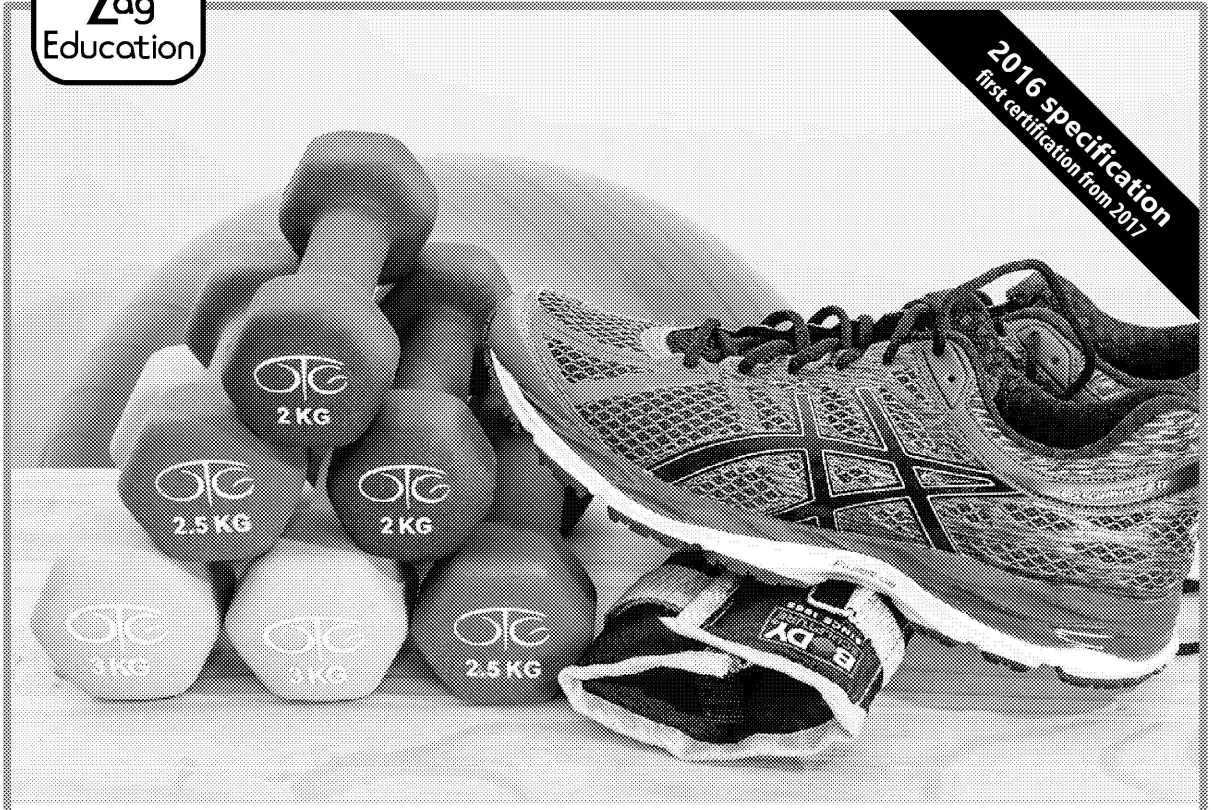
Zig Zag Education

Sport Pearson BTEC | Level 3 Nationals

2016 specification
first certification from 2017



Activity Pack
for BTEC Nationals in Sport

Unit 2: Fitness Training and Programming for Health, Sport and Well-being

For Pearson BTEC Level 3 National:
Extended Certificate in Sport (601/7218/6)
Foundation Diploma in Sport (601/7220/4)
National Diploma in Sport (603/0460/1)
National Extended Diploma in Sport (603/0459/5)
National Diploma in Fitness Services (601/7215/0)

zigzageducation.co.uk

POD 8558

Contents

Teacher's Introduction

This pack provides activities which can be used to test and aid the learning of information that is delivered in Unit 2 of BTEC Nationals (Level 3) in Sport.

The resource follows the specification in the order provided. The activity cross-reference table provided at the beginning of the resource is a useful tool for locating the specification points covered in each activity, the activity title and the type of activity that is used.

Remember!
Always check the exam board website for new information, including changes to the specification and sample assessment material.

A range of activities are used in this pack which are designed to be completed individually, in pairs and in large groups or class groups, as well as activities which are designed to be completed during practical classes. The type of activity can be identified by the icon in the top right-hand corner of each activity:

 = individual activity

 = pairs activity

 = group activity

Note that some activities are suitable for varying numbers of participants. This information can be found in the activity cross-reference table.

These activities are designed to be completed by the students with little input from the teacher required. However, where relevant, teacher's instructions have been provided in order to aid the delivery of the activity.

July 2018

Specification Reference Tab

Activity No.	Specification Reference		Title	Additi
1	A1	Exercise and Physical Activity / Positive Risk-taking Activities	[illegible] A	Any suita equipme exercise
2	A1	Balanced Diets	Fill Your Plate	
3	A1	[illegible] Diet Strategies	Nutritional Expert	
4	A1	Government Recommendations	Report	
5	A1	Positive Lifestyle Factors and Their Effect on Health and Well-being	Keywords	
6	A2	Negative Lifestyle Factors and Their Effects	Newspaper Report	
7	A3	Lifestyle Modification Techniques	Overcoming Barriers	
8	B1	Screening Processes for Training	PAR-Q	
9	B2	Health Monitoring Tests	Test It!	• Blood moni • Stopw • Scale • Tape • Calcu
10	[illegible]	[illegible]preting the Results of Health Monitoring Tests	Interpreting Data	
11	C1	Nutritional Terminology	Crossword	
12	C2	Components of a Balanced Diet	Greedy Chops	Scissors
13	C3	Adapting Diets	Poster	
14	C3	Ergogenic Aids	Convince Me!	
15	D1	Components of Physical Fitness to be Trained	Be a Star for the Day	• Cone • Free • Exerc
16	D1.1	Skill-related Fitness Components	Match up	
17	D2	Training Methods for Physical Fitness-relat[illegible] Components	[illegible]aluate and Train	Scissors
18	[illegible]	[illegible] Endurance Training Methods	AerO$_2$bic Stations	Any suita equipme e.g. cone free weig
19	D2.2 + D2.3	Muscular Strength and Endurance Training Methods	Working Your Way up	

Activity No.	Specification Reference		Title	Additi
20	D2.4 + D2.5	Core Stability and Flexibility Training	Plan and Implement	
21	D2.6 + D3.1	Speed and Agility Training Methods	Pl[illegible]nd I[illegible]lement	
22	D3.2 + D3.3	Balance and C[illegible]on Train[illegible]as	Match-up	
23	D3.4	Reaction Time Training Methods	On Your Marks, Get Set...	• React ball • Whis • Cone • Ruler
24	D3.5	Power Training Methods	Email	
25	E1	Principles of Fitness Training Programmes – Goals	Be SMART	
26	E1	Principles of Fitness Training Programmes – FITT	Plan It!	
27	E1	Principles of Fitness Training Programmes – Additional Principles	Case Studies	
28	E1	Principles of Fitness Training Programme Design – Periodisation:	[illegible]et [illegible]et a Date	

Exercise and Physical Activity / Positive Risk-taking Activities: *Q a*

1. Set up a circuit of different activities that each have a different focus on hea
psychological). Some examples of activities are given below.

The mini-activity areas could involve the following:

- a walking group
- a four-a-side basketball game
- a yoga [illegible]p
- [illegible] group

2. In small groups, pick a sta[illegible] to t[illegible]at around the hall. Work your way aro
each activity for fi[illegible].

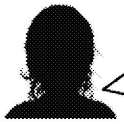
3. You wi[illegible]ree different activities that are set up around the sports hall b
your exercise sessions, complete the questions, providing brief notes to ans

If you were trying to convince your friend to take part in this form
what **physical benefits** would you tell them about?

✓	Activity 1	Activity 2	Ac

ps[illegible] was going to prescribe this form of exercise for the
t **psychological benefits** could the patient hope to see?

