

**6th Form
Preparation work
for
BTEC Sport**

**Unit 1 – Anatomy
and Physiology**



Complete:

Task 1 Create a table for the 3 main synovial joints

	Ball and Socket	Hinge	Condyloid
Description			
Examples in the Body			
Bones that create the joint			

Task 2: Look up what these joint movements are. Describe and give a sporting example. **Present in table form.**

Movement	Description	Sporting Example from body
e.g. Flexion	Decreasing the angle at a joint	Upward phase up bicep curl

**Flexion/Extension/Abduction/Adduction/
Horizontal Flexion/Horizontal Extension/Medial Rotation/Lateral Rotation/ Circumduction/Dorsiflexion/Plantar flexion**

Task 3: What are the antagonistic pairs of muscles at each of these joint? **Present in table form**

1. Shoulder joint
2. Ankle Joint
3. Elbow Joint
4. Wrist Joint
5. Hip Joint
6. Knee

Note: There may be more than one movement at each joint



Watch

Joints and Movements by James Morris

Joint Action and Muscles by James Morris

<https://www.youtube.com/watch?v=otHNMOaXSns>

Time: 50 MINS in total



Read

Brianmac.co.uk Anatomy and Physiology – The Skeletal System and The Muscular System

<https://www.brianmac.co.uk/physiol.htm>

Time: 1 hour

Unit 5 – Application of Fitness Testing

Task 1 - How much can you remember from GCSE PE?



Below are 17 statements that relate either to a component of fitness or a fitness test.

Can you match the statement with the correct one from the boxes below? Do not cheat and check the answers!

1. I am the range of movement around a joint
2. I am the ability to link all the parts of a movement into one efficient smooth movement
3. I can be used to improve muscular strength or endurance by varying the reps and sets that you would do.
4. I can be used to improve power and include jumps, bounds and leaps
5. I am the ability of the heart and lungs to supply oxygen and nutrients to the working muscles efficiently over a prolonged period.
6. I am the fastest rate at which you can complete a task or cover a distance. A combination of reaction time and movement time
7. I am the ability to keep the body stable whether still (static), moving (dynamic) or in a different shape by keeping the centre of gravity over the base
8. I am the time it takes to respond to a stimulus
9. I can be used to improve aerobic endurance and I involve training at a steady pace over a long distance.
10. I am the ability to judge the time and place of an object's arrival and then execute appropriate movements
11. I am a training method that uses both static and dynamic exercises to improve the component of fitness

www.pponline.co.uk –

Peak Performance: free advisory newsletter that discusses strength and fitness

www.topendsports.com –

Top end Sports: a range of fitness tests and normative data

1. Practical Fitness Testing: Analysis in Exercise and sport by Archer and Coulson (2015)

2. Measurement and Evaluation in Human Performance by Morrow et al. (2010)

(optional reads)

12. I am the muscles' ability to move a low to moderate weight over a long period without tiring and losing effectiveness
13. I can be used to improve many different components of fitness and I involve lots of different activities performed for short time periods
14. I am a combination of flexibility and speed and the ability to change direction quickly and keep control of your whole body
15. I am a training method that involves changes in intensity without stopping or resting. This is usually done by varying the speed or terrain.
16. I am the ability to apply a combination of maximum strength and maximum speed in an action
17. I am a training method that uses periods of work and rest to help improve fitness. Varying the intensity and duration of work and rest periods will have different effects on you.

You can use each of the below only once...

Balance	Timing / Reaction Time	Agility	Reaction Time	Cardiovascular Endurance	Fartlek Training
Power	Continu ous Training	Flexibility	Circuit Training	Interval Training	Speed
Weight Training	Flexibility training / stretching	Plyometric	Muscular Endurance	Co-ordination	

Task 2 – Sporting examples of fitness

Fitness is an essential part in all sport and exercise performances.

Choose 2 contrasting sports performers and create a factsheet / poster for each of them discussing fitness components and fitness tests.

Annotate your factsheet with the following information:

- A picture and description of your sports performer
- What are 5 components of fitness that your sports performer needs to be effective in their sport?
- Why are these important for their sporting performance?
- State a fitness test that could be used to test each of the component of fitness – please use only the tests that are listed below!
- Explain why this is a good test for your performer



Use the following 2 websites to help you if you need some ideas

[https://www.brianmac.co.uk/eval .htm](https://www.brianmac.co.uk/eval.htm)

<https://www.topendsports.com/testing/tests/index.htm>

The fitness tests that you can choose from are:

Sit and reach test	Wall toss test
Shoulder flexibility test	30m sprint tests
Calf muscle flexibility test	Vertical Jump (Sargent Jump) test
Trunk rotation test	Standing long jump (Broad jump) test
Illinois agility test	Margaria Kalamen power test
T Test Sidestep test	Seated medicine ball throw
One rep max test	Cricket ball throw test
Hand grip dynamometer	Wingate test
7 stage abdominal strength test	1-minute press up test
Balance Stork stand test	1 minute sit up tests
Beam walk test	Wall sit test
VO2 max test	Ruler drop test
Multistage fitness tests	Skinfold callipers
12-minute Cooper run	Body Mass Index
Harvard step test	Bioelectrical Impedance Analysis
Rockport walk test	

The answers to Task 1!

1. Flexibility
2. Co-ordination
3. Weight Training
4. Plyometrics
5. Cardiovascular endurance
6. Speed
7. Balance
8. Reaction time
9. Continuous training
10. Timing / Reaction time
11. Flexibility training / stretching
12. Muscular endurance
13. Circuit training
14. Agility
15. Fartlek training
16. Power

17. Interval training

How many did you get correct out of 17?

For those that you didn't get correct make sure you go back and write the correct answer next to the question.

**Unit 3 –
Professional
Development in
the Sports
Industry**

Task 1 – Jobs within the sports industry

Draw a circle in the middle of a sheet of paper and write 'Jobs in the sports Industry' inside it. Then draw lines off the circle and, at the end of each line write the name of a sports industry job e.g. Lifeguard. See how many jobs you can name!

Task 2 – A career in sport for YOU!

Copy this table into a word document with the title 'Careers in Sport'. Think about 3 careers in sport that interest you and find out a bit about them!

	Career 1	Career 2	Career 3
Qualifications needed?			
What things will you do in the job?			
Skills needed?			
Annual Salary?			

www.careers-in-sport.co.uk – Careers in sport: information about career options in the sports industry

www.nationalcareerservice.direct.gov.uk – National Careers Service: information about different careers and advice and guidance about the process of finding a job

www.uk sport.gov.uk/jobs-in-sport - UK Sport: information about sports related jobs in the UK

1. Working in sport by Masters (2011)

2. A career in Sports: Advice from Sports Business Leaders, Ohio, USA by Wells et al (2010)

(optional reads)

