



Revision Series 2024

**NCFE L1/2 Technical Award
in Health and Fitness 2024 (VCERT)**

◆ Notes pages ◆



The EverLearner

How to use this revision session and notes

- Complete this document when doing the live or on-demand revision shows.
- The imagery contained in the notes is designed for you to be able to study the key knowledge prior to the live session.
- During the live session, James will guide you through how to use that knowledge in your exam.
- Focus on the skills that James is presenting as much as the content. In most cases, students have a knowledge of the topic but struggle to respond to the command in the question. This is a focus of our revision.
- Complete the notes pages as extensively as possible and, if necessary, return to the show to complete it more than once in order to make the fullest notes possible.
- Have the National Mock Exam to hand and, ideally, your completed, marked version of it.
- Have the **exam infographics** to hand. These will be referred to throughout the show.

My ticklist:

- Notes pages
- Exam infographics
- Exam paper
- Exam mark scheme
- Exam model answers

During the live show, we will cover...

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We will also cover a wide array of exam skills including command terms for shorter and longer answers as well as the extended writing requirements of the paper.

Topic 1: Joint actions

Identify the movement at the joint occurring in these examples:

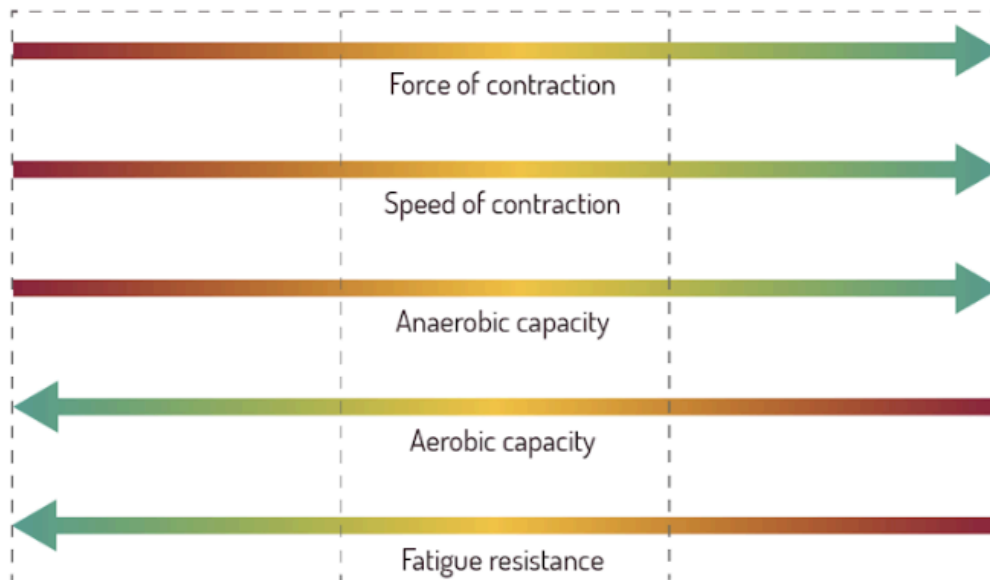
			
Right hip	<hr/> <hr/> <hr/>	<hr/> <hr/> <hr/>	<hr/> <hr/> <hr/>
Right knee	<hr/> <hr/> <hr/>	<hr/> <hr/> <hr/>	<hr/> <hr/> <hr/>
Left elbow	<hr/> <hr/> <hr/>	<hr/> <hr/> <hr/>	<hr/> <hr/> <hr/>
Left shoulder	<hr/> <hr/> <hr/>	<hr/> <hr/> <hr/>	<hr/> <hr/> <hr/>
Right ankle	<hr/> <hr/> <hr/>	<hr/> <hr/> <hr/>	<hr/> <hr/> <hr/>



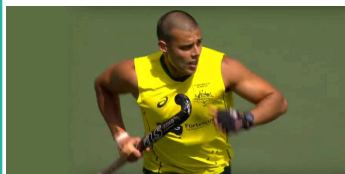
Want to know more?