✓	Activity 1	Activity 2	Ac

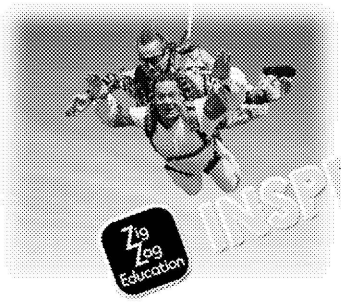


Many people take part in exercise f[illegible]e[illegible]cial **benefits**. What so
are you getting from takin[illegible] this exercise?

✓	Activity 1	Activity 2	Ac

Imagine more people took part in physical activity across the natio
benefits would this have to the economy and workforce?

Some people like to participate in risk-taking activities such as rock
scuba diving or bungee jumping. What benefits could people expe
experience by participating in these activities?



Balanced Diets: *Fill Your Plate*

Teacher Notes:

Cut out the food types below and place them on a table, acting as the 'food bank' this page more than once, if you have a larger class size. Following each scenario desired food sources from the 'food bank', to give a visual representation of the m scenario. For example, if a total of 10 cards are collect[illegible]d the students want t carbohydrates, they will pick five carbohydrate cards to provide the following scena

1. An average balanced diet for [illegible]en and women
2. A woman who is taki[illegible] heavy-weight-training session
3. A man [illegible] part in a long-distance running event
4. An obe[illegible] who has started going to the gym to lose weight
5. A boxer, looking to increase their weight, in preparation for a weigh-in

If desired, a scoring system can be implemented by giving 10, 5 and 3 points to th accurate teams respectively.

Carbs	Potatoes	Brown rice	White pasta	Bread	Parsnips
	Porridge	Barley groats	Cornmeal	[illegible]nas	Couscous
Protein	[illegible]s	Chicken breast	Whey protein	Milk	Lean pork
Vitamins and Minerals	Oranges (Vit. C)	Leafy green vegetables (Folic acid)	Lentils (Iron)	Oily fish (Vit. D)	Carrots (Vit. A)
	Cheese (Calcium)	Lean red meat (Iron)	Yeast extract (B-12)	Nuts (Potassium)	Processed ham (Sodium)
Fibre	Wholegrain rice	Nuts	Dri[illegible] fruit	Bran cereal	Kidney beans
Fats	[illegible]se	Avocado	Egg yolk	Salmon (oily fish)	Olive oil

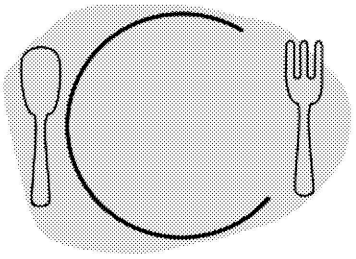
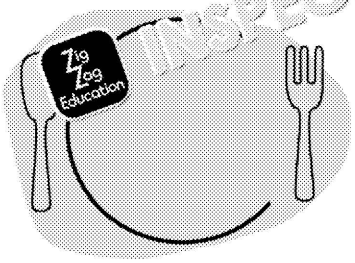
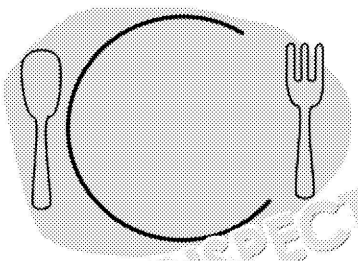
Balanced Diets: *Fill Your Plate*

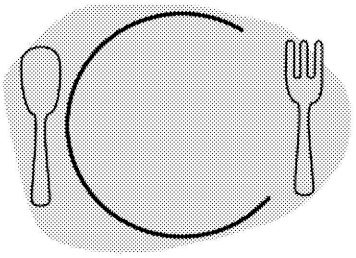
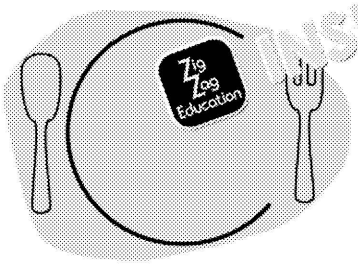
1. Your teacher will give you a particular scenario. For each scenario, spend tw
what types of food sources are required by that individual, and in what quan

2. At the end of the two minutes, take it in turns to visit the 'food bank', collec
your hoop (but don't be greedy, only take one ite d at a time!). Onc
write down on the plate below how much yo or each and explain you
as a representation of the diet e requires (e.g. if the scenario re
carbohydrates, then pick carbohydrate cards out of a possible 10).

3. After e nas been completed, draw the breakdown of the diet yo created on the worksheet and explain to the class why you chose the plate for the scenario.

T
re
h

Scenario 1: ..... 	**Why is this plate appropriate for t** ....
Scenario 2: ..... 	**Why is this plate appropriate for t** ....
Scenario 3: ..... 	**Why is this plate appropriate for t** ....

Scenario 4: ..... 	**Why is this plate appropriate for the scenario?** ....
Scenario 5: ..... 	**Why is this plate appropriate for the scenario?** ....

Balanced Diet Strategies: *Nutritional Expert*

1. Working in groups of three, act as healthcare specialists who need to point o balanced diet to three individuals and provide guidance to them on the nutri adopt.

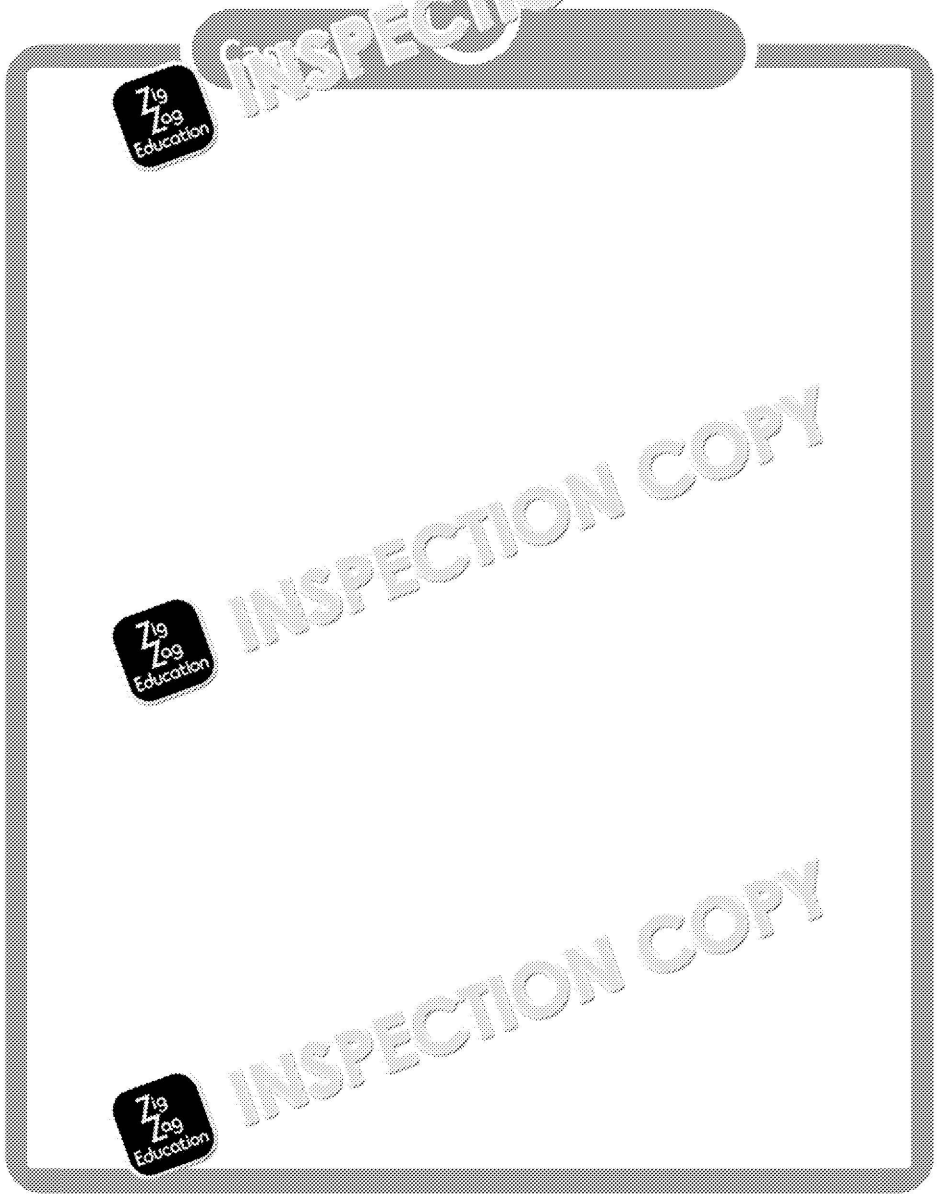
2. Each of you will need to choose one of the following individuals:

Case 1	Case 2
An old-age person with osteoporosis	An obese adult with hypertension and high cholesterol

3. Team up with other members of the class who have chosen the same case a about the following:
   - how a balanced diet can improve health
   - the importance of fluid intake and fluid intake recommendations
   - the strategies the individual should adopt to improve their dietary intak

Case 1

4. Now return to your original group of three and take it in turns to explain the information that you found during your research, take notes about the important information in the spaces below.



