THE Ebbsfleet ACADEMY
Aspire, Excel

Exercise Intensity

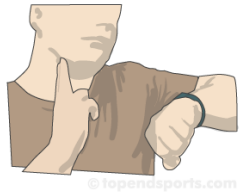
Subject: BTEC
Year: 9
Term: 1b
Topic: Unit 1

Knowledge Sequence
Heart Rate
The Borg scale
Training zones

Key Assessments

Core Texts
BTEC sport First Award – Pearson text
Revise BTEC sport – Revision Guide
Revise BTEC sport – Revision Workbook

Heart rate (HR)	The number of heartbeats per unit of time (usually in minutes). Normally measured in Beats per minute (BPM).
Resting HR	Your bodies BPM when at rest.
Maximum HR	Your bodies maximum BPM.



Radial Artery (Wrist) / Carotid Artery (Neck)

Two most common places to measure your HR (never put your hand to your chest)

You can work out an individual's Max HR with a basic sum….

HRmax = 220 – age (years).

A 15 year olds maximum HR is…

220 – 15 = 205 bpm

Remember this is a safe Max HR. the body can go above this in extreme circumstances.

Why is measuring HR important? Athletes will measure there HR to indicate how hard they are working. If an athlete wants to improve they will generally have to work at a high intensity. Using HR is a more scientific way of measuring at what intensity an athlete is working,

Training Zones

In order to improve certain components of fitness you will need to work within a specific 'Training zone' in order to see the best improvements. Training zones rely on using your HR to work out where you are training.

Training Zones

0-50% = Warm-up/cool down zone

50-60% = Fat burning zone

60-85% = Aerobic (aerobic endurance) training zone

85-100% = Anaerobic (speed/power) training zone

A healthy 20 year old wants to find out their lower and upper heart rate training zones to improve cardiovascular endurance. (4)

Stage 1: Work out the performers MaxHR
Stage 2: Work out the performer's lower training threshold (60% of maxHR)
Stage 3: Work out the performer's upper training threshold (80% of maxHR)
Stage 4: Summarise findings

6	No exertion
7	
8	
9	
10	
11	Light
12	
13	Somewhat hard
14	
15	Hard (heavy)
16	
17	Very hard
18	
19	
20	Maximal exertion

The BORG (RPE) Scale

RPE = **R**ate of **P**erceived **E**xertion

Exertion means 'working hard during exercise' therefore RPE is asking you how hard you think you are working.

RPE can also be used as a rough guide to predict HR.

RPE X 10 = HR