Watch the FREE tutorial "Joint actions" on [TheEverLearner.com](https://www.theeverlearner.com)

Topic 2: Muscle fibre types



Sprinting with the ball



Off the ball tracking back



Playing the full 70mins

Muscle fibre type	_____	_____	_____
Explanation	_____	_____	_____

6. Identify an activity where type 2B muscle fibres would be most important **and** describe the characteristics of this fibre type that make it so important in the activity.

Activity: _____

Characteristics of 2B fibres: _____

[3]

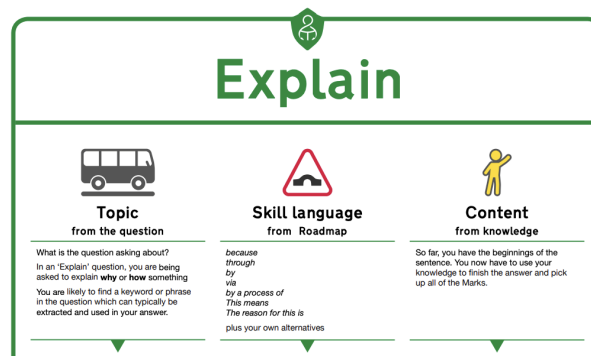
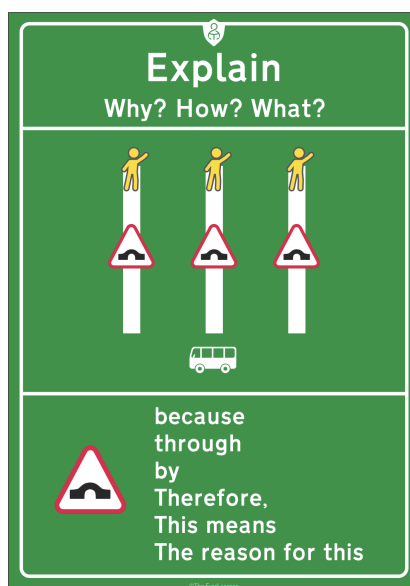
Model answer 1:

A long, cut-out pass in rugby because 2B fibres have a high contractile force for explosive movements and because the pass is short duration and 2B fibres don't have high fatigue resistance.

Model answer 2:

The initial push-off for the 100m sprint start because 2B fibres. This is because type 2B fibres produce very fast contractions and bursts of power. It is a short activity because type 2B fibres tire very quickly.

Identify an activity where type 1 muscle fibres would be most important and explain how the characteristics of this fibre type are important in the activity. (3)



Want to know more?

Watch the FREE tutorial "Muscle fibre types - Characteristics and performance" on [TheEverLearner.com](https://www.theeverlearner.com)

Topic 3: Energy systems

System		Energy release
Aerobic energy system	<ul style="list-style-type: none"> • Oxygen dependant • Low to moderate levels of intensity • Long duration activities, more than one minute • Carbon dioxide and water are by-products 	Glucose + Oxygen \rightarrow Carbon dioxide + Water + Energy
Anaerobic energy system	<ul style="list-style-type: none"> • Non-oxygen dependant • High intensity • Activities lasting less than a minute • Sprinting, jumping, shot-putting • Glucose is not fully broken down • Lactic acid is produced as a waste product 	Glucose \rightarrow Lactic acid + Energy

Performer	When aerobic is relevant	When anaerobic is relevant	Conclusions
Javelin thrower	Very little. Recovery between throws.	To power the approach and throw of the javelin BECAUSE it is short duration and very high intensity.	Javelin throwing is predominantly anaerobic but relies on aerobic energy release for recovery. Suitable training methods would be weights, intervals and plyometrics.
Football midfielder	_____	_____	_____