Government Recommendations: *Report*

Working individually, research the current UK Government guidelines for maintai
Research the following three categories:

- physical activity levels
- alcohol consumption
- healthy eating

Write your report in the template bel[illegible] dr[illegible]g graphs and tables where appro
useful information as possible[illegible] u c[illegible]d develop your own templates on blank p

Report

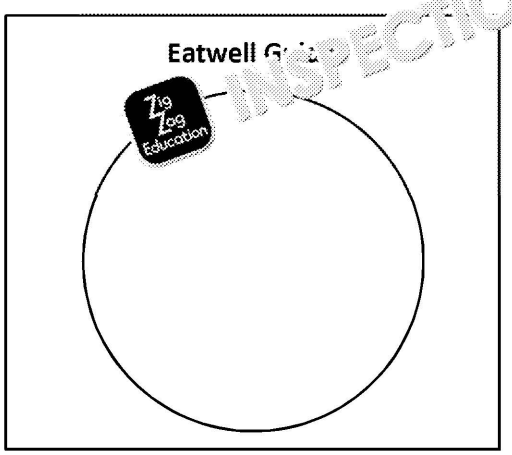
Physical Activity Levels

Age Range	Physical Activity Level Guideline Ove

Report

Alcohol Consumption

Healthy Eating



Positive Lifestyle Factors and Their Effect on Health and Well-being: *Keywords*

Working *individually*, work through the following four sections to unscramble an discussing a person's lifestyle.

Step 1. Unscramble each of the clue words to re a m related to positive

Step 2. In the box below, define th rms (*).

Section 1: Exercise and activity

1. **rstethg oosne**
2. **rmiopved psoeutr**
3. **ocronary ehrat desisae***
4. **ytep wot iabedtes***
5. **tsesrs rileef**
6. **ruceded deprsioesn**
7. **irmdovep lsciao kissll**
8. **lesf etseem***
9. **necooimc adavagntse**

Section 2: Balanced diets

10. **aeelltw pltae**
11. **ryacobhdrate**
12. **prno**
13. **ftsa**
14. **nmimeu ftuncion***
15. **yobd wethig***
16. **idbaeste**
17. **soteopossroi***
18. **nyphrsetenoi***
19. **cehlotseorl***
20. **fcafiene oucnmsption**

Definitions of Key Terms

1.	5.
2.	6.
3.	7.
4.	8.

Negative Lifestyle Factors and Their Effects: *Newspaper Report*

Working individually or in groups of five, write a newspaper article about one of t
below and the health risks associated with each factor. If you are working indivi
working in a group, pick one factor each:

1. smoking
2. alcohol consumption
3. stress
4. lack of sleep
5. sedentary lifesty

DAILY SPORTS SCIEN

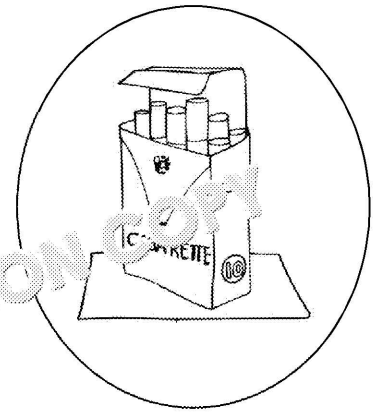
[insert headline]

Lifestyle Modification Techniques: *Overcoming Barriers*

Step 1. Annotate the images below, describing the barriers people may face th
healthy lifestyle. Then, annotate the remaining images, to describe str
overcome negative lifestyle factors.

Step 2. Once finished, come together as a class and di s he barriers you ide
could be used to overcome negative life tyl f ors. Were there any t

ys al Activity Levels



Stopping Smoking

Reducing Alcohol Consumption

Reducing Stress Levels

Screening Processes for Training: *PAR-Q*

Step 1. Develop your own lifestyle and physical activity readiness questionnaire establish the health of an athlete who is about to take part in your train questions that you think are important to ask the athlete before they b template to help.

Step 2. Once you have written your questionnai ge classmate to fill out t questionnaires with each other sc anything that you may have should include.

Step 3. Discuss the fo g questions as a class:
1. y is important for trainers or testers to collect data about an a
2. might trainers also collect lifestyle questionnaires?
3. What legal considerations should trainers or testers make prior to

Lifestyle Questionnaire

Lifestyle Questions [insert more questions]

Question	
1. What is your occupation?	
2. How many units of alcohol do you consume per week (a pint of beer = 2–3 units; a glass of wine = 2–3 units; a shot of spirit = 1.5 units)?	

Physical Activity Readiness Question

[Insert disclaimer]

Health Questions [insert [illegible] questions]

Question	
Has your [illegible] diagnosed you with a heart condition or high blood pressure (hypertension)?	

If you answered **YES** to any of the questions above…

……

……

If you answered **NO** to any of the questions above…

……

……

Participa[illegible]la[illegible] [insert declaration information]

Health Monitoring Tests: *Test It!*

Step 1. Research how to carry out the common health monitoring tests listed b
you were teaching someone how to carry out the test for the first time

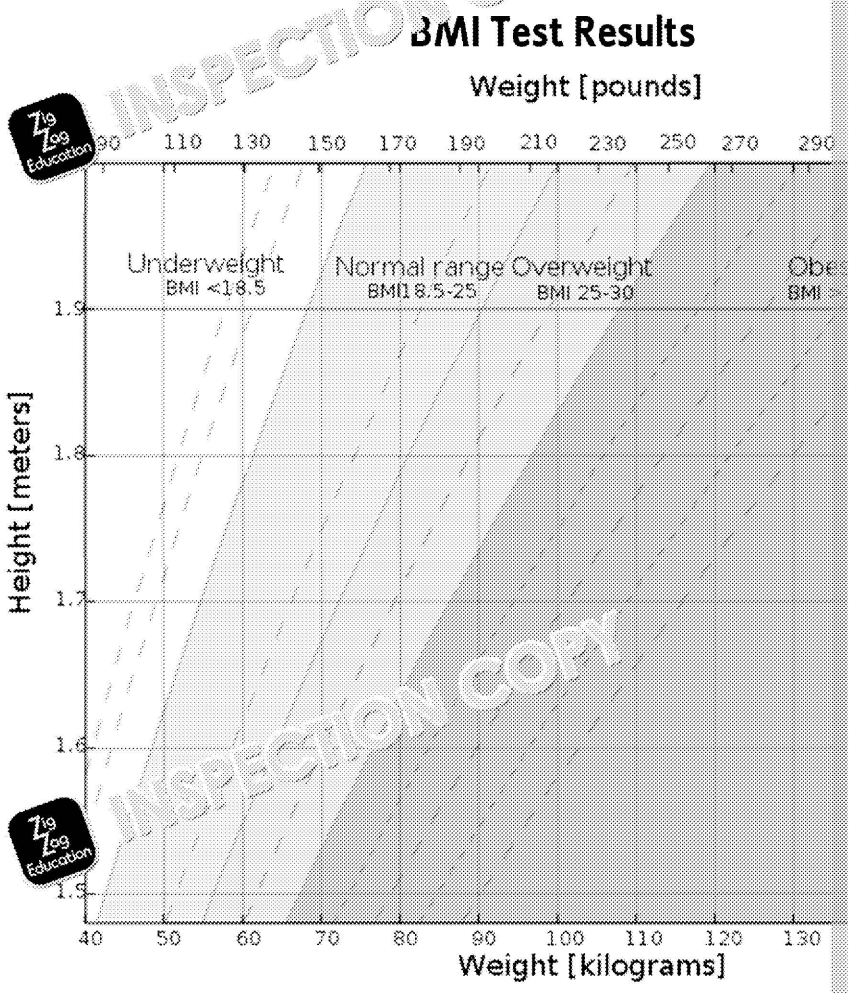
Step 2. Using your instructions, carry out the health monitoring tests on yourse
Record your scores.

