

# OCR

Oxford Cambridge and RSA

## Sport Science



## Transition Booklet Y9-Y10



KS4 Physical Education

Welcome,

We are delighted that you have opted to study Sport Science in September. The step up from KS3 PE to Cambridge National Sport Science work can be tough, but this booklet is designed to give you an insight into the work you will be completing during Y10. During the course you will get an opportunity to study sport and physical activity in more depth and start to shape your pathway into Level 3 qualifications, apprenticeships or work.

In order to give yourself the best start in Autumn with your new course, we suggest that you complete the following preparation tasks to the best of your ability.

Before you start the tasks, read through the brief overview of the Cambridge National Sport Science course below. The course is broken down into 4 units each worth 25%. Two are completed during Y10 and two during Y11:

### Year 10

Autumn/Winter term - R044 Sport Psychology. Coursework unit.

Spring/Summer term - R041 Reducing the risk of injuries. External examination sat in the summer term.

### Year 11

Autumn/Winter term - R042 Applying principles of training. Coursework unit.

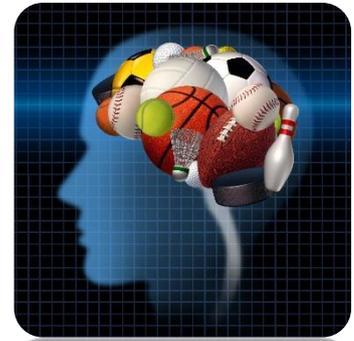
Spring/Summer term - R043 The body's response to physical activity. Coursework unit.

If you have any questions or queries, please contact a member of the Physical Education department:

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## Unit R044: Sport Psychology

### Task 1- Personality

Personality is the unique characteristics of an individual. Knowledge about personality is important to ensure optimum sporting performance. Your personality can affect the type of sports you like and excel in. Personalities are often described by how introverted or extroverted the individual is.

Introverts are often described as shy and happy in their own company. Extroverts are often described as outgoing and talkative. Sort the information below. Is the trait/character described for an **introvert** or **extrovert**? One has been done for you as an example:

Shy	Outgoing	Can concentrate for long periods of time
Have a few close friends	Enjoy leading others	Easy to understand and sociable
Share emotions easily	Outspoken in groups and takes risks	Comfortable in their own company
Learn through doing	Like to keep things private	Bottle up their emotions
Comfortable around other people	Easily distracted	Make friends easily
Quiet in large groups, fear humiliation	Mentally rehearse what they are going to say before they say it	

## Task 2- Personality traits

It is often thought that the traits and characteristics that define your personality can make you more suited to certain sports. For example, aggression is seen as a desirable trait for rugby. Being talkative is seen as a desirable trait for a team captain.



Complete the table below to show which personality traits would be seen as more desirable for the sports listed. The first one has been completed for you (some traits could apply to more than one sport, pick the one you think is most suited):

Sport	Personality trait	Why is the trait desirable?
	Calm	Snooker requires players to keep calm and control their heart rate. This allows them to perform shots with precision and accuracy.
		
		
		
		

Team player
Aggressive
Concentration

Focus
Calm

### Task 3 - Motivation



Engaging in physical activity and sport at any level requires the participant to have a certain level of motivation. Motivation is the 'get up and go' in sports and is required for the hours spent training and competing to improve. Motivation to carry on could be the difference between winning and losing. There are two types of motivation: Intrinsic (from within) and extrinsic (from another source or person).

Decide whether the scenarios below are examples of intrinsic or extrinsic motivation:

- 1) A junior 100m sprinter has beaten her personal best by 1 second in her latest competition

Intrinsic / Extrinsic

- 2) A professional football player is starting to feel tired and give up. The crowd watching the game start chanting his name to cheer him on.

Intrinsic / Extrinsic

- 3) A long-distance runner is determined to win the gold medal in the 10,000m final at the Olympics.

Intrinsic / Extrinsic

- 4) A beginner feels extremely proud of themselves when they complete their first 5k run.

Intrinsic / Extrinsic

- 5) A tennis player wins the men's singles competition at Wimbledon and wins the trophy and prize money.

Intrinsic / Extrinsic

\*Remember, intrinsic motivation comes from within the performer's own mind. Extrinsic motivation comes from another source or person.



Watch - Intrinsic and Extrinsic motivation video for more information

## Task 4 - Arousal and Anxiety

As well as physically preparing for competition through training to improve skill level and fitness. Performers need to also mentally prepare, at the highest level of sport competition can be extremely pressurised so it is important that a performer can deal with this pressure.



One mental factor a performer has to control is arousal. Arousal is defined as a physical and mental state of alertness ranging from extreme calm to extreme excitement.

