. To prepare for the dive my elbows are slightly bent so my bicep is contracting My shoulders (ball and socket joint) have full range of movement and are outstretched in front of my body (adduction as it is away from the centre of my body).

Feedback:

Knee:

"my hamstrings are contracting" – must mention quadriceps are relaxing (antagonist pair)

Where you have said "knees are bent" – use correct terminology – flexion.

What bones make up the articulating joint at the knee?

Fixator?

Hip:

They are both in flexion (one more than the other) – what antagonistic pairs? Which one contracting and which one relaxing?

What bones make up the articulating joint at the hip?

Elbow:

"slightly bent" – correct terminology slight flexion. Bicep contracting – don't forget about the tricep relaxing (antagonistic pair).

What bones make up the articulating joint at the elbow joint?

Fixator?

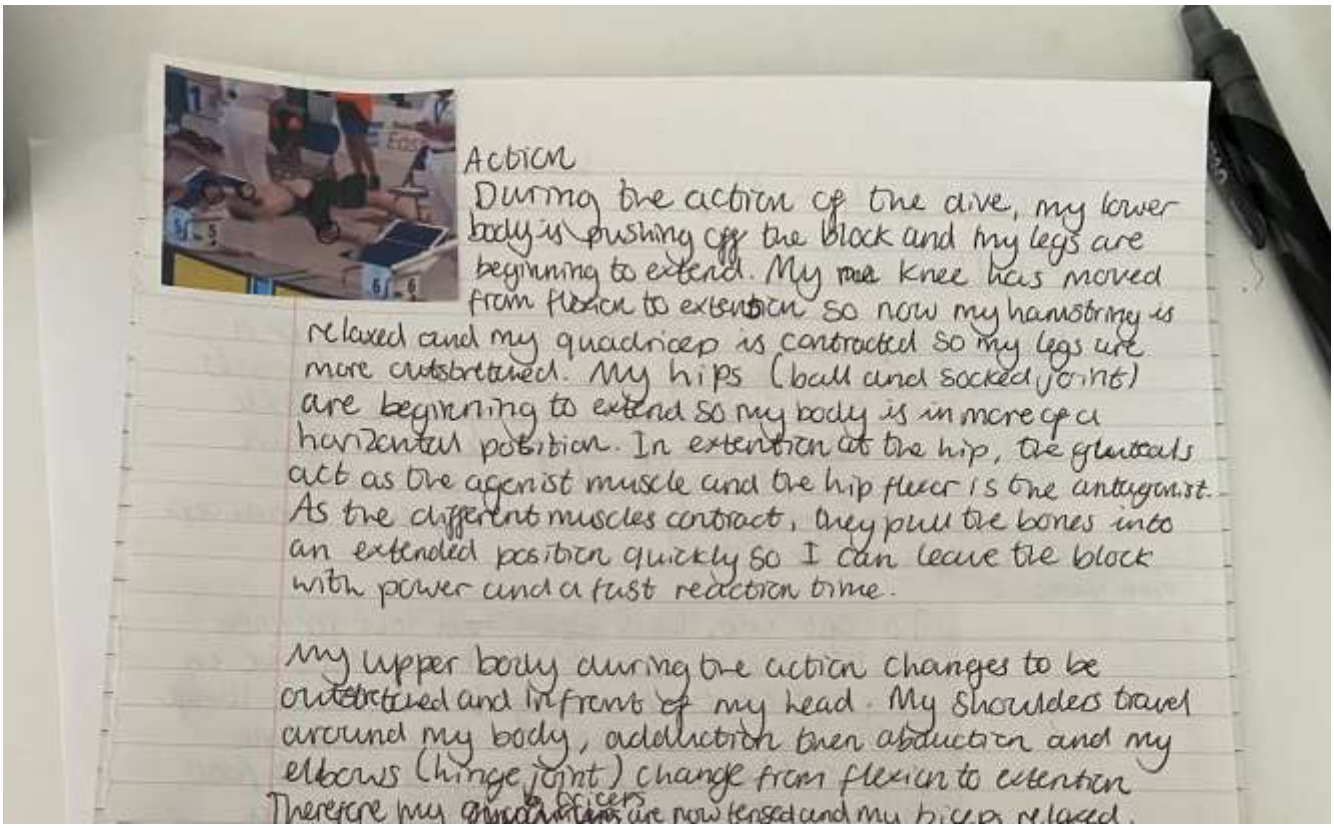
Shoulder:

Both shoulders are in flexion as you have moved them forward not out to the side.