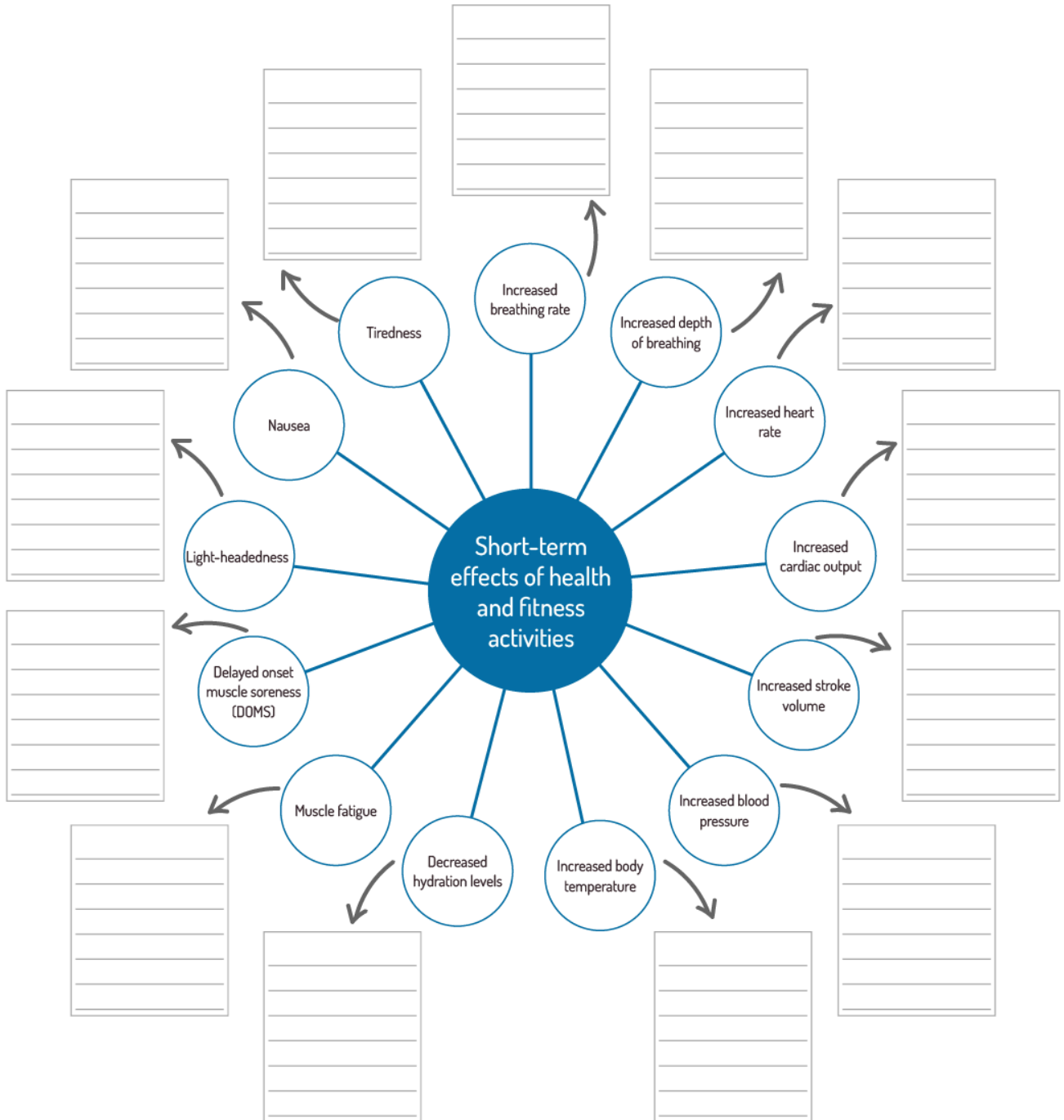
Downhill skier	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
Triathlete	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>
Boxer	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>



Want to know more?

Watch the FREE tutorial "Aerobic and anaerobic energy" on [TheEverLearner.com](https://www.theeverlearner.com)

Topic 4: Short-term effects of health and fitness activities



Immediate effects of exercise	How the effect aids immediate performance
Increased rate and depth of breathing	_____ _____ _____
Increased HR, cardiac output, SV	_____ _____ _____
Increased blood pressure	_____ _____ _____

Immediate effects of exercise	Why does this immediate effect occur?
Decreased hydration levels	_____ _____ _____
Muscle fatigue	_____ _____ _____
Increased body temperature	_____ _____ _____
Light-headedness	_____ _____ _____
Nausea	_____ _____ _____
Tiredness	_____ _____ _____



Want to know more?

