

# Unit 6

## Classification of Skills and Goal-setting

**Learning objective:** To develop your knowledge and understanding of the classification of skills and the principles of goal-setting in sport and physical activity

### Knowledge Checklist



|                                                                                                    | Revised | Understood | What you need to do |
|----------------------------------------------------------------------------------------------------|---------|------------|---------------------|
| Be able to describe the characteristics of different skill classifications                         |         |            |                     |
| Be able to place and justify sporting skills on the correct skill continua                         |         |            |                     |
| Explain the different types of goal and understand when they should be used for different athletes |         |            |                     |
| Explain the SMART principle of goal-setting                                                        |         |            |                     |

### Key Terms



1. **Continuum** – a sequence, or order of criteria, that has two opposing ends of a scale
2. **Basic skill** – skill that is made up of simple movements that are not difficult to perform and that does not require largely cognitive thinking skills.
3. **Complex skill** – skill that is made up many subroutines and which requires cognitive thinking
4. **Open skill** – skill that takes place in an open environment and which must be adapted to suit the environment
5. **Closed skill** – skill that takes place in a predictable environment with limited adaptation needed for the skill
6. **Self-paced skill** – skill in which the timing and pace of completion are controlled by the performer
7. **Externally paced skill** – skill which must be timed and paced depending on external influences
8. **Gross skill** – skill that requires large muscle groups to generate power, with limited accuracy
9. **Fine skill** – skill that requires small muscle groups to produce small, accurate movements
10. **Goal** – a set target that an athlete works towards achieving
11. **Performance goals** – goals that are intrinsic to the performer and which are not concerned with other people
12. **Outcome goals** – goals that are only aimed towards success or failure
13. **SMART** – the principles of goal-setting: specific, measurable, accepted, realistic and time-bound

## Classification of Skills

It is important to understand the difference between skill and ability in sport and physical activity. A **skill** is a predetermined action or movement that is learnt and has a specific outcome, or goal. **Ability** is the innate (natural-born) ability of someone in a certain situation – also known as traits. Ability determines how well you can learn a skill.

All skills can be categorised into one or more of the following classifications (sometimes called continua):

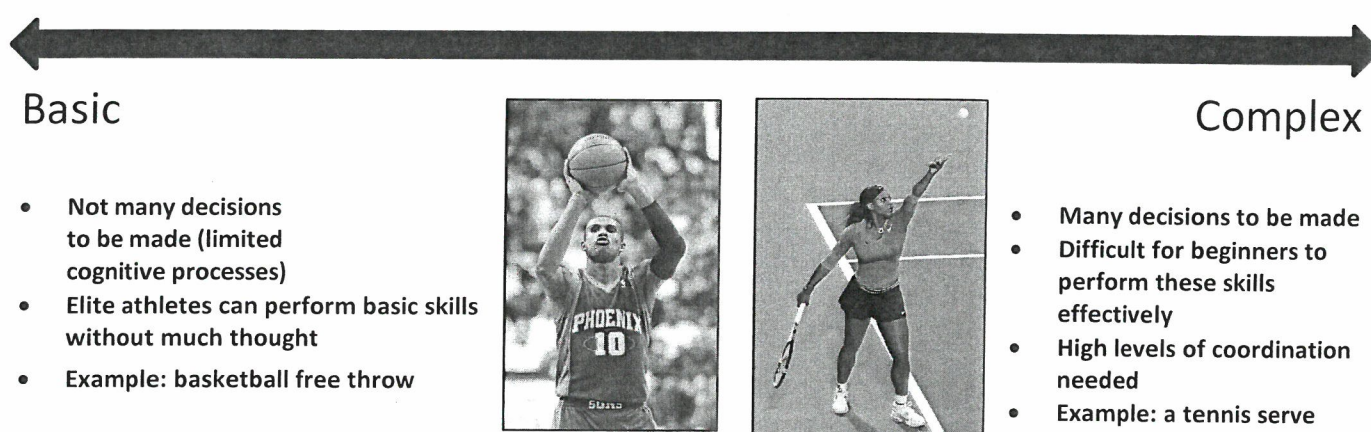
- Basic/complex
- Open/closed
- Self-paced / externally paced
- Gross/fine

### REVISION TIP!

Remember that not all skills can be easily placed on a skills continuum. However, providing you can **justify** your answer, you can pick up marks in the exam.

### Basic/Complex Continuum

This continuum takes into account the complexity of the skill being completed.



### Open/Closed Continuum

This continuum takes into account the amount the environment influences the skill.





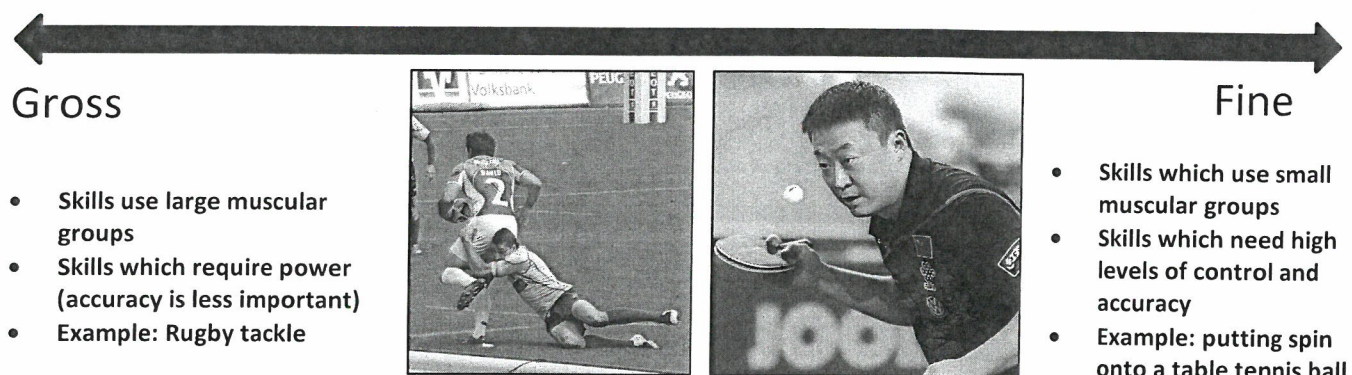
## Pacing Continuum

This classification refers to how the performer times the execution of a skill.



## Gross/Fine Continuum

This classification classifies skills depending on the level of precision that the movement requires (muscular involvement).



### Worked Example: Triple Jump

In the exam, you will be expected to categorise one skill against all of the continua. Take the triple jump for example:

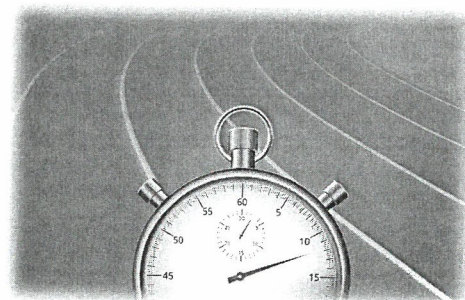
- Complex:** the triple jump is complex because high levels of coordination are required to complete each stage of the jump
- Closed:** the triple jump is started and ended at the athlete's own pace and is completed in a predictable environment (i.e. each jump environment is the same)
- Self-paced:** the athlete will perform the jump at their own pace and start and finish the movement when they want to
- Gross:** the triple jump is a power-based activity which uses the strong muscle groups in the body to perform the jump

## Goal-setting

Goal-setting is used by athletes and coaches to focus an athlete on short-term and long-term achievements. Goal-setting is also used to motivate athletes and maintain their focus. There are two types of goal: **performance goals** and **outcome goals**.