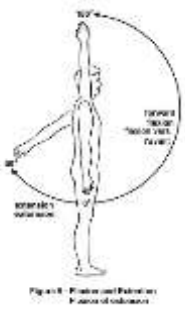
Which antagonistic pair has caused this? Front deltoid agonist back deltoid is antagonist.

What bones make up the articulating joint at the shoulder?

Fixator?



Feedback:



Shoulder: are still in flexion I think do they go straight ahead or do they go out to the side then straight ahead ? may need to cover adduction and abduction too if this is the case - see picture – see points mentioned above for flexion.

I am no expert so I had to watch a few videos – see below, do shoulders go into slight extension before going into flexion? It is so quick I cant tell.

https://www.youtube.com/watch?v=So9TN0oB2QM

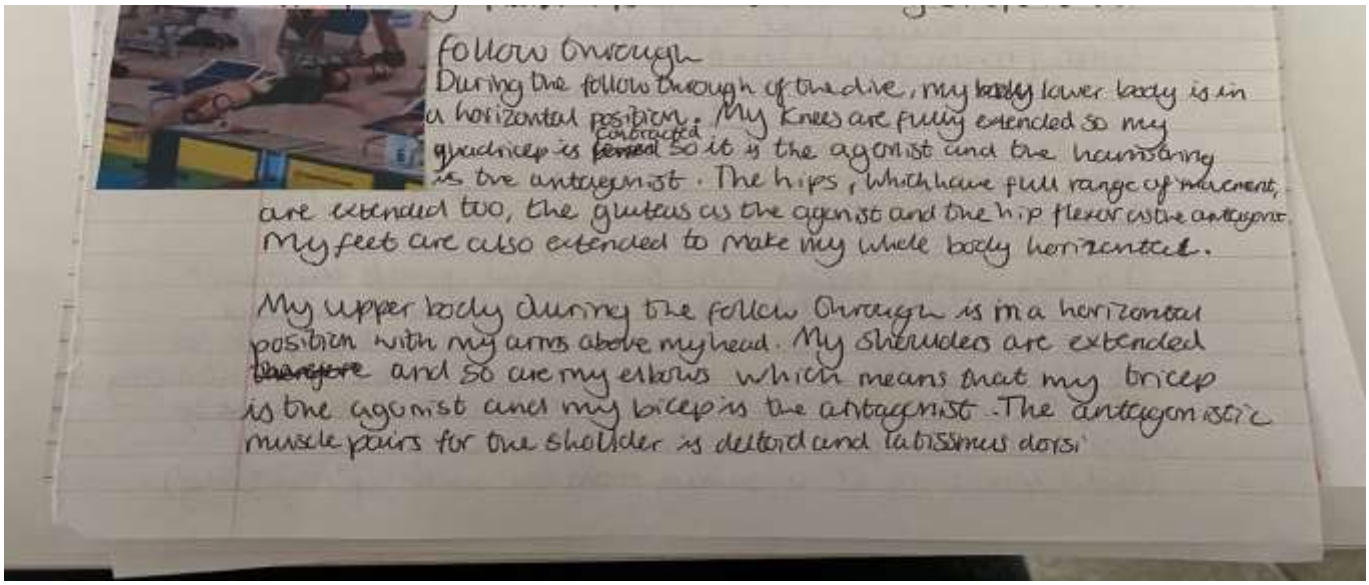
https://www.youtube.com/watch?v=8aY3pr_XWFY

Fixator?

Elbow:

Use contract not tensed.

Fixator?



See points above.

Shoulder is now in flexion for the impact into the water

This is really good as this was a challenge.

Don’t forget your articulating bones.

Must mention both antagonistic muscles and what they are doing

Use correct terminology.

Fixator?