Watch the tutorial "Short-term effects of health and fitness activities" on [TheEverLearner.com](https://www.theeverlearner.com) (subscribers only).

Topic 5: Health-related components of fitness

The heptathlon is made up of seven events and will be hotly contested in the Paris Olympics this summer. Below is an example of six of the events and how the health-related components of fitness are required in them.

Shot-put

Event phase	Most important component of fitness required	Justify choice
Throw	Strength	Strength is important because the athlete needs to _____ _____ This will lead to them _____ _____

*Sentence starters could change

800m

Event phase	Most important component of fitness required	Justify choice
The end of the race	Cardiovascular fitness	_____ _____ _____ _____

High jump

Event phase	Most important component of fitness required	Justify choice
Clearing the bar	_____	To be as light as possible in order to clear the bar. Excess weight or fat will require more effort to jump the same height.

100m hurdles

Event phase	Most important component of fitness required	Justify choice
Hurdle action		<hr/> <hr/> <hr/> <hr/> <hr/>

Long jump

Event phase	Most important component of fitness required	Justify choice
Take-off		<hr/> <hr/> <hr/> <hr/> <hr/>
Shape in the air		<hr/> <hr/> <hr/> <hr/> <hr/>

Javelin

Event phase	Most important component of fitness required	Justify choice
Run-up		<hr/> <hr/> <hr/> <hr/> <hr/>

Event phase	Most important component of fitness required	Justify choice
Throw		<hr/> <hr/> <hr/> <hr/>

	Most important component of fitness required	Justify choice
Completing all 7 events over 2 days		<hr/> <hr/> <hr/> <hr/>
Completing 2 throwing and 3 jumping events over 2 days		<hr/> <hr/> <hr/> <hr/>



Want to know more?

Watch the tutorial "Health-related components of fitness" on [TheEverLearner.com](https://www.theeverlearner.com) (subscribers only).

Topic 6: Understanding the principles of training

Principles of training



Principle of training	Description	Application
Specificity	_____	_____
_____	Gradually making it more difficult	_____
_____	Work harder than normal	_____

Principle of training	Description	How to avoid
Reversibility	_____	_____
_____	Decrease in motivation caused by repetition and boredom	_____



Want to know more?

Watch the tutorial "Principles of training" on [TheEverLearner.com](https://www.theeverlearner.com) (subscribers only).




Topic 7: Health-related fitness tests

Components of Fitness - Flexibility	
Definition	The range of motion of your joints
Examples	Hockey goalkeeper shows a wide range of movement in the shoulder by hyperextending to save a slow-moving ball that has already looped over their head and is going into the net.
Sit and Reach test	Remove shoes
	Sit on floor with legs straight out
	Soles of feet on the box
	Reach forward with one hand on top of the other
	Stretch as far as possible
	Hold for two seconds
	No jerking movements
	Distance reached is measured in cm

Components of Fitness - Strength	
Definition	Ability of a muscle to exert force for a short period of time
Examples	Weightlifter begins to raise a world record weight off the ground by applying maximal muscular force to the bar with the upper and lower body.
Grip strength dynamometer test	Hold in dominant hand
	Start with your hand up
	Bring down to side/Squeeze the handle/Lower arm
	No swinging your hand
	Repeat three times
	Record the maximum force reading

Components of Fitness - CV endurance	
Definition	Ability of the heart and lungs to supply oxygen to the working muscles
Examples	Triathlete efficiently delivers oxygen to the gastrocnemius when running in order to work at higher intensities aerobically and prevent OBLA.
Cooper 12-minute run/walk	Run for 12 minutes around a designated course
	Place cones 50m apart
	Measure the distance you cover and calculate your VO2 max
	Compare results against normative data
Harvard Step test	Step up and down on a specific height bench
	Continue for five minutes
	1 step every 2 seconds
	When finished, take your heart rate
	Take heart rate again 2 and 3 minutes after exercise
	Plot a graph/Compare against averages