Step 3. Highlight or mark your score on the [illegible] data and compare yours

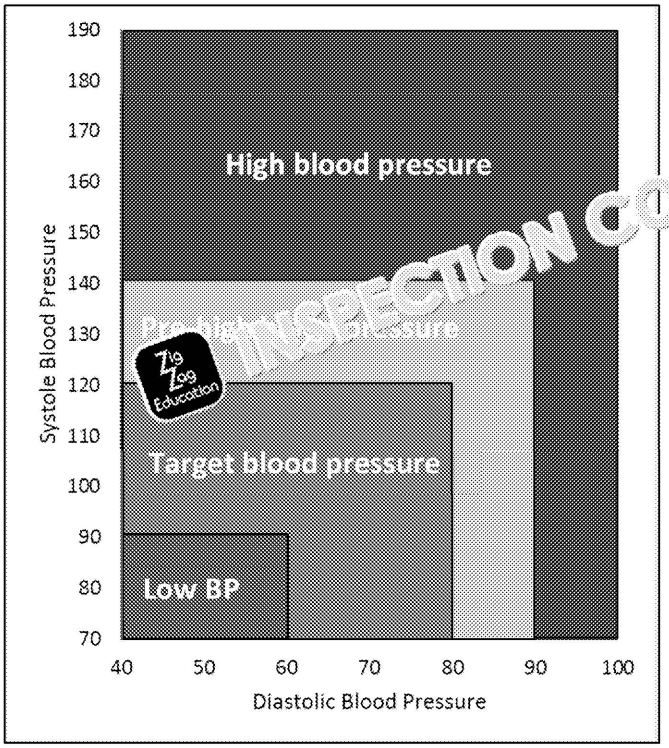
Test	[illegible]nt used	Instructi[illegible]
Blood pressure		
Resting heart rate		
Body mass index		
Waist-to-hip ratio		

Step 1. The figures below show the accepted health ranges of the different hea
the graphs or tables mark/circle where your results would be (See Activ

Step 2. Then, describe how your results compared to the *population norms*, an
performers and *elite athletes*.



Blood Pressure Results



Waist-to-Hip Ratio Test Results

	Excellent	Good	Average	
Male	<0.85	0.85–0.90	0.90–0.95	0
Female	<0.75	0.75–0.80	0.80–0.85	0

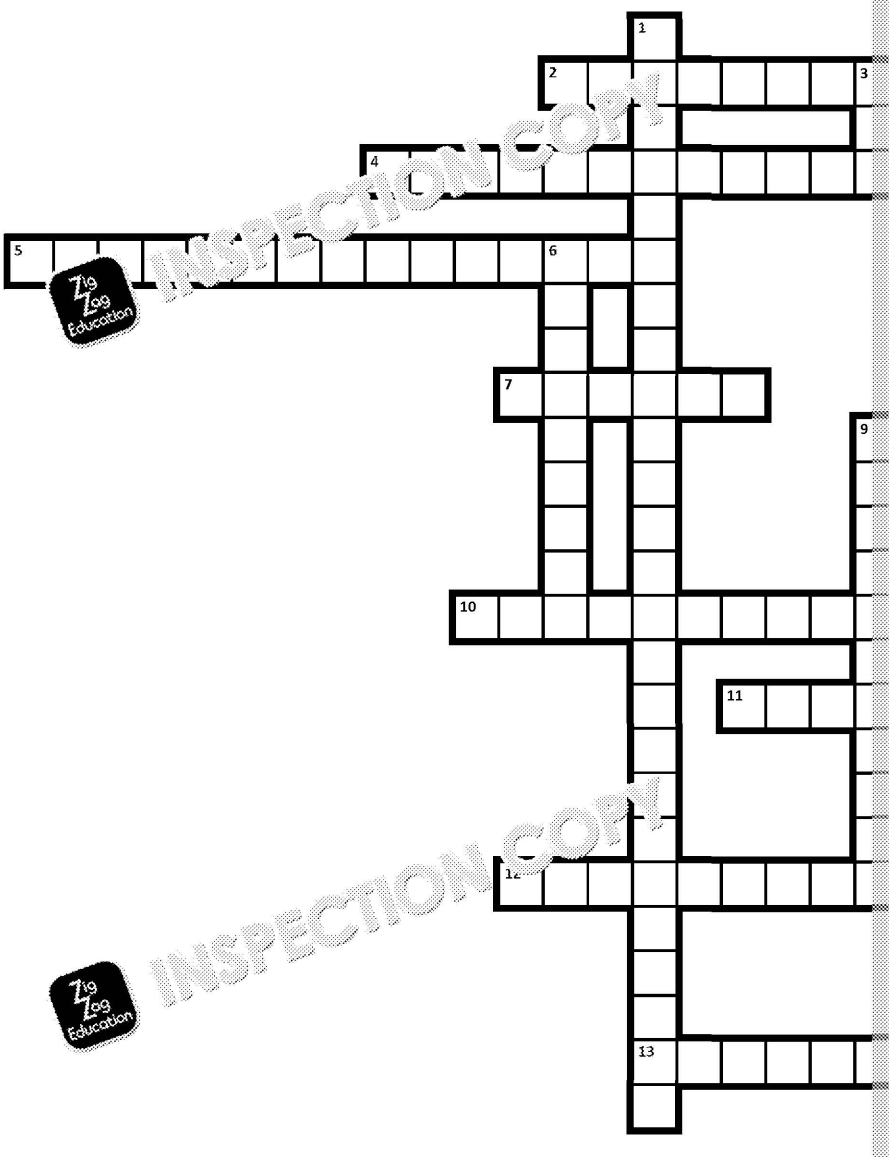
Resting Heart Rate (bpm) Test Resu

Normative Data for Men				
Rating	Age			
	18–25	26–35	36–45	46–55
Elite athlete	49–55	49–54	[illegible]6	50–57
Excellent	56–61	5[illegible]	57–62	58–63
Good	62–[illegible]	62–65	63–66	64–67
Above av	[illegible]–69	66–70	67–70	68–71
Averag	70–73	71–74	71–75	72–76
Below average	74–81	75–81	76–82	77–83
Poor	82+	82+	83+	84+

Normative Data for Women				
Rating	Age			
	18–25	26–35	36–45	46–55
Elite athlete	54–60	54–59	54–59	54–60
Excellent	61–65	60–64	60–64	61–65
Good	66–69	65–68	[illegible]	66–69
Above average	70–73	69–7[illegible]	70–73	70–73
Average	74–78	[illegible]3–76	74–78	74–77
Below av	[illegible]84	77–82	79–84	78–83
Poor	85+	83+	85+	84+

Nutritional Terminology: *Crossword*

Fill in the crossword below to identify the key nutritional terms that are used wh



Across

2 When energy consumption is the same as energy expenditure (6,7)

4 A long-distance runner would need to consume more calories because of the .... they are competing for (6,2,4)

5 The absolute minimum amount of energy require[illegible]ing organism to stay alive (5,10)

7 Differentiating between male [illegible]ales (6)

10 Any movement tha[illegible]r the body to produce movement and use[illegible]y (3,5)

11 Unit of e[illegible]gy, or work done, that is equal to 0.24 calories (5)

12 Unit of energy, or work done, that is equal to 1,000 joules (9)

13 The amount of energy needed to increase the temperature of 1 g of water by 1°C (7)

1 The sug[illegible] macronu[illegible]

3 How old[illegible]

6 Sprinter[illegible] muscle g[illegible] activity t[illegible]

8 The ongo[illegible] condition[illegible]

9 The amo[illegible] increase[illegible] water by[illegible]

Components of a Balanced Diet: *Greedy Chops*

Cut out the cards below. Once students have completed their balanced diet pie c
on each of the cards. The first student to put their hand up and correctly identify
micronutrient the food source contributes to a diet, gets to keep the card. Some
for you to add extra food, if you wish.