### Performance Goals

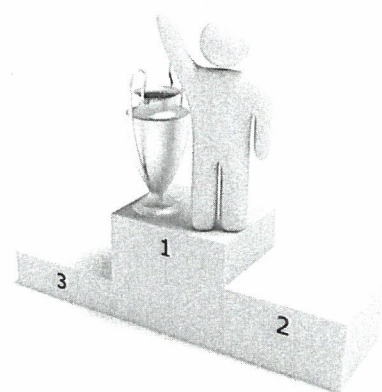
Performance goals are intrinsic to the performer. This means that the performer is not concerned with what others are doing. They compare their results to the results they have achieved in the past. For example, if a swimmer personally swam 50 m freestyle in 25 seconds, they would only concern their performance goals with beating that time.



They can also compare their performance to how the performance felt. For example, a sprinter may not be concerned with their sprint time, but is interested in getting out of the blocks well.

### Outcome Goals

Outcome goals are only used to determine success or failure when compared to other people. For example, a 100 m sprinter who isn't interested in the time they run, as long as they come first in the race.



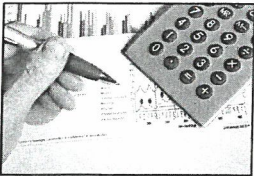
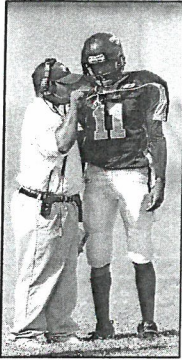
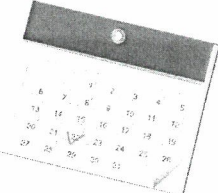
**Performance goals and outcome goals can be used together. However, generally speaking they are both suitable for different types of athlete and so should be used independently.**

- ➔ For example, beginners should not use outcome goals as they cannot control or influence the performance of others around them. This puts them in a stressful and frustrating situation if they do not win. However, elite athletes will often use outcome goals as they are intrinsically wanting to win at all costs and so success is their primary goal.
- ➔ Performance goals are more suited to beginner athletes as they can focus on goals regarding their performance of a skill, without worrying about what others around them are doing.
- ➔ Elite athletes would use performance goals to focus on particular aspects of their performance. For example, a triple jumper may focus on landing as close to the take-off board as possible prior to take-off; however, they would still have the outcome goal of winning.



## SMART Principle of Goal-setting

The SMART principle of goal-setting is used to give structure to your goal and allow you to track progress – maximising its effectiveness as a goal.

|                                                                                     |                    |                                                                                                                                                                                                                                         |
|-------------------------------------------------------------------------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <b>S</b> pecific   | Goals should focus on one aspect of performance so that it is clear if the goal has been met or not. The goals should be aimed at the specific needs of an athlete, e.g. a swimmer's goals should be specific to the sport of swimming. |
|    | <b>M</b> easurable | Any goals should be able to be measured, to track progress.                                                                                                                                                                             |
|   | <b>A</b> ccepted   | The coach and the athlete should come to an agreement on what the goals are.                                                                                                                                                            |
|  | <b>R</b> ealistic  | The athlete should have the ability and resources to achieve the given goal.                                                                                                                                                            |
|  | <b>T</b> ime-bound | There must be a time limit on completing the task.                                                                                                                                                                                      |

1. Place the following skills on each of the continua below. Think carefully – can you justify why you placed each skill on the continuum?

- Long-distance running
- 100 m sprint
- Rugby conversion
- Baseball pitch
- Batter returning a baseball pitch
- Squash drop shot

a.



b.



c.



2. Using a footballer player as an example, give examples of performance goals and outcome goals that they may set.

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3. For each of the following examples, identify which element of the SMART principle of goal-setting is being used.
- a. A rugby player has been given the goal of recovering from their injury within three months.  
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  - b. A footballer player has been told that they must score at least 80% of the penalties that they take in one season.  
.....
  - c. A gymnast and their coach agree the long-term goals of the athlete, including the level of success they will have over the next two years.  
.....
  - d. An archer, with the goal of reaching the Olympic Games, is given top-of-the-range equipment to practise with.  
.....
  - e. A diver has been told that for the next week they will only focus on their skill of entering the water with minimal splash.  
.....



1. Which **one** of the following is an example of an open skill?

- A. Triple jump ☐
- B. Tennis serve ☐
- C. Badminton serve ☐
- D. Making a rugby tackle ☐

(1 mark)

2. Define a complex skill.

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(1 mark)

3. Using a sporting example, describe how performance goals are used in sport.

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(2 marks)

4. Using examples, describe two elements of the SMART principle of goal-setting.

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(2 marks)

# Unit 6

## Information Processing, Feedback and Guidance

**Learning objective:** To develop your knowledge and understanding of information processing and feedback used in sport

### Knowledge Checklist



|                                                                                                                              | Revised | Understood | What you need to do |
|------------------------------------------------------------------------------------------------------------------------------|---------|------------|---------------------|
| Be able to describe the stages in the information processing model                                                           |         |            |                     |
| Be able to use a sporting example to describe the information processing model                                               |         |            |                     |
| Identify examples of guidance, and evaluate the effectiveness of the guidance with reference to beginners and elite athletes |         |            |                     |
| Be able to describe types of feedback and identify which types of feedback should be used in sporting situations             |         |            |                     |

### Key Terms

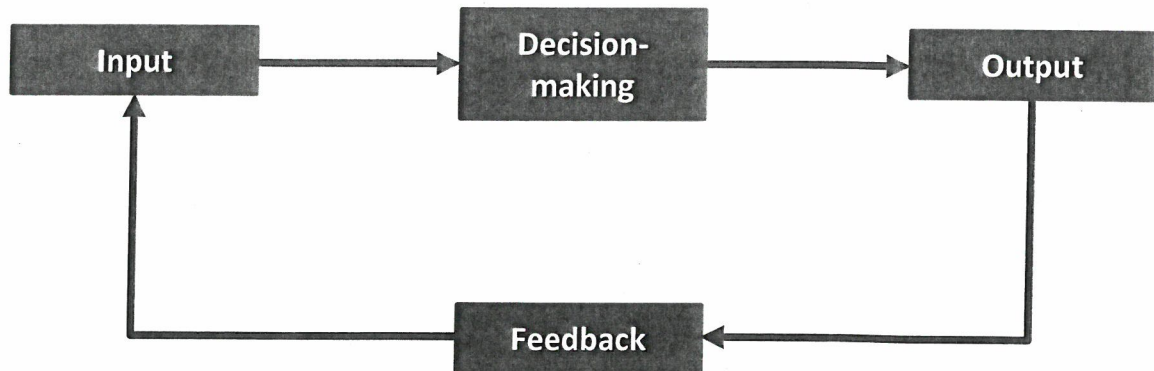


- Information processing model** – model that outlines how decisions are made to respond to a stimulus using a skill
- Intrinsic feedback** – form of feedback that originates from within the individual athlete
- Extrinsic feedback** – form of feedback from sources external to the individual performer
- Selective attention** – the ability of the brain to filter out unimportant cues and focus on the most important ones
- Short-term memory** – information stored in the brain for approximately 30 seconds. The information is lost if it is not attended to.
- Long-term memory** – information stored in the memory that is able to be recalled in the future
- Visual guidance** – a performer observing a coach, video, images or other form of visual cue to watch how a skill should be performed
- Verbal guidance** – the verbal instructions given by a coach or peer to an athlete
- Mechanical guidance** – the use of devices and equipment to aid performance of a skill
- Manual guidance** – the use of physical contact to move and adjust a performer's body and technique
- Knowledge of results** – the outcome of a performance being used to assess success or failure of the performance
- Knowledge of performance** – assessing success of a skill based on the performance of the skill – it is not concerned with the outcome
- Positive feedback** – information given to a performer regarding successful aspects of a performance
- Negative feedback** – information given to the athlete regarding the failure or negative aspects of a performance