Components of Fitness - Muscular endurance	
Definition	Ability to use voluntary muscles repeatedly without getting tired
Examples	Olympic rower repeatedly contracts the biceps to flex the elbows and pull against the water without fatiguing meaning they maintain their pace in the crucial last 100m.
Press-up and Sit-up Test	Correct sit-up/press-up technique
	Time for 1 minute
	Count the number of sit-ups/Count the number of press-ups

Sport / Activity	Identify the most appropriate fitness test for each sport/activity (select different ones for each sport)	Explain your choice
	_____	_____ _____ _____
	_____	_____ _____ _____
	_____	_____ _____ _____
	_____	_____ _____ _____

Explain your reasons why the following athletes should change from the suggested fitness test:

Sport / Activity	Suggested fitness test	Alternative suggestion	Justify your choice
Sumo Wrestling	12 min Cooper run	_____	_____ _____ _____
Triathlon	Sit-and-reach	_____	_____ _____ _____
Football	Hand-grip	_____	_____ _____ _____



Want to know more?

Watch the tutorials "CV endurance fitness tests", "Hand-grip dynamometer", "Muscular endurance fitness tests", "Body composition fitness tests" and "Sit-and-reach test" on [TheEverLearner.com](https://www.theeverlearner.com) (subscribers only).

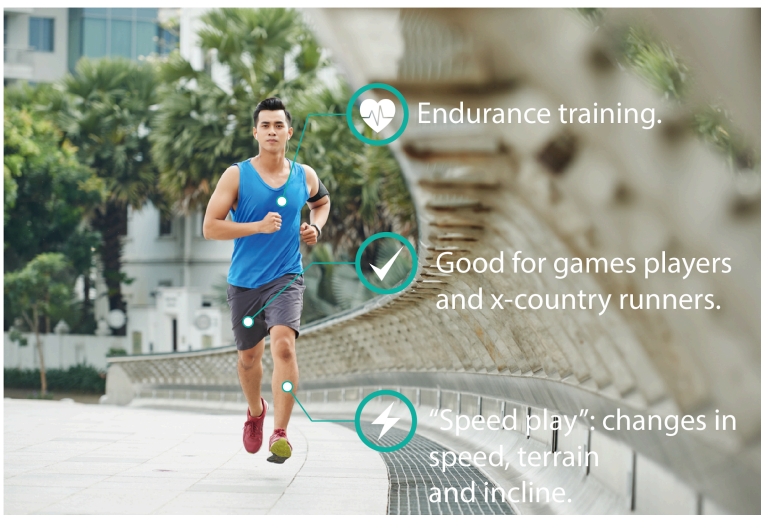
Continuous Training



- Simple
- Cheap
- Intensity accuracy
- All age groups
- Essential

- Monotonous
- Time-consuming
- Weight-bearing
- Overuse injuries
- Can decrease speed

Fartlek Training



- More varied than continuous
- Non-rhythmical
- Different sessions
- More sport-specific
- Does not threaten speed

- More varied locations needed
- Individual requirements-harder for group training