Answers

Eggs – protein	[illegible] east – protein	Whey protein – protein	Milk – pro
Beans and [illegible]ses – protein	Soya – protein	White potato – carbohydrates	Brown carbohy
White pasta – carbohydrates	Porridge – carbohydrates	Lentils – carbohydrates	Avocado
Doughnuts – fats	Chocolate – fats	Ice cream – fats	Butter
Wholegrains – magnesium	Tomatoes – vitamins and minerals (vit. C)	Oily fish – vit. D	Yoghurt – and mi (calci
Parsnips – carbohydrates	Quinoa – carbohydrates	Sweet potato – carb[illegible]es	Porrid carbohy
Cornmeal – carbohydrates	Banana[illegible] carb[illegible]ydr[illegible]es	Couscous – carbohydrates	White carbohy
Lean pork [illegible]ein	Lean beef – protein	Greek yoghurt – protein	Wholegra fib
Dried fruit – fibre	Bran cereal – fibre	Kidney beans – fibre	Wholeme fib
Egg yolk – fats	Salmon (oily fish) – fats	Olive oil – fats	Sunflowe fat
Lentils (iron)	Carrots – vit. A	Broccoli – vit. K	Soybeans
Yeast extract – vit. B-12	Nuts – potassium	Processed ham – [illegible]n	Fish –

Components of a Balanced Diet: *Greedy Chops*

Step 1. In small groups, complete the pie chart below, showing how much each macronutrient should contribute to a diet (carbohydrates, proteins, fats,

Step 2. Your teacher will now call out a number of food types. When they do, p what the food contributes to a diet (e.g. orange – contribute vitamin C to you can place the food on the correct section of your pie chart. The first each section of the pie chart will is

Step 3. On your pie chart, write notes about each micronutrient and macronutri function and when and how each is used in sport. Also do this for water

% Car
% Pro
% Fat
% Vit

Step 4. Now, imagine you are a sport scientist for a cyclist taking part in the To
to give information to an understudy about hydration, so that they can
fully hydrated. Give this information by filling in the worksheet below.

Hydration Information Pac

It is important for our cyclist to maintain hyd ati n, eep them healthy and t
out of them. The information below b d by you as a guide.

In hot and humid cl

.....

.....

When training or competing in the summer...

.....

.....

Race Strategies

Before the start of each race...	
Durin race	
Following the completion of each race...	

We must ensure that dehydration is avoided by our athlete, because it affects
ways:

.....

.....

The signs and symptoms o d a ion and hyperhydration to look out for:

.....

.....

Adapting Diets: *Poster*

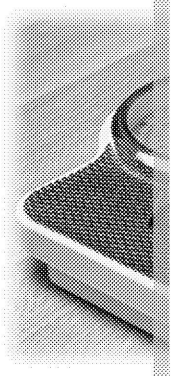
Using the template below, design a poster to be displayed in a gym, highlighting
be achieved and how to promote increases in lean muscle mass. Consider exerci

Want to lose weight?

Want to look leaner a muscular?

Not to lose weight?

Just can have off those pounds, no matter how hard you try?



TOP TIPS FOR LOSING WEIGHT AND PROMOTING L

[Insert information- adapting diets and training progr

Follow-up Question for Discussion:

Which athlete may want an increase or decrease in their weight? Why would this benefit their sport?

Ergogenic Aids: *Convince Me!*

Step 1. Get into groups of five and assign each of the following roles:

1. marathon runner
2. 100 m sprinter
3. weightlifter
4. sports nutritionist
5. sports drink salesman

Step 2. On a piece of paper, prepare the arguments you will make in your debate. Think of ways in which your debating opponent might catch you out – think of their tricky questions!

Step 3. Start your debate. The sports performers should explain to the salesman the nutritional strategies they think that they need. The nutritionist should explain why they require legal ergogenic aids (energy gels and bars, protein drinks and so on). The salesman should attempt to convince the athletes that they should buy his drinks (isotonic, hypertonic and hypotonic).

Remember, you can also try to convince the athletes against listening to the nutritionist by highlighting the negative aspects of what they are offering!

Step 4. Fill in the worksheet below, making notes during the debate.

	Summary Notes
1	
2	
3	
4	
5	

Components of Physical Fitness to be Trained: *Be a Star for the D*

Step 1. In pairs, complete the five activity stations explained below. Each station re

Step 2. *Once* you have completed the activity, think about which **physical** fitne these components below each image and then define them.

Step 3. In pairs or as a class, discuss the follow-up q n.

Mo Farah (long-distance runner)

Challen mplete a five-minute continuous run around the sports hall or

Physical Fitness Component	De

Usain Bolt (100 m / 200 m sprint)

Challenge: Complete a 50–100 m dash as fast as n.

ysical Fitness Component	De

Chris Froome (cycling)

Challenge: Complete a five-minute cycle.

Physical Fit ponent	De

Zulfiya Chinshanlo (weightlifting)

Challenge: Lift a weight in a single motion (e.g. 10 kg).

Physical Fitness Component	De

Simone Biles (gymnastics)

Challenge: Complete a three-minute gymnastics floor routine.

Physical Fitness Component	De

Follow-up Questions for Discussion:

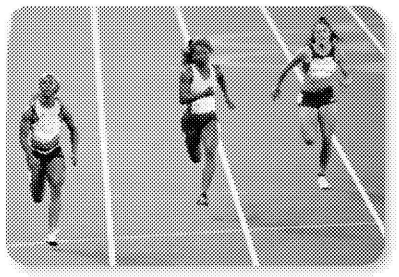
1. What is body composition?
2. How do the above athletes' body compositions differ and how does this benefit performance?

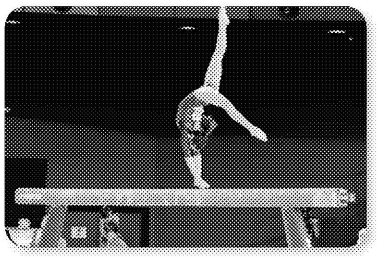
Skill-related Fitness Components: *Match-up*

Step 1. Match up the **skill-related** fitness components with the sports they appear in (some may appear in more than one sport!).

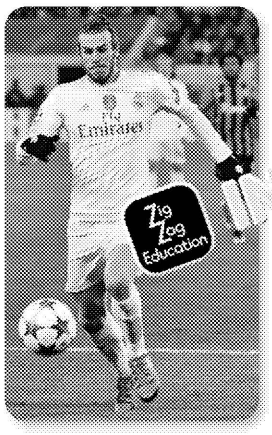
Step 2. Take **one** fitness component and write a speech, addressing a sports novice, explaining why this component is important in their sport.

Step 3. Share your speech with the rest of the class where each listener should identify what you have missed in your answer.





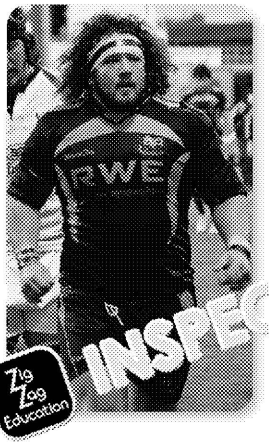
Agility



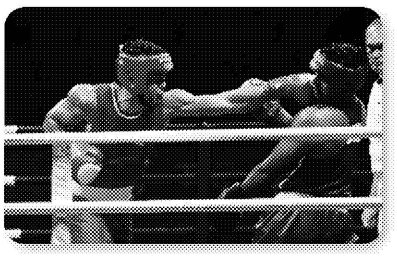
Balance

Coordination

Reaction Time



Power



My Speech

Fitness Component: .....