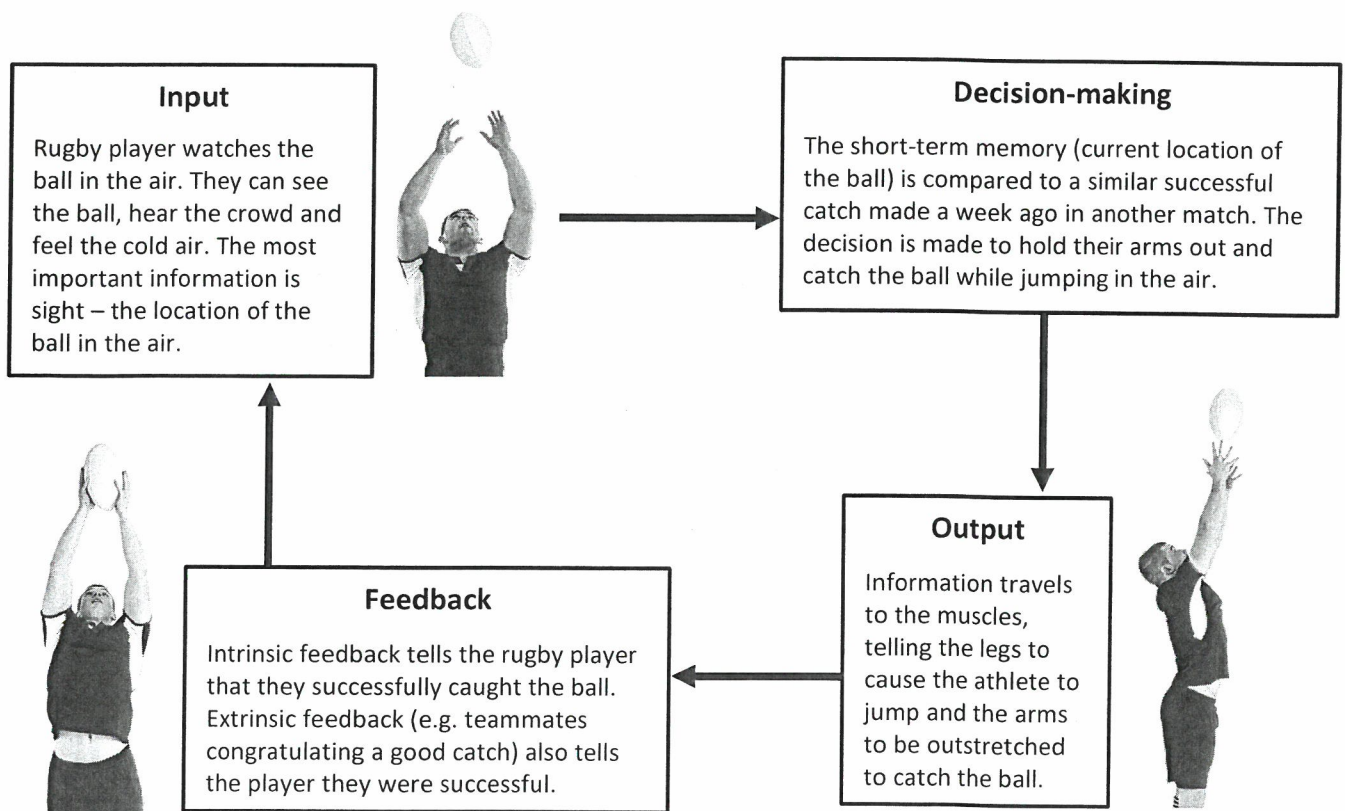
## The Information Processing Model

When taking part in sport, athletes must perform numerous skills appropriate to the situation. To do so, athletes must make decisions. This is called **information processing** – the process of making an informed decision based on the information available to the athlete.



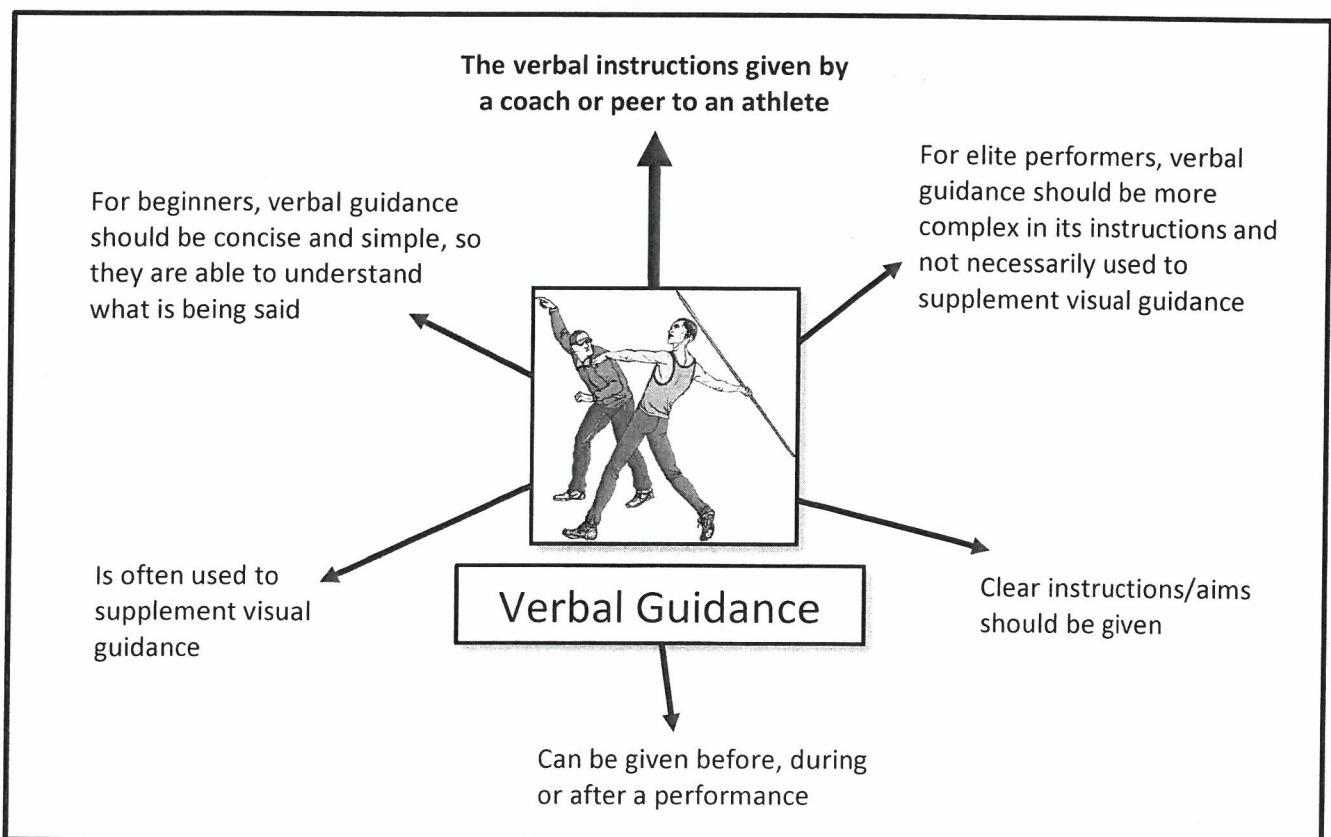
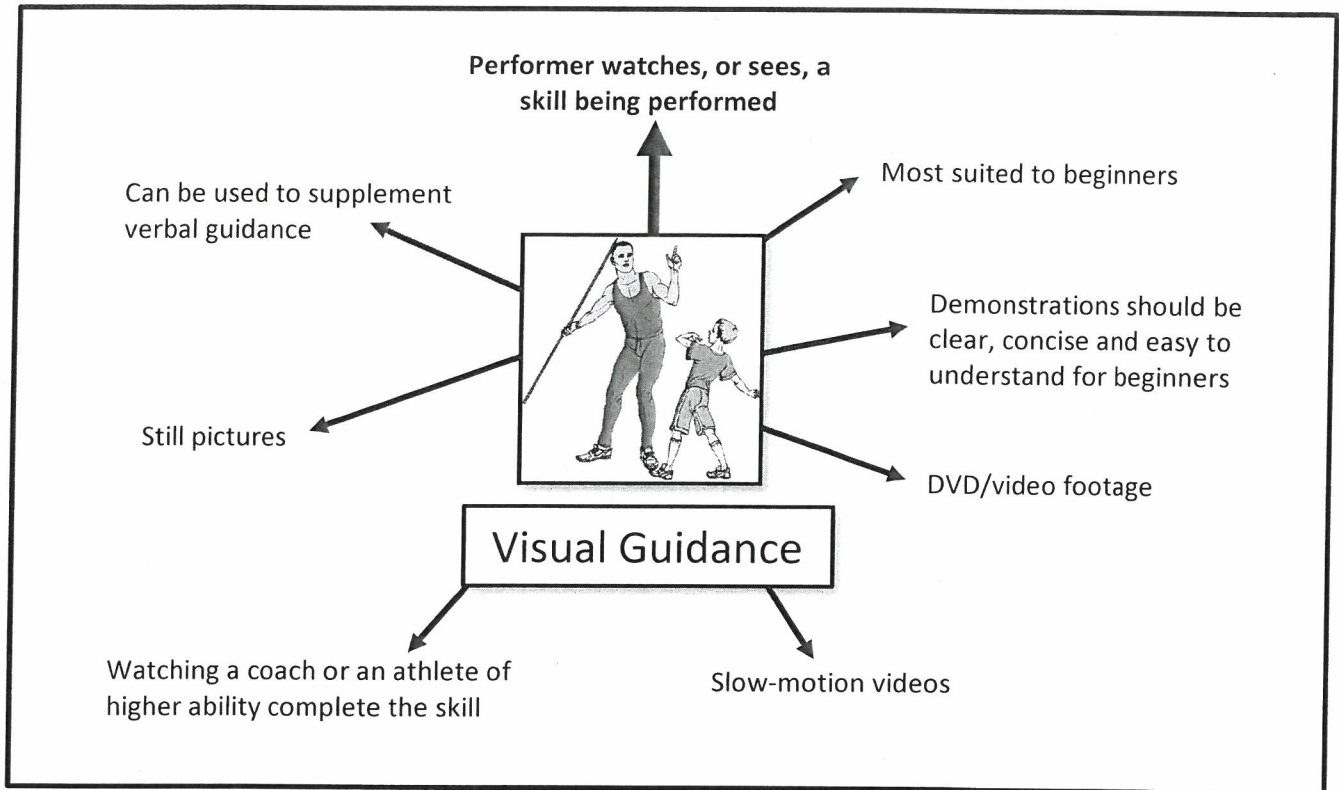
- **Input** – the information received by the senses from the environment. **Selective attention** is used to focus on the most important information.
- **Decision-making** – the performer responds to the information they have received by using previous experiences (memory). The **short-term memory** attends to information from very recently (i.e. the information received by the senses). The **long-term memory** selects an appropriate response to the situation by picking a skill that has previously been learnt.
- **Output** – the appropriate response selected by the long-term memory is sent to the relevant muscles to perform the response.
- **Feedback** – information is received again regarding the success or failure of the skill.