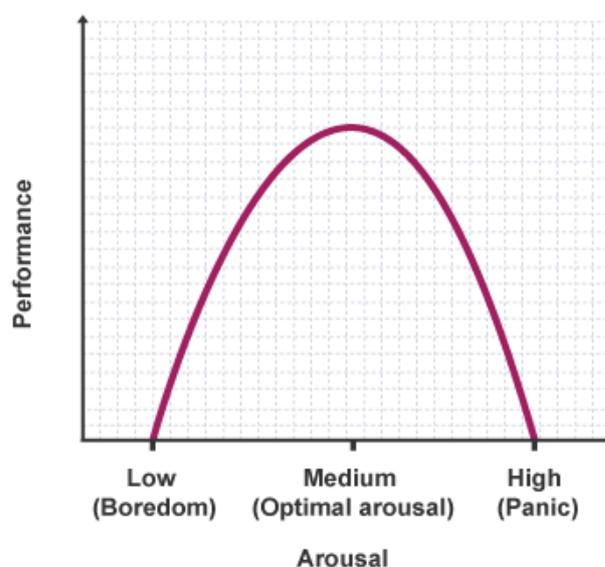
For example, a judo player may feel highly aroused the moments before a bout and much less aroused an hour after the contest has ended.

### The 'inverted U' theory

The 'inverted U' theory proposes that sporting performance improves as arousal levels increase but that there is a threshold point. Any increase in arousal beyond the threshold point will worsen performance.

At low arousal levels, performance quality is low. This is described as **under-arousal** or **boredom** and might be experienced by an elite tennis player playing a lowly ranked opponent.

At medium arousal levels, sporting performance peaks. This can be described as **optimal arousal** and might be experienced when a boxer gets themselves in the right 'zone' to perform at their best.



At high arousal levels, performance quality deteriorates. This can be described as **panic** and **anxiety** and might explain why a football player performs very poorly when their team is losing 3-0.

### Changes in arousal

Sometimes arousal levels need to be changed within the same performance depending upon the skill being performed. A fly-half in rugby needs higher arousal when making a big hit compared to when they take a penalty kick when calmness would be beneficial.

Watch - Mental Preparation for Performance video for more information

## Mini quiz

1) According to the inverted U theory, which of these arousal states is likely to bring about optimal performance level?

- a) Low arousal
- b) Medium arousal
- c) High arousal

2) What is the central proposition of the inverted U theory?

- a) No relationship between arousal and performance
- b) As arousal increases, performance improves
- c) As arousal increases, performance improves until a threshold point

3) Finish the sentences:

-As arousal increases, performance also increases up to an optimal level.

-If arousal increases past the optimal level \_\_\_\_\_ will begin to decrease.

-The optimal level of arousal may be different for different \_\_\_\_\_

4) Arousal is defined as:

- a) Mental state of alertness or excitement
- b) Physical and mental state of alertness or excitement
- c) Physical state of alertness or excitement

5) Which skill in rugby would require a higher level of arousal?

- a) Tackling
- b) Kicking a conversion

6) Which shot in golf would require a higher level of arousal?

- a) Putting
- b) Drive

## Unit R041: Reducing the risk of sports injuries



### Task 1- Understand different factors which influence the risk of injury

Taking part in sport and physical activity puts the body under stress. Knowing how to reduce the risk of injury when taking part in sport and how to respond to injuries in a sport setting are vital skills within the sport sector.

When looking at the different factors that could cause an injury there are two main types, extrinsic (outside of the individuals control) and intrinsic (caused by the individual).

An example of an extrinsic factor that could cause injury is the weather.



An example of an intrinsic factor that could cause an injury is the participant not warming up properly.



Sort the factors below into **extrinsic** or **intrinsic** factors:

Poor coaching	The weather	Lack of exercise
Not warming up	Not wearing the correct equipment	Colliding with another person
Your age	Gender	Not carrying out safety checks
Posture	Over training	Not doing a cool down
Damaged playing surface	Being hit by a ball	High levels of aggression

\*Remember extrinsic factors the participant has no control over. Intrinsic factors the participant can control.

## Task 2 - Warm up and cool down

A warm-up prepares the body for physical activity. Think about when you have taken part in physical activity, what happens to your body...



Does your heart beat faster or slower?



Does your body temperature increase or decrease?



Do your muscles become more or less flexible?



Does the blood flow to your muscles increase or decrease?

### Key components of a warm-up

When warming up before taking part in any physical activity/sport the following 5 stages of a warm-up should be followed:

Research what each of the following terms mean, then plan out a warm-up for a sport of your choice (next page).

1) Pulse raiser

2) Mobility

3) Dynamic movements

4) Stretching

5) Skill rehearsal

Warm-up plan:

Sport -

In each phase of the warm-up write what activities you would do:

1) Pulse raiser

2) Mobility

3) Dynamic movements

4) Stretching

5) Skill rehearsal

### Task 3- Types of injuries

There are two types of injuries that you can get through taking part in physical activity / sport.

- **Acute injuries** are caused by a sudden trauma to the body
- **Chronic / overuse injuries** are caused by continuous stress on an area



A bruise is an example of an *acute injury*, it is caused by a sudden trauma such as being hit by a piece of equipment or colliding with another participant.

Tendonitis such as tennis elbow is an example of a chronic injury, it is caused by overuse of the tendons at a joint. They become inflamed and sore.



Research the injuries below, briefly explain the injury, give a suggestion of how they are caused and then decide if it is an acute or chronic injury:

Injury	What is it?	Caused by?	Acute or chronic?
Ligament sprain			
Muscle strain			
Shin splints			
Concussion			
Abrasion			
Golfer's elbow			
Cramp			

# Y10 Sport Science

Well done on working through the transition tasks. Completion of this work will help prepare you for the two units you will be completing in Y10 as part of your sport science studies.

We look forward to welcoming you in September.

The PE Department

## Transition booklet