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Activity Icons

Activity icons used in this workbook are as follows:



Theory



Problem



Practical



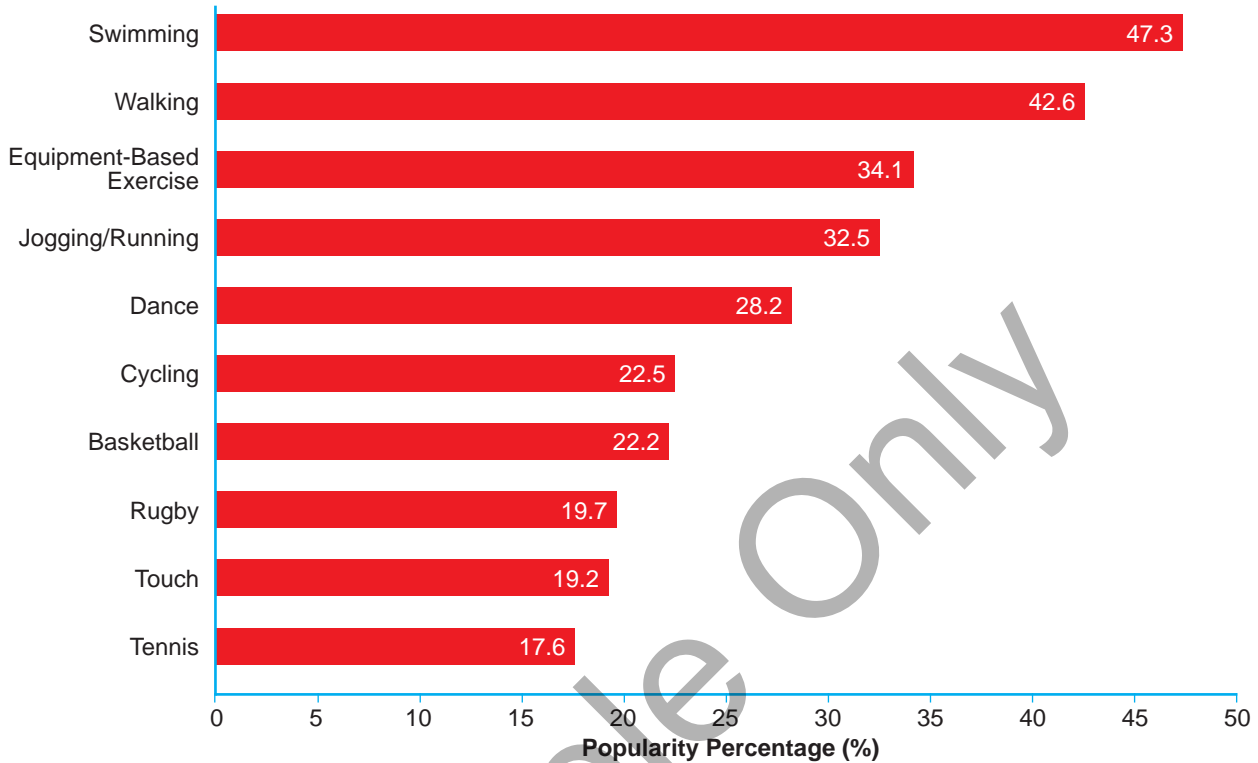
Discussion



Internet
Links

The SPARC 2007/2008 Active New Zealand Survey investigated the 10 most popular sport and recreation activities that young people had participated in over the last 12 months. They found the following:

The 10 Most Popular Physical Activities for 16-24 Year-Olds Participated in Over the Last 12 Months



13. How do your class survey results compare to the SPARC data? Explain the differences.



14. Why do you think most of the activities identified in the SPARC survey are sports?

Clearly, young people are involved in a wide range of physical activities. Irrespective of whether they are sport based or not, all physical activities contribute to improved wellbeing. It is that improved sense of wellbeing that defines the role of physical activity in the lives of young people.



Stability and Balance

Stability or balance is defined as the *ability to hold or maintain a position in space*.

The two key elements in maintaining stability are the **position of the centre of gravity (COG) with respect to the base of support** and the **direction of the forces being applied** to the object or body.

There are a number of basic principles underlying stability in sport.

1. Principle #1

The closer the line of gravity (LOG) is to the centre of the base of support (BOS), the greater the likelihood of maintaining balance.

All segments of the body should have their centre of gravity falling in a line that passes as close as possible to the centre of the base of support. Consider the gymnast to the right. All parts of the body should fall in a line that passes through the base of support rather like a pile of building blocks built up into a tower.



a. Draw in the COG, BOS and LOG for the handstand.