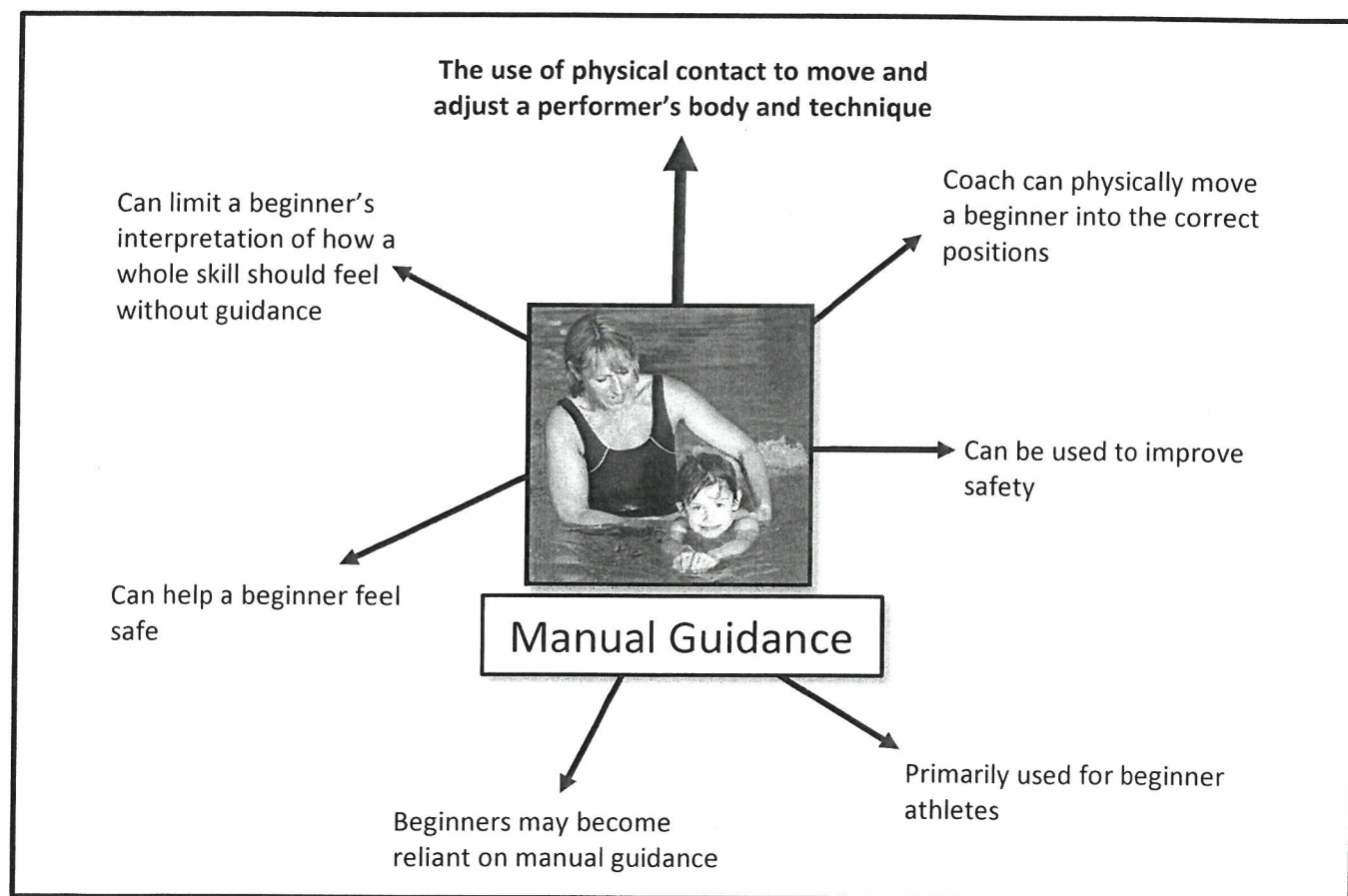
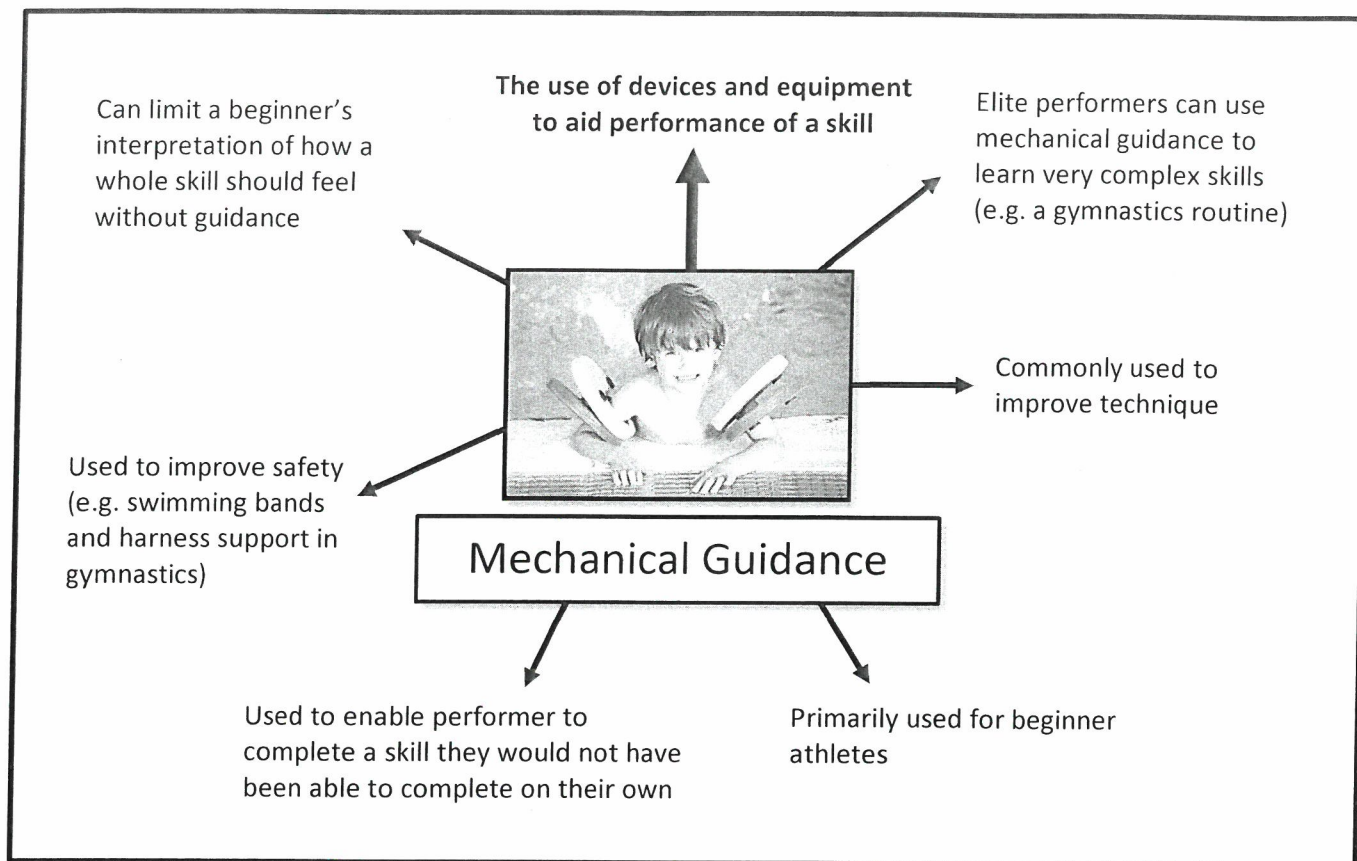
Example: Rugby player catching a ball in a line-out