Sport: .....

Training Methods for Physical Fitness-related Components:
Evaluate and Train

Cut out the cards below and stick them up at different locations around the room page and hand one copy to each student. Instruct the students to work their way to each station and discussing the training method or activity with other people aim to write a point explaining what it is and one advantage and disadvantage of have 15 minutes to complete as many as the

Interval Training	Continuo
Fartlek Training	Circuit
Pyramid Sets	Fixed Ma
Free Weights	Pl
Yoga	Gym-base (plank, bi
Flexibility Training	Resistan

Training Methods for Physical Fitness-related Components: *Evaluate and Train*

Move around the classroom to each of the stations (each station will represent a
by your teacher. At each station, interact with your classmates who are also the
with them, aiming to write one point suggesting what it is and one advantage and
method. You will have 15 minutes to complete as ma[illegible] you can.

Interval Training	**Continuous Training**
Fartlek Training	**Circuit Training**
Pyramid Sets	**Fixed Resistance Mach**
Free Weig	**Pilates**
Yoga	**Gym-based Exercises**
Flexibility Training	**Resistance Training**

Aerobic Endurance Training Methods: *AerO$_2$bic Stations*

Cut out the training cards below and stick them up at different locations around t
need to set up a small circuit session for students to complete (focused on aerob

You may need to organise students so they don't all go to the same station first.

Station 1: Continuous training

Run around the hall or track continuously for 10 minutes.*

Sta
Fartle

Run around the h
for 10 minutes. A
between sprintin

Stati 3:
I rval training

For 10 minutes complete the following (complete twice):

- Jog for one minute.
- Rest for one minute.
- Jog for one minute.
- Rest for one minute.
- Jog for one minute.

Sta
Circu

Complete the circ
set out for you. P
for 45 seconds, fo
rest.

*You should inform students t cor i uous training normally lasts for 30 minut
is just a 'snapshot' of y t e should expect in a continuous training session.

Aerobic Endurance Training Methods: *AerO$_2$bic Stations*

Step 1. In pairs, pick one of the four stations that your teacher has set out for you. C station. Take it in turns to complete tasks (i.e. only one of you completes e will have completed two stations by the end of the session.

Step 2. When you complete each station, immediately ta he heart rate of th this value.

Step 3. Fill in the worksheets on the p Some help has been provided to

Measurin r (HR): Take this measurement **immediately after the parti be represe of the heart rate during exercise. Find the pulse of the athlete number of beats they produce in 15 seconds. Times this number by 4 to give yo

Calculating maximum heart rate (HR_{max}): HR_{max} = 220 – age

Percentage of HR_{max}: Divide the measured heart rate by the HR_{max}. Times this r percentage. For example, for a 20-year-old with an exercising heart rate of 140

(140 ÷ 200) x 100 = 70%

Training zone: See the table below to see which zone your athlete was working

HR_{max} (%)	Tra
80–100	erobic threshold /
80– 90	Upper limit of aerobic
70–80	Aerobic exercise zone
	'Ideal' training zone (a
0–70	Fat-burning zone (aerc
60	Recovery zone (aerobi
50	Warming-up or cooling

Training Method: .....

Advantages	Disadvantages

Max. HR of athlete:

Heart rate during exercise:

Percentage of HR_{max}:

Training zone:

Training Method: ...

Advantages

Max. HR of athlete:

Heart rate during exe

Percentage of HR_{max}:

Training zone:

Training Method: .....

Advantages	Disadvantages

Max. HR of athlete:

Heart rate during exercise:

Percentage of HR_{max}:

Training zone:

Training Method: ...

Advantages

Max. HR of athlete:

Heart rate during exe

Percentage of HR_{max}:

Training zone:

Muscular Strength and Endurance Training Methods: *Working Your*

Step 1. Fill in the fact sheet below regarding muscular strength and muscular endu

Step 2. Design a pyramid set for an athlete looking to improve their muscular s

Step 3. Describe how the three methods of muscular endur nce training can b

Muscular Stre .. and Endurance Training Fac

1. Sets are:

2. Reps are:

3. Equipment that can be used to improve muscular strength and/or endurance includes:

-
-
-

4. The basic princip

_____ reps a

sets and a high _

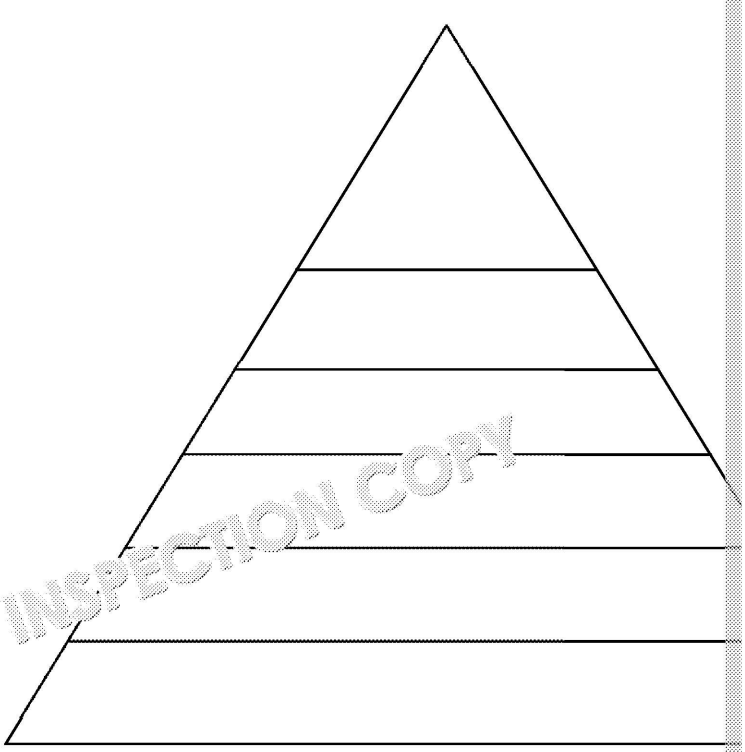
The basic princip

training is _____

number of sets a

Pyramid Sets f: uscular Strength

1. Complete the pyramid belc .. onstrate a pyramid set including set annotate the pyra .. ain how this is an effective weight-training m



Methods of Training for Muscular Endu

Describe how the three methods of training for muscular endurance can be use

Circuit training:

Fixed resistance machines:

Free weights:

Core Stability and Flexibility Training: *Plan and Implement*

Step 1. In pairs, decide who will design and coach core stability training and flexibil
the pair should write down or think about how they would have designed a
programme. Work as a pair to set up any equipment or space required to c

Step 2. Take five minutes to design your training sessions in the worksheet below.

Step 3. Take your partner through your trainin[illegible] for 10 minutes. Following
other anything else you could have included to make it better. You could th
you have the opportunity to both design and participate in a training sessio

Training Plan

Equipment needed:	Methods I will use:

Instructions for participant:

Floor plan:

Things I could improve next time:

Step 4. Discuss the follow-up questions below with your partner, making notes
back to the class with your answers.

Follow-up Questions for Disc

1. What are the three types of stretches a
could use? Can you describe each of th
2. Do all sports require flexibility? Why?

Speed and Agility Training Methods: *Plan and Implement*

Step 1. Split the class into two (or more if required) groups. One group is to collect session. The other group should design an agility training session.

Step 2. Take 10 minutes to design your training session in the worksheet below.

Step 3* Take the other group through your training [illegible]ne. At the end of participants anything that your gro[illegible] di[illegible]or could have improved.

***optional**

Speed Training Plan

Equipment needed:	Methods we will use:

Instructions for participant:

Participants should be working at _____ per cent of heart rate m

of _____ with _____ minutes of [illegible]st between sets.

Floor plan:

Feedback received from participants.