In many sporting situations, this principle is essential. Consider the person doing squats to the left. In order to maintain stability throughout the exercise, the line of gravity passes closely through the centre of the base of support. Even though all body parts are not aligned like the handstand above, the COG is still over the BOS.



b. Why? _____

c. Draw in the COG, BOS and LOG for the squat.

This principle of stability can also be used to explain why the crouch start from the blocks in sprinting is so effective.



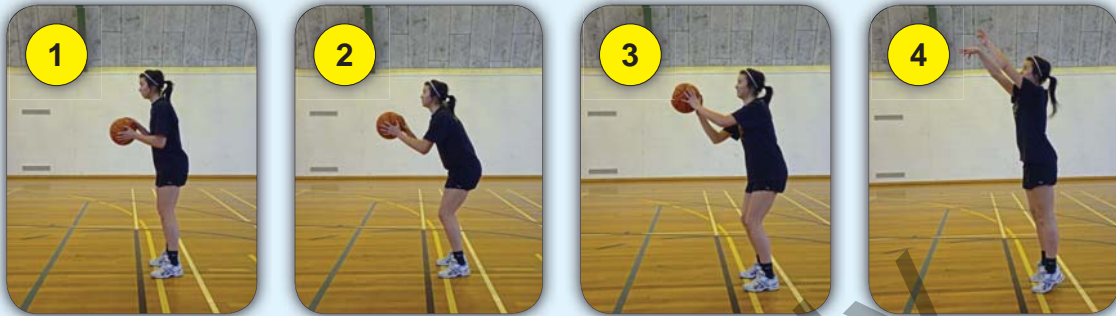
d. Consider how stable sprinters are in the “set” position and use this to explain why the crouch start is so effective in sprinting.



Performance Appraisal

Performance appraisal brings together functional anatomy and biomechanics to explain not only how a skill should be performed but also to explain differences between the performance of someone learning the skills and the ideal performance.

We will bring these together to appraise the performance of a basketball free throw we consider ideal.

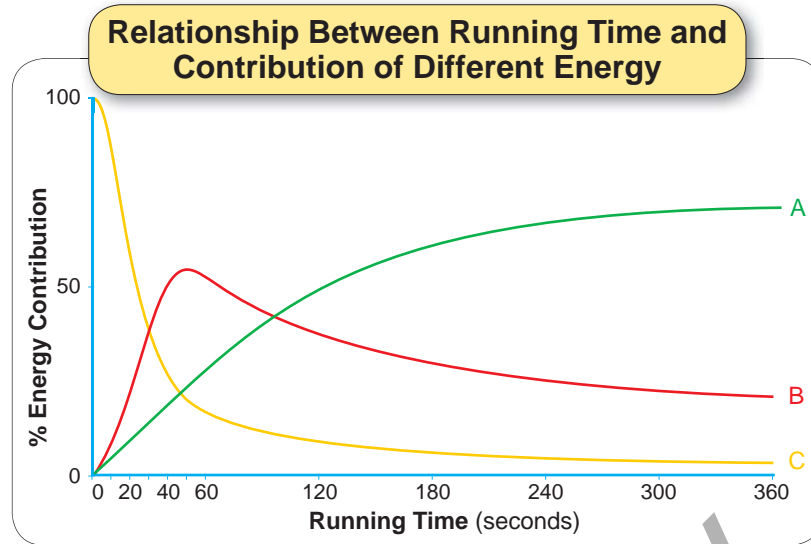


A. Functional Anatomy

Describe how the joints and muscles work together to perform the movements in the basketball set shot. The first one has been done for you.

Joint	Movements/Agonists/Antagonists
knees	From frames 1→3 the player flexes the knees slightly. The agonists are hamstrings and gastrocnemius. The antagonists are the quadriceps group. From frames 3→4 the knees are extended as the shot is executed. The agonists are the quadriceps group and the antagonists are the hamstrings and gastrocnemius.
ankle	
hip	

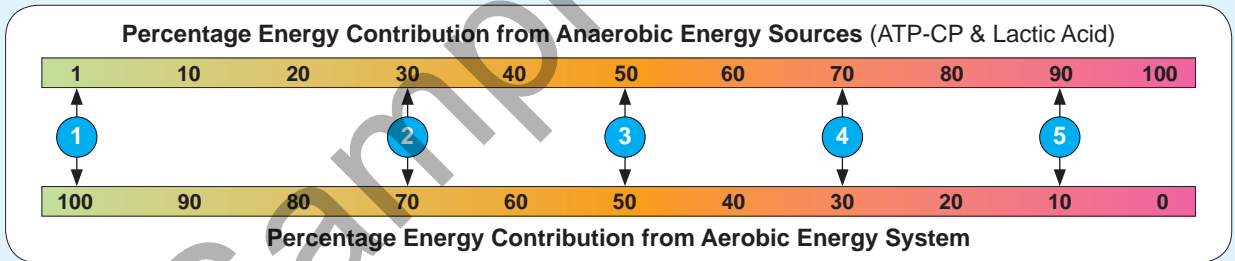
3. The graph below illustrates how the three energy systems work together over time.