## Types of Guidance

There are different types of guidance to help sports performers learn or advance their skills. Each type of guidance has specific benefits to different learners which should be considered when a coach or athlete is deciding which type of guidance they require. Throughout most types of guidance, a learner will attend to information and remember guidance better if it is being given by someone considered to be a significant other (e.g. a coach of a higher standard).







## Types of Feedback

Feedback is used by an athlete to judge the level of success of a performance. There are different types of feedback an athlete can use:

- positive
- negative
- knowledge of results
- knowledge of performance
- intrinsic
- extrinsic

| Type of Feedback         | Definition                                                                                           | Example                                                                                 | Use by Beginners                                                                          | Use by Elite Athletes                                                                         |
|--------------------------|------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| Positive                 | Information given to the athlete regarding the success, or successful aspects, of a performance      | A coach telling a swimmer they are performing the breaststroke with a correct technique | Used by both beginners and elite athletes as a source of motivation                       |                                                                                               |
| Negative                 | Information given to the athlete regarding the failure, or negative aspects, of a performance        | A coach telling a rugby player how they are performing a rugby tackle incorrectly       | Used to explain where they went wrong and <i>how to fix it</i>                            | Used as a source of motivation and to set goals                                               |
| Knowledge of results     | Feedback on the success or failure based on the outcome of a performance                             | High jumper knowing they have succeeded or failed based on how high they jumped         | Needed to be given to a beginner so they are aware of whether they were successful or not | Not needed as much because elite athletes tend to know whether they were successful or not    |
| Knowledge of performance | The success or failure in the performance of a skill, irrespective of the outcome of the performance | A swimmer feeling as though they performed with good technique throughout their race    | Used to give feedback on technical aspects of performance                                 | Used to give feedback on technical aspects of performance                                     |
| Intrinsic                | The performer's own interpretation of the success or failure of a skill based on their senses        | A golfer judging how good their shot was based on how the strike of the ball felt       | Limited use by a beginner as they may not know how a skill should 'feel'                  | Used to self-assess performance as they know how a skill should feel when performed correctly |
| Extrinsic                | Feedback that originates from sources external to the performer; for example, a coach                | A gymnastics floor routine being scored by judges                                       | Used a lot by coaches and peers to tell them how they performed                           | Normally comes in the form of scores from judges or spectators                                |



## Revision Activities - Unit 6



1. Draw and correctly label the basic information processing model.

2. Using a sporting example of your choice, explain the stages of the basic information processing model.

Input:

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Decision-making:

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Output:

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Feedback:

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3. Why is selective attention important in the performance of a skill?

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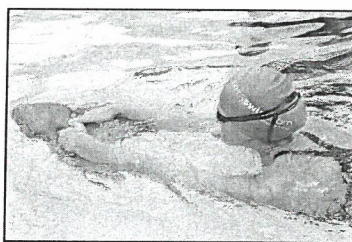
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4. For each of the following scenarios, identify which type of guidance is being used and state whether beginners, elite athletes, or both, would use this type of guidance.

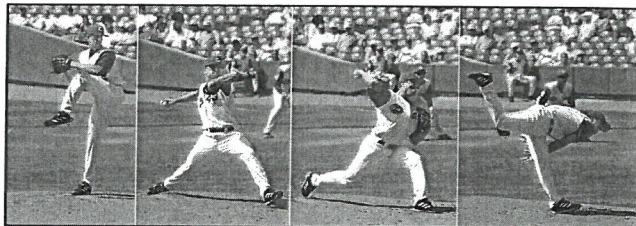
a.



Type of guidance: .....

Athletes that would use this type of guidance: .....

b.



Type of guidance: .....

Athletes that would use this type of guidance: .....

.....





1. Which **one** of the following is **not** a type of visual feedback?
  - A. Video analysis of a somersault ☐
  - B. Watching a coach perform a somersault ☐
  - C. Coach putting a gymnast into the correct position during a somersault ☐
  - D. Watching a somersault in slow-motion ☐

(1 mark)

2. Using a sporting example, describe how selective attention is used to improve performance of a skill.

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(2 marks)

3. Name two types of feedback and explain how they can be used to aid performance in either elite or beginner performers.