Justify
Give reasons why

I think
 I believe
 The reason for this is
 Since
 Thus
 Because of this

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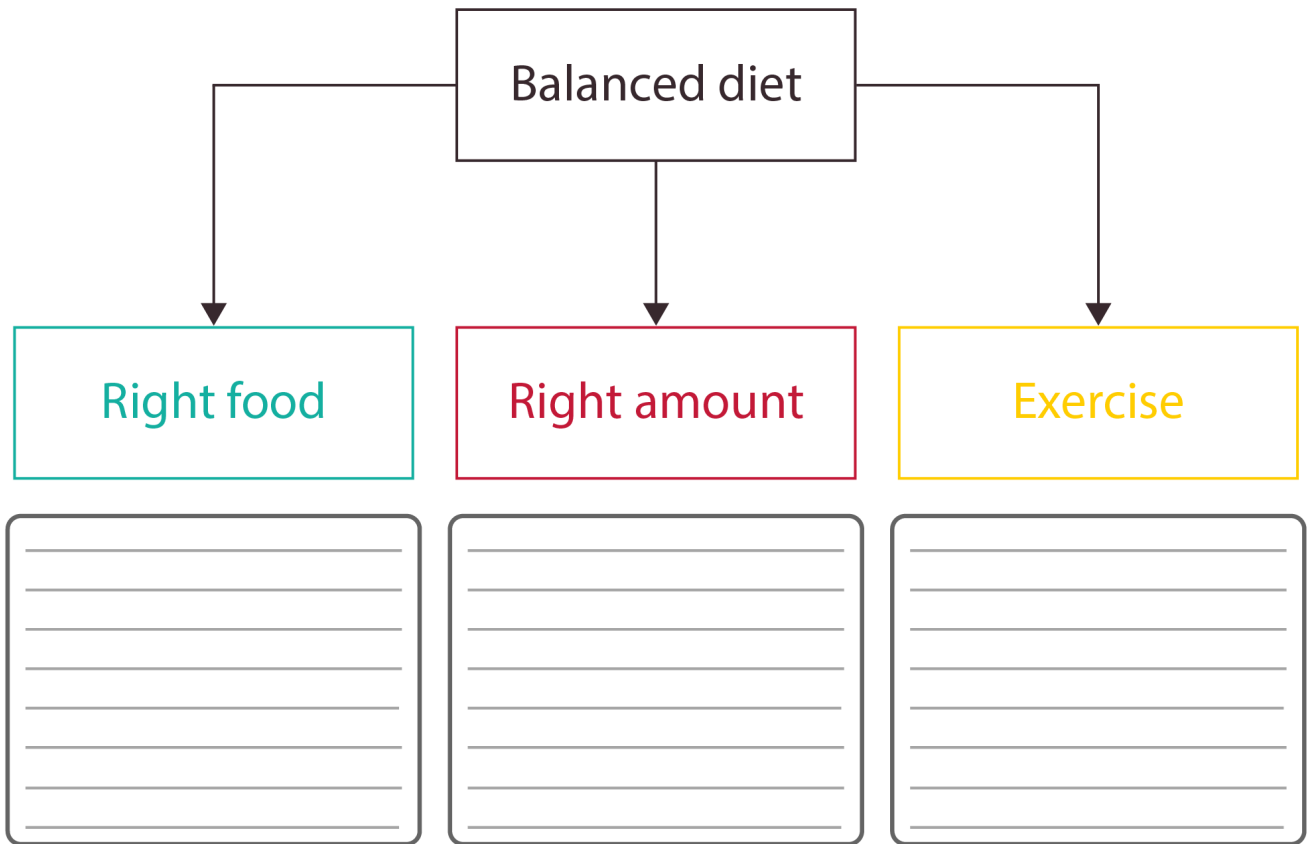
Justify

 Topic <small>from the question</small>	 Skill language <small>from Roadmap</small>	 Content <small>from knowledge</small>
What is the question asking about? In a 'Justify' question, you are often going to be asked to say why something happens or why you hold a certain opinion.	because through by I think this because The reason for this is Since plus your own alternatives	So far, you have the beginnings of the sentence. You now have to use your knowledge to finish the answer and pick up all of the Marks.

Justify the importance of these methods of training to improve the fitness of these athletes:

Method of training	Athlete	Component of fitness	Evaluation
Interval	75m hurdler	<hr/> <hr/> <hr/>	<hr/> <hr/> <hr/> <hr/>
Plyometric	High jumper	<hr/> <hr/> <hr/>	<hr/> <hr/> <hr/> <hr/>
Fartlek	Steeplechaser	<hr/> <hr/> <hr/>	<hr/> <hr/> <hr/> <hr/>
Weight	Shot-putter	<hr/> <hr/> <hr/>	<hr/> <hr/> <hr/> <hr/>
Flexibility	Pole vaulter	<hr/> <hr/> <hr/>	<hr/> <hr/> <hr/> <hr/>