Complete the following: Line A = _____
 Line B = _____
 Line C = _____

Different sports use different amounts of each energy system during their performance.

The scale below illustrates the percentage energy contribution from aerobic and anaerobic sources for five activities.



4. Using the scale above, identify on the table which activity belong to which place on the continuum and explain why.

Activity	Placement	Justification
soccer/hockey		
swimming 1500 m		
tennis		
sleeping		
athletic field events		

3. Muscular Endurance

While muscular strength is the maximum force that can be generated in a single contraction, muscular endurance is a product of being able to repeatedly contract muscle in order to continue producing force, e.g. running, carrying objects, etc. Muscular endurance is very important for people playing sports and who have to sustain an activity for long periods of time. Muscular endurance is a result of how well slow twitch muscle fibres are developed. Improving muscular endurance does not have to involve weight training. The best way to enhance muscular endurance is any cardiorespiratory activity such as running, cycling, swimming, etc.



- a. Why is muscular endurance a measure of slow twitch muscle fibre development rather than fast twitch?

- b. Why is muscular endurance best developed by doing cardiorespiratory activities?



Practical Activity – Abdominal Curl Test

- Set a metronome for 50 beats per minute. This represents 25 curl-ups.
- The sequence for curl-ups will be up on one beat, down on the next.
- The curl-ups are done on the back with the knees bent at 90°, the hands beside your ears and the elbows pointing forwards.
- Elbows touch thighs on one beat and the shoulder blades touch the floor on the next beat.
- Continue until you cannot keep up with the beats on the metronome. Hands come in front of the ears, elbows do not touch thighs, feet come off the floor (as in illustration) or the bottom comes off the floor.



Number of curl-ups completed = _____ Fitness category = _____

Category	Females	Males
excellent	>25	>32
good	25-20	32-25
average	19-11	24-19
fair	10-6	18-10
poor	<6	<10



Thinking Critically

Critical thinking is about being open-minded. You may have firm views and ideas surrounding a topic but it is important to listen to the ideas of others and take them on board. This allows you to consider more than one point of view. Put their view up against your own and see how your view changes. Who is making the better argument? On what basis are they making the better argument? In effect, you are having a debate with yourself and trying to come to a conclusion.



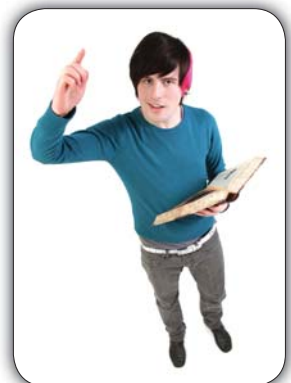
Critical thinking is not about looking to pick holes in an argument for the sake of it. It is not about thinking negatively. It is supposed to be a process whereby an individual evaluates the claims, beliefs and assumptions of another person, group or organisation. The word 'individual' is very important. It suggests that no two people will come to the same view having looked critically at a piece of work for example. This is because we each bring our own values, feelings and emotions. Therefore there is no single best 'answer' when having to produce a piece of work.

Critical thinking is not finding faults or errors in an argument without reasoning. This means if we refute an idea or assumption, we must do so on the basis of sound evidence and not simply say, "It's wrong because I don't believe it". We should be asking ourselves, "Why don't I believe it".

If we do not think critically about information presented to us, we tend to simply accept what is reported in the media, the content of advertisements, the statements of politicians or what large corporations and businesses tell us.

A person who thinks critically is prepared to look at all sides of the story by trying to see the situation from another person's perspective. They are prepared to listen to and tolerate the views of others. From this they form their own beliefs as regards a situation.

1. Why is it important to hear/read/gather information and ideas from a variety of sources when thinking critically about a topic?



2. Why is it also important to critically evaluate the sources of information we are using when gathering information?



Communication Essentials

In any leadership situation, good communication is the essence of getting things done. Good communicators know what they want to say, how to say it given the group they are with and why they need to get the message across in the first place. A breakdown in communication can put the coach-athlete relationship and long terms goals in jeopardy.

Effective communication can be summarised as the '6 C's' – **concise, clear, constructive, correct, complete and courteous.**



A. Concise

To be **concise** means to keep the message to the point without giving unnecessary extra information.

Why is this important in coaching?

B. Clear

To be **clear** means make sure the information is understood by those getting the message.

Why is this important in coaching and how can we check that people have understood the message?

C. Constructive

To be **constructive** means being positive in the delivery of the message and not being personally critical.

Why is this important in coaching?