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(4 marks)

## Unit 6 Mental Preparation

**Learning objective:** To develop your knowledge and understanding of arousal, aggression, personalities, motivation and mental preparation used to aid performance

### Knowledge Checklist



|                                                                                                                                  | Revised | Understood | What you need to do |
|----------------------------------------------------------------------------------------------------------------------------------|---------|------------|---------------------|
| Be able to explain the Inverted-U theory of arousal and apply it to different sports                                             |         |            |                     |
| Be able to describe different stress management techniques used by athletes in performance                                       |         |            |                     |
| Be able to describe and give examples of direct and indirect aggression                                                          |         |            |                     |
| Be able to describe the characteristics of introverts and extroverts and identify which sports each are likely to participate in |         |            |                     |
| Assess the types of motivation used to aid performance                                                                           |         |            |                     |

### Key Terms

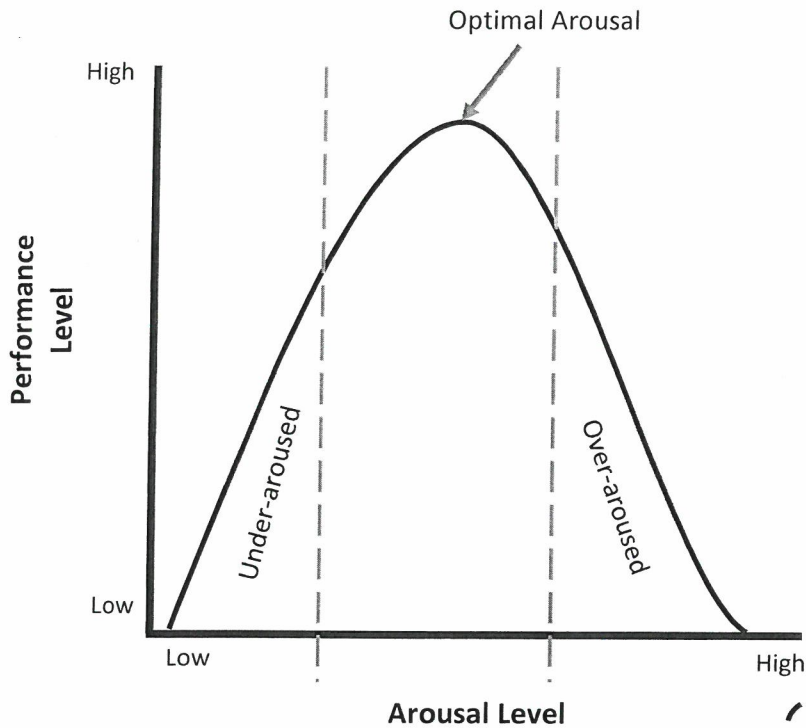


1. **Arousal** – the physical and mental alertness of an individual
2. **Inverted-U theory** – theory that proposes performance will increase as arousal levels increase to a certain point. After this point, any further increase in arousal will cause a gradual decrease in performance levels.
3. **Optimal arousal** – the point at which the level of arousal corresponds to the best possible performance
4. **Stress** – the mental or physical state of a person in response to a specific object or situation
5. **Somatic** – something related to the physical body
6. **Cognitive** – relating to the brain, or thought processes
7. **Mental rehearsal** – stress management technique where you imagine a scenario where a skill is performed perfectly
8. **Positive self-talk** – stress management technique where a performer says or thinks positive statements to motivate themselves
9. **Deep breathing** – stress management technique where a performer concentrates on their deep, exaggerated breathing
10. **Direct aggression** – physical contact between people where there is an intent to harm the other person
11. **Indirect aggression** – aggression aimed towards an object (not a person) where the aim is to intimidate the opponent
12. **Personality** – a combination of an individual's characteristics that make them unique
13. **Introverts** – people who are quiet and prefer their own company to large social situations
14. **Extroverts** – people who are outgoing and enjoy social situations
15. **Intrinsic motivation** – a source of motivation from within a performer
16. **Extrinsic motivation** – sources of motivation from outside the performer
17. **Tangible rewards** – physical or monetary rewards that motivate an individual
18. **Intangible rewards** – non-physical rewards (e.g. praise) that can motivate someone

# Arousal

Arousal refers to the 'readiness' or alertness of the body, both mentally and physically, for a task. It is defined as an increase in mental and physiological readiness in response to a stimulus. It is important for athletes and their coaches to understand arousal: how it occurs, when it occurs and, most importantly, how to control it, to maximise the benefits an athlete can get from arousal.

Inverted-U theory (Yerkes and Dobson, 1908)



The inverted-U theory states that as arousal levels increase, so do performance levels.

However, once arousal reaches a certain level, the athlete will be over-aroused which will have a negative effect on performance.

The amount of arousal that equates to the best possible performance is called 'optimal arousal' of the 'optimal zone'.

When applying the inverted-U theory to sports, remember that optimal arousal levels will vary from person to person. Also consider the amount of arousal needed by performers in particular skills.

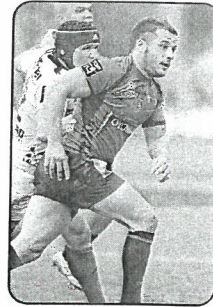
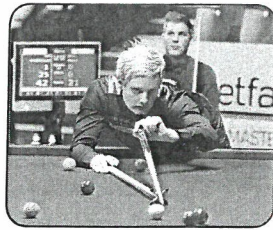
## REVISION TIP!

For the exam, you will need to be able to draw a graph to demonstrate the inverted-U theory. This includes drawing the inverted-U and labelling the axes correctly.