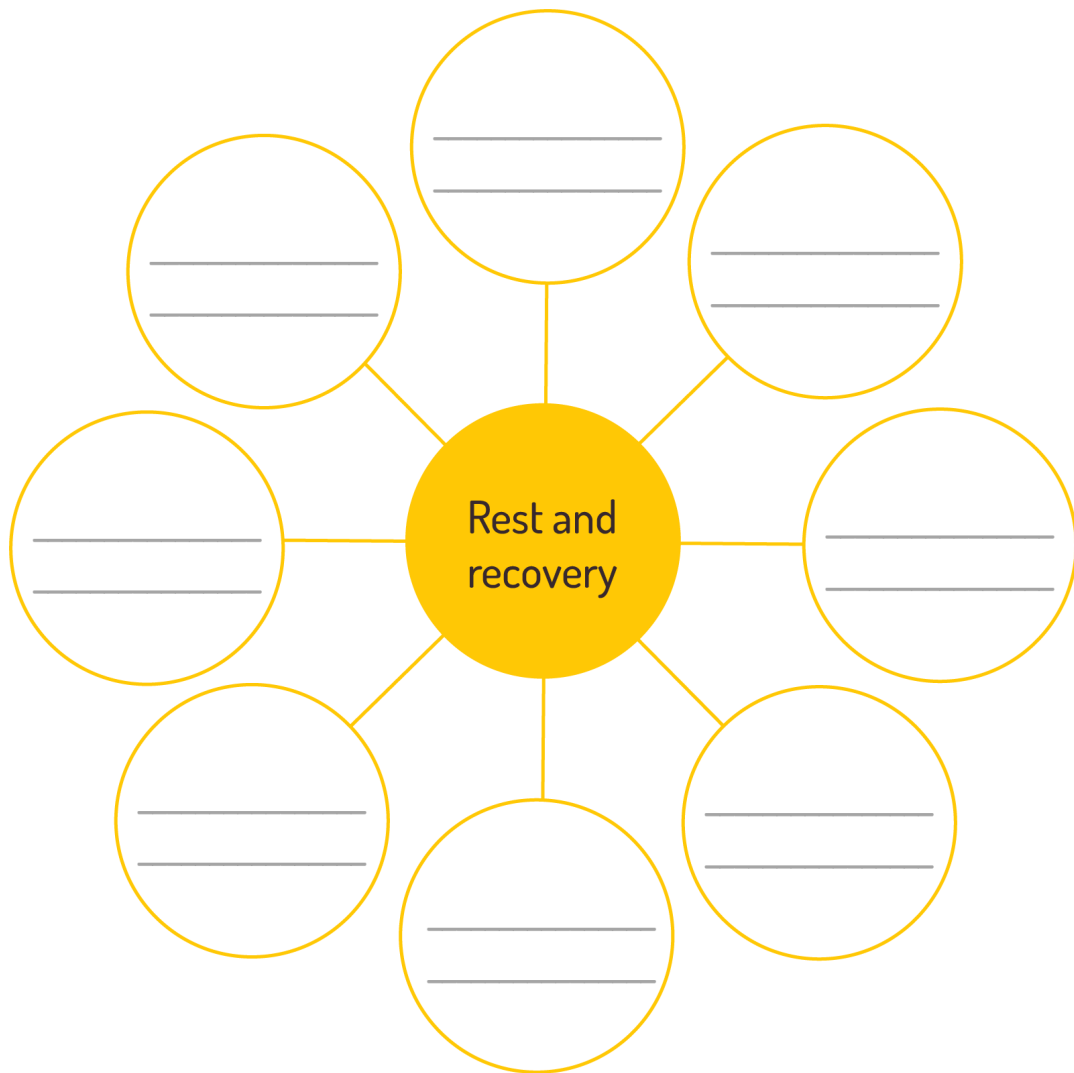
Topic 9: Diet



Want to know more?

Watch the tutorials "Key nutrients - Fat, carbohydrates and protein" and "Key nutrients - Vitamins, minerals, fibre and water" on [TheEverLearner.com](https://www.theeverlearner.com) (subscribers only).

Topic 10: Rest and recovery





	Same or different	Explanation
Sleep	_____	_____
Cool-down	_____	_____
Rehydration	_____	_____
Diet manipulation	_____	_____
Static stretching	_____	_____
Massage	_____	_____
Ice baths	_____	_____



Want to know more?

Watch the tutorial "Methods of rest and recovery" on [TheEverLearner.com](https://www.theeverlearner.com) (subscribers only).