Agility Training Plan

Equipment needed:	Methods we will use:

Instruct[illegible] p[illegible]icipant:

Floor plan:

Step 3 (optional): Feedback received from participants

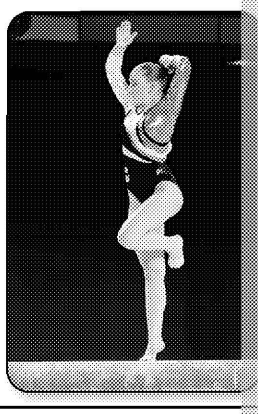
Balance and Coordination Training Methods: *Match-up*

Step 1. Match the statements below to the type of balance they refer to.

Step 2. Read the statements below about coordination. Decide whether they a
to the corresponding 'true' or 'false' boxes.

Ma ta g balance while moving

Can be practised by balancing on stable rfa



Can be tested using the Stork Balance Test

Static Balance

Dynamic Balanc

Maintaining the centre of gravity within the base of support

Balance boards or exercise balls can be used to improve this type of balance

Coordination is the ability to use more than one body part at the same time.

Coordination is the ability to use one or more body parts at the same time.

The sit-and-reach test is used to determine coordination levels of an athlete.

Coordination allows complex movements or skills to be completed.

The wall-toss test is used to dete co ination levels of an athlete.

The sit-u used to determine coordination levels of an athlete.

Coordination allows a squash player to run to the ball and bring their arm back, ready to return the shot.

- Cut out the station instructions below and place then around the hall or clas
directed by the cards (or get your students to set out the stations, in a space
complete each station's task.

- (Optional) You could record students' scores for eac ion activity, to intr
between students, and provide a winner at t d the lesson.

Station 1: Reaction Ball

Throw the reaction ball underarm against the wall from a distance of 1.5 m. When the ball returns, catch it with the opposite hand and continue this for the time period. Try to do this as fast as possible, without dropping the ball!

You have 30 seconds to catch the ball as many times as you can. If you drop the ball, just pick it up and carry on!

Station

From a standing sta
blows the whistle –
Measure your time

Station 3: Left or Right (visual and auditory)

- A partner will stand directly opposite you, at a distance of 15 m.
- Place a cone 5 m in front of the partner (i.e. 10 m in front of you).
- Run straight towards your partner from 15 m away. When you reach the cone marking 5 away from them, they will dire t yo run to the left or right of them rai ing their left or right arm.
- Comp e same task, but this time you will respon an auditory cue of 'left' or 'right'.

St
Ruler

- A partner w
ruler betwe
thumb.
- They will th
to clasp the
before it dr
- Look at the
on (in cm).
better your

Reaction Time Training Methods: *On Your marks, Get Set...*

Step 1. Have a class discussion on how different sports (e.g. football and 100 m spri reaction times and the situations in which the athletes are required to use g sports differ? What types of stimuli do they face? Are there any similarities

Step 2. During the class discussion, make notes on the templates below.

Step 3. Participate in the activities set out by your teacher. When participating which sports they could apply to, the types of stimuli you are facing and some activities than others.

Sport

Importance of reaction times:

Type of stimuli faced:

Sport 2:

Importance of reac

Type of stimuli fac

Sport

Importance of reaction times:

Type of stimuli faced:

Sport 4:

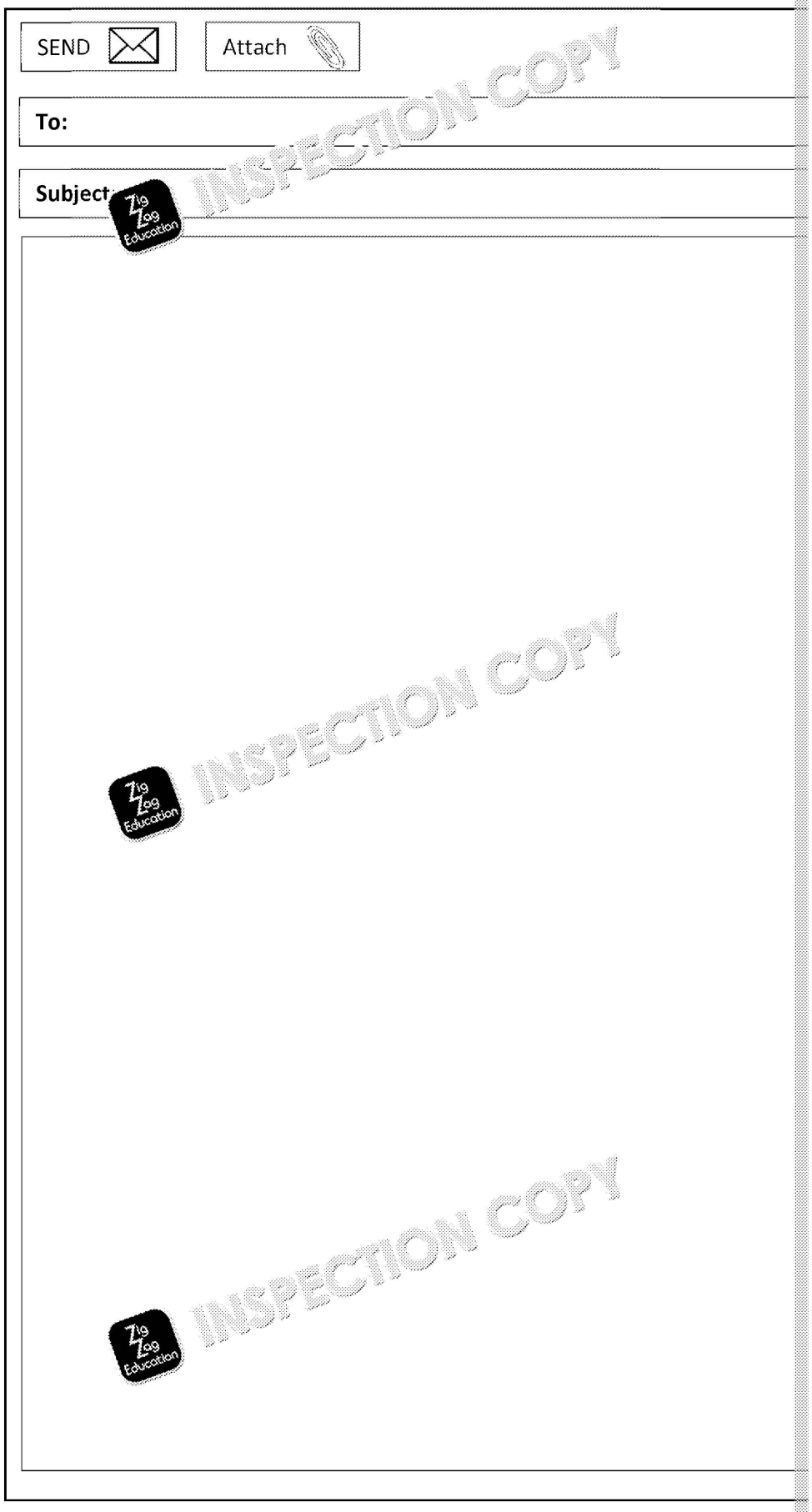
Importance of reac

Type of stimuli fac

Similarities between sports:

Power Training Methods: *Email*

Write an email to the NGB of gymnastics: British Gymnastics. Explain to them wh
should be a key feature in gymnastics programmes, to help athletes achieve mor



Principles of Fitness Training Programmes — Goals: *Be SMARTER*

1) Match up the SMARTER principles below with their definitions.

Specific	Goals should not be vague but want to achieve in detail.
Measurable	It should be fun and engaging
Achievable	Goals should be tracked in order complete them.
Realistic	It should be possible to track identify when you have reached
Time-related	It should be possible to reach
Exciting	It should be clear when your
Recordable	The goals should be something individual circumstances, e.g. dedicate to training or the fac to you.