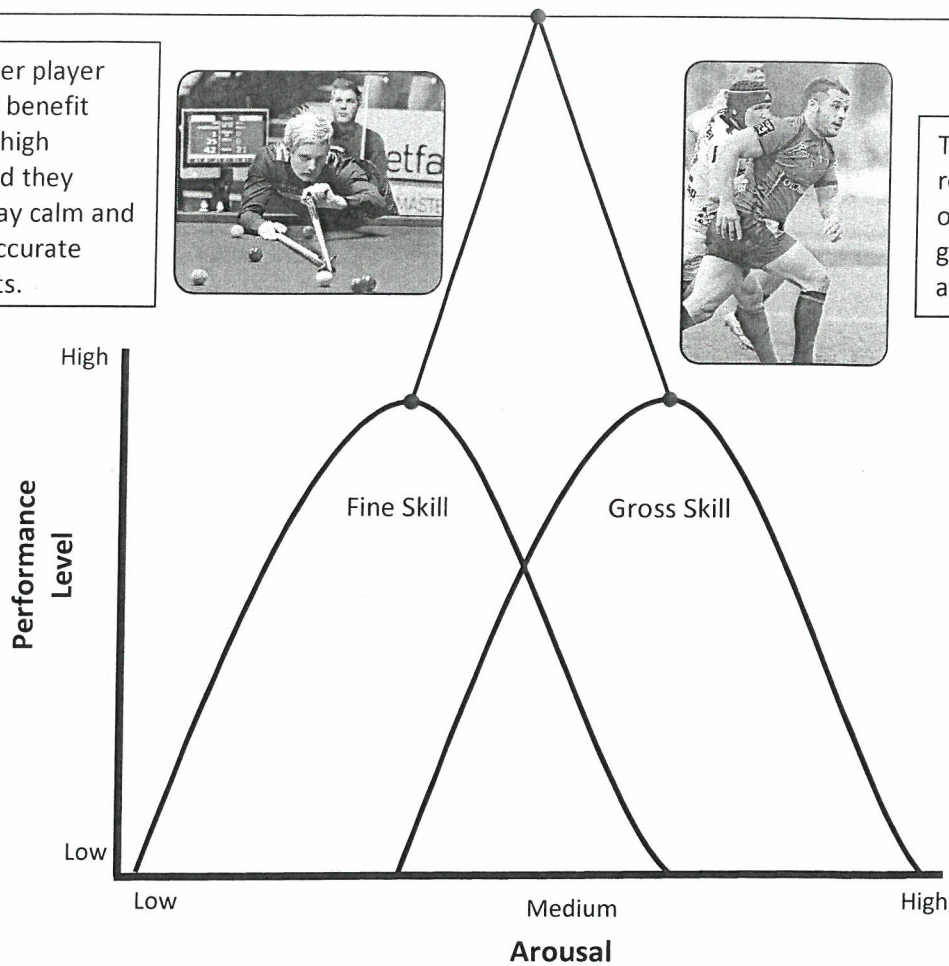


When gross skills (large muscle groups) are being performed, the optimal arousal level will be much higher than the optimal arousal levels for a fine skill (small muscle groups). Consider a snooker player and a rugby player.

The snooker player would not benefit from very high arousal and they need to stay calm and produce accurate movements.



The rugby player would require a higher level of arousal to produce gross movements such as a tackle.

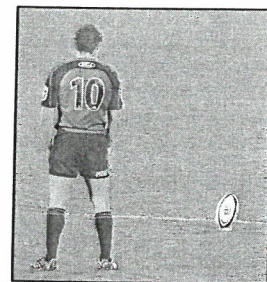


## Stress Management Techniques

In sports, athletes need to control their arousal levels to optimise performance. Having an arousal level too high can have a detrimental effect on performance (inverted-U theory). Athletes can use stress management techniques to control their arousal levels.

### Mental rehearsal (cognitive)

Mental rehearsal is the process of visualising the skill about to take place. The performer will imagine the skill being carried out as they would want it to happen in real life. Mental rehearsal allows the performer to focus on the task in front of them and block out any distractions. A common example is a rugby player taking a conversion or penalty from the tee. You will often see the kicker pause and concentrate on the ball and posts – it is now that they are visualising the perfect kick.



### Positive self-talk (cognitive)

Positive self-talk is a performer telling themselves positive messages or thoughts regarding performance. It normally occurs mentally but can also be when a performer quietly says phrases to themselves out loud. Phrases such as 'come on' and 'you can do this' are common examples.



*This footballer is focusing on their deep breathing before taking their penalty*

### Deep breathing (somatic)

Deep breathing requires the performer to take large, exaggerated breaths before performing a task. This helps to control arousal as the performer's focus is placed on breathing technique and away from the arousing situation.

### REVISION TIP!

To help you remember the stress management techniques in the exam, think of a time when you have been stressed in sport and what you did to combat it.

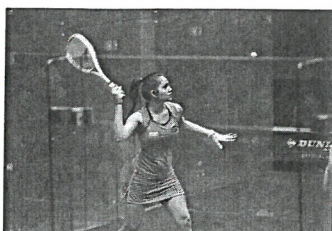
## Aggression

Aggression is intentional behaviour aimed at intimidating or harming others. It can be categorised into either direct aggression or indirect aggression. In sports, the level of aggression needed depends on the situation a performer is in. Think of the aggression needed to make a rugby tackle compared to the aggression needed to perform a dive.

### Direct aggression

Direct aggression is the physical contact between performers. It lies outside the laws of the game and is deliberately intended to harm an opponent.

For example, in football, a two-footed tackle may be deliberately committed to injure an opposing player, forcing them off the field of play.



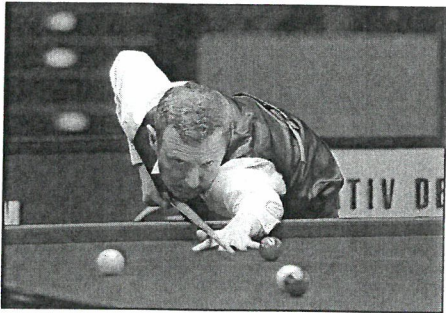
### Indirect aggression

Indirect aggression is aggression aimed towards an object within the laws of the game. Its aim is to intimidate an opponent, lowering their confidence.

For example, in squash, the player may hit the ball as hard and as low as possible, intimidating the opponent as they think they cannot compete with the power of the other player.

## Personality Types

Personality is the combination of many different characteristics that make up an individual. Personality influences who we are and how we act around others. Personality can be split into two groups: introvert and extrovert. Introverts and extroverts require different amounts of arousal to perform well and act differently in social situations.

| Introverts                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Individual Characteristics                                                                                                                                                                           | Sport Characteristics                                                                                                                                                                                                                                                                                           |
| <ul style="list-style-type: none"> <li>• Low arousal suits them</li> <li>• High arousal can cause them to be stressed</li> <li>• Shy</li> <li>• Quiet</li> <li>• Prefer their own company</li> </ul> | <ul style="list-style-type: none"> <li>• Sports that require fine motor skills (snooker, archery, bowls, etc.)</li> <li>• Skills that require high levels of concentration</li> <li>• Normally individual sports</li> </ul>  |

| Extroverts                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Individual Characteristics                                                                                                                                                                                                         | Sport Characteristics                                                                                                                                                                                                                                                                                                                 |
| <ul style="list-style-type: none"> <li>• Prefer high levels of arousal</li> <li>• Lack concentration when under-aroused</li> <li>• Loud</li> <li>• Confrontational</li> <li>• Not scared of failure</li> <li>• Sociable</li> </ul> | <ul style="list-style-type: none"> <li>• Sports that require gross skills (basketball, rugby, football, hockey, etc.)</li> <li>• Team sports (sociable)</li> <li>• High concentration not always required</li> <li>• Fast-paced games</li> </ul>  |



# Motivation

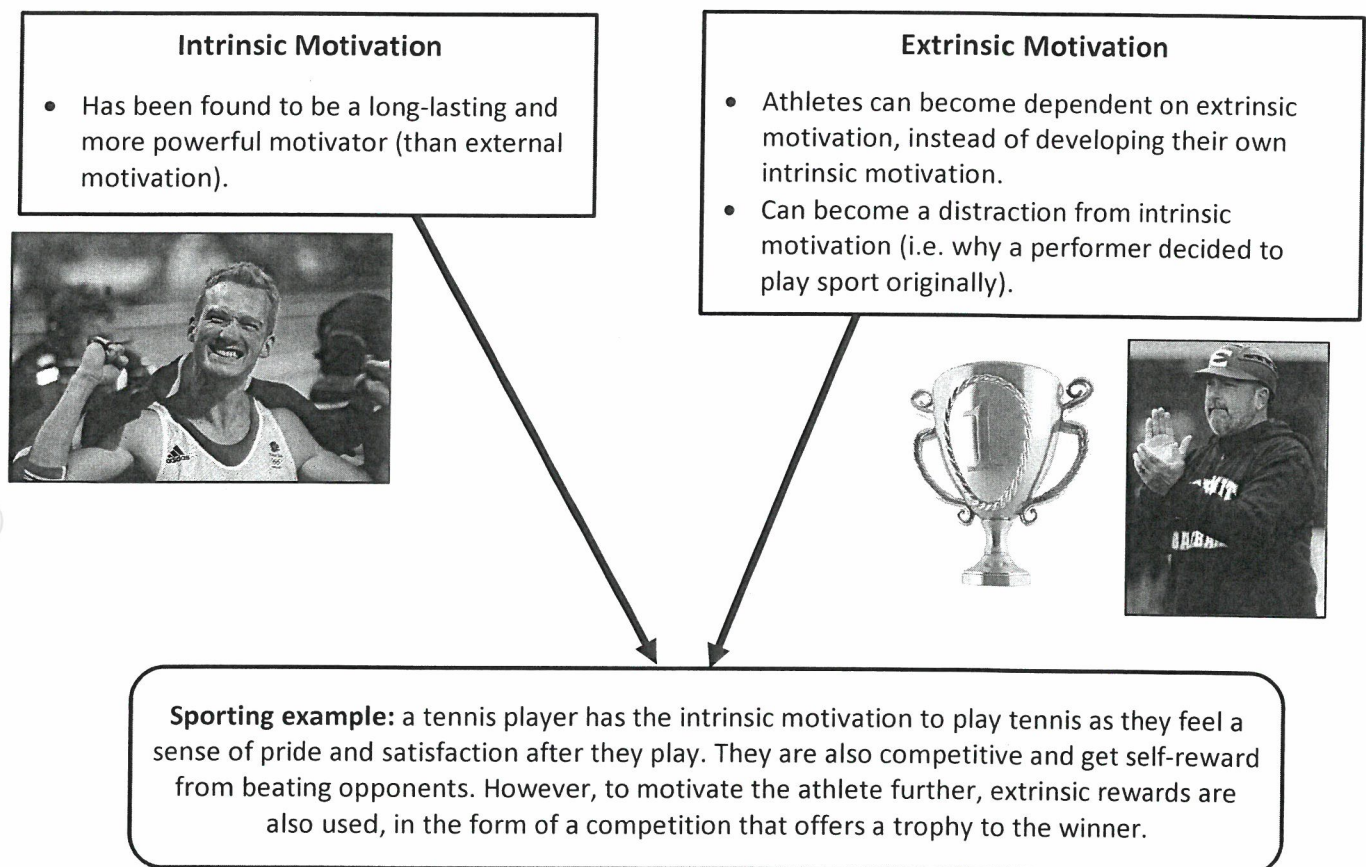
Motivation is the internal drive a person has to achieve a goal. Motivation can be caused by many different factors and these vary from person to person. Motivation can be split into internal motivation and external motivation.

## Intrinsic motivation and extrinsic motivation

- Intrinsic motivation is motivation that originates from within the individual. It is concerned with the individual's perceptions of what they will get out of a good performance: pride, satisfaction, sense of achievement.
- Extrinsic motivation is motivation that originates from sources external to the individual. It consists of rewards that can motivate the individual. Extrinsic motivation sources are either tangible or intangible rewards:
  - Tangible rewards are physical rewards that motivate an individual; for example, money or medals, such as Olympic gold medals.
  - Intangible rewards are non-physical rewards that can motivate someone. They normally consist of positive feedback such as praise from a coach or peers.

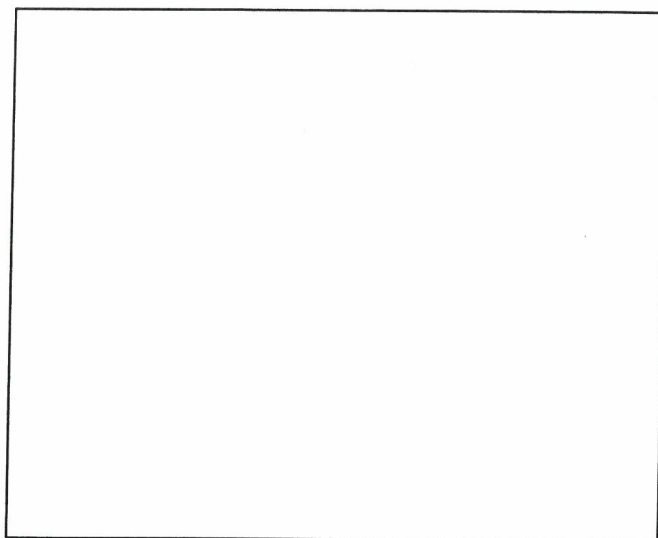
## Using intrinsic motivation and extrinsic motivation

It would be uncommon for an athlete to be motivated solely by either intrinsic or extrinsic motivation. The two types of motivation are usually used together, to maximise motivation of an individual.



## Revision Activities – Unit 6

1. Draw a graph to represent the inverted-U theory. Correctly label the x-axis and the y-axis and draw an arrow identifying the optimal arousal



2. Give two examples of sports that would require low optimal arousal levels.

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3. Give two examples of sports that require higher optimal arousal levels.

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4. Match the following athletes to the most likely personality type the athlete would be.

Olympic diver

Captain of a football team

Golfer

Squash player

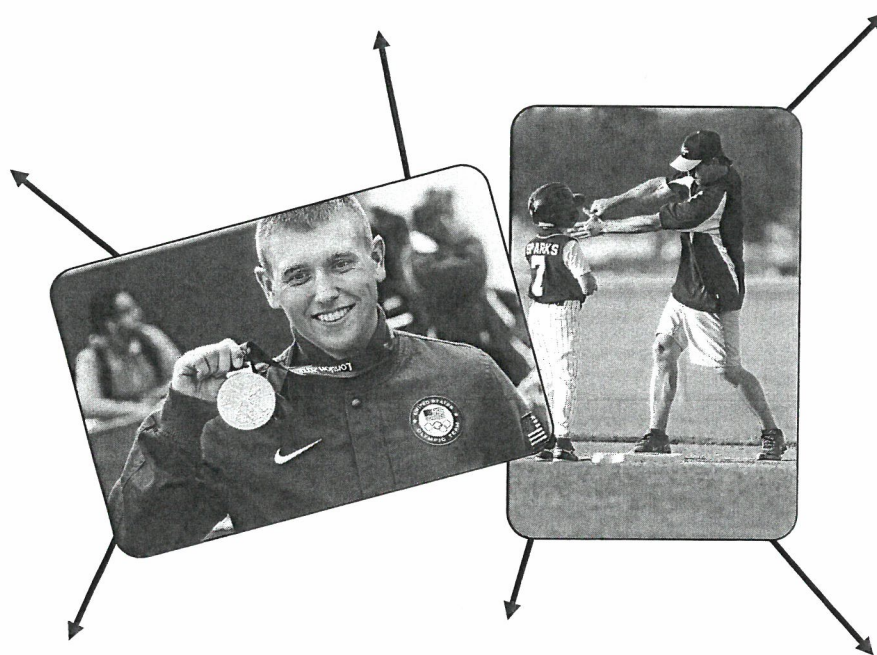
Quarterback in American football

Extrovert

Introvert

5. Identify whether the following forms of aggression are direct or indirect.
- 'In a rugby match today, I purposefully high-tackled an opponent so that they would be injured and have to go off the pitch.'*  
.....
  - 'When I'm defending in hockey, I sometimes purposefully hit an opponent's ankles so that they may have to be substituted.'*  
.....
  - 'In a rugby match, I always try to make the first and hardest tackle of each game.'*  
.....
  - 'I took a football penalty today and scored. I kicked the ball as hard as I possibly could to get into the head of the goalkeeper.'*  
.....
  - 'I was frustrated in a basketball match and pushed an opponent to the ground.'*  
.....

6. Annotate the images below to assess the differences between intrinsic motivation and extrinsic motivation.







1. Which one of the following sports would benefit from high optimal arousal, according to the inverted-U theory?
- A. Archery ☐
  - B. Snooker ☐
  - C. Golf ☐
  - D. Weightlifting ☐

(1 mark)

2. Define 'direct aggression'.

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(1 mark)

3. Using your knowledge of arousal and personality, assess how personality can influence sports participation.

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(6 marks)