2) Identify the following individuals' goals and decide which principles of goal-s the correct principle in the b... each scenario.

a) A... to record all of her results from her fartlek training in orde how she is progressing.

b) Christian did not think that he would have enough training time in ord complete the goal that his coach suggested, so he told the coach that t would need to be adjusted in order to reflect this.

c) Emily likes to incorporate a number of different methods of training in strength programme, such as parachute running, which she finds really

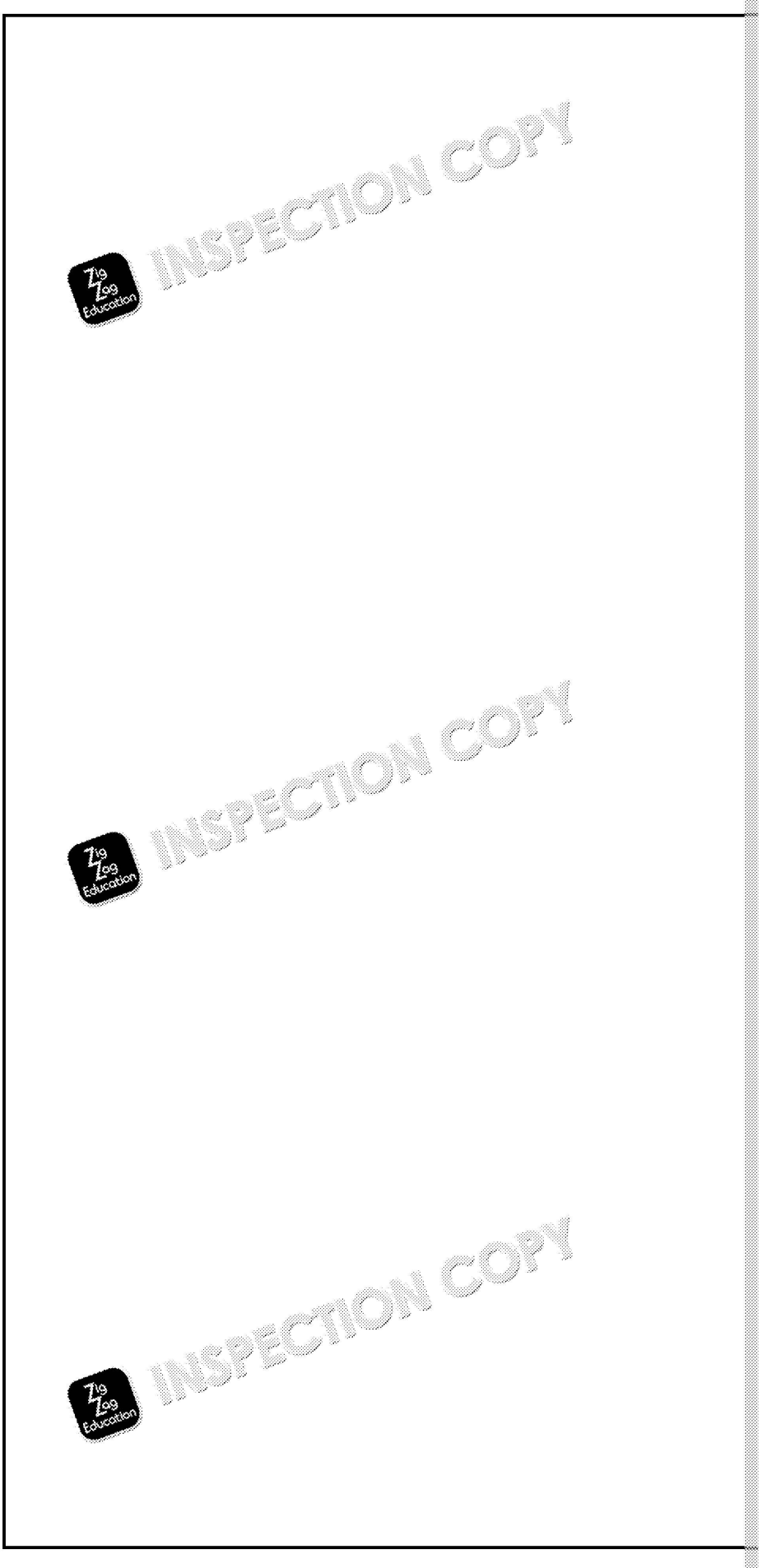
d) Omar has the goal that he wants to improve his muscular endurance, s improve on his time and have a strong finish when competing in the 80

e) Michael wants to increase his 100 m br...st stroke time by two seconds taking small steps to eventuall... his overall time by eight secon

f) Selena keeps a ... diary in which she tracks her progress towards b... to ...ve at 80 mph. In this diary she notes down her averag s... that she achieves in each serving session.

g) Tim has set himself the goal of running the 100 m in 0.5 seconds less th currently run it in. However, he has given himself two months in whic achieve this goal.

3) Using your knowledge of the principles of goal-setting, create a personal go
then highlight and annotate, indicating where your goal shows each of the S



Principles of Fitness Training Programmes — FITT: *Plan It!*

Develop a training goal that you would like to achieve in a chosen sport. Undern
for each of the following principles of training and how your training programme

Your goal:

The principles of training (FITT):

Frequency is:

How your goal will meet this principle:

Intensity is:

How your goal will meet t pie:

Time is:

How your goal will meet this principle:

Type is:

How your ill eet this principle:

Principles of Fitness Training Programmes — Additional Principles
Case Studies

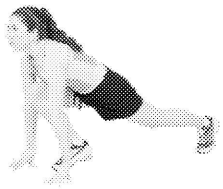
Read what each of the athletes below says about their training and then give the
they could apply the most relevant principle of training to their situation.

1.

I always lift the same weights at the gym as I'm comfortable with this but I don't seem to feel any fitter or stronger.

.....
.....
.....
.....
.....

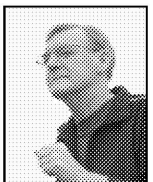
2.



Resistance training helped me improve my sprint times, but now I can't get any faster.

.....
.....
.....
.....
.....

3.



I don't seem to have enough energy when I turn up for training sessions.

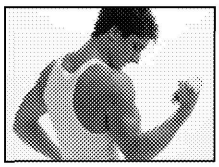
.....
.....
.....
.....
.....

4.

I play basketball but most of my training is performed without a ball and I feel like I'm losing my ability.

.....
.....
.....
.....
.....

5.



I try to avoid repeating the same exercise at the gym, but I don't think I am getting stronger.

.....
.....
.....
.....
.....

6.

I took a month off training and playing during the season and now it is so hard to complete 90 minutes.

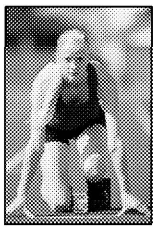
.....
.....
.....
.....
.....

7.

I haven't been to my fitness classes for a few weeks. I thought that they got boring after a few sessions.

.....
.....
.....
.....
.....

8.



I take part in training with the rest of the athletics club but most of the training focuses on long-distance running and I prefer sprinting.

.....
.....
.....
.....
.....

Principles of Fitness Training Programme Design — Periodisation:
Let's Set a Date

Alice plays for her university football team. Below are sections from her training d

1. Fill in the table below by providing a description of the three phases of perio

2. Read the different sections of Alice's train ng di , below, identifying which section relates to from the list gi n be w. You should also provide a justifi

Macr	Mesocycle	

Alice's training diary:

Date: 17th July 2016

I just remembered how much I hate pre-season fitness training! I wa complete the last mile of our five-mile run. My aim for the next six m aerobic fitness so that I can break into the first team!

Answer: .....

Reason for choice: .....

.....

4th August 2016

Today I concentrated on improving the accuracy of my long passing. also going to focus on this in tomorrow's session to make sure that I accurate.

Answer: .....

Reason for choice: .....

.....

Date: 18th September 2016

Coach gave us a target at the start of the season o gain promotion made a good start to the season, with fi s f om seven, sitting in table. Coach has made sure that e ill aintain our attacking focus reach top position in th au ecuring promotion.

Answer: .....

n for choice: .....

.....

Date: 12th December 2016

I've been working on my defensive play for just over a month now a
repetitive! All I've done recently is tackle, head and defend set piec
difference to my game, but I would definitely find it more enjoyable

Answer: .....

Reason for choice: .....

.....

Date: [illegible] May 2017

[illegible]ve got the last game of the season in one week and the cup fina
have all been working on our defensive positions in the last week, to
winning.

Answer: .....

Reason for choice: .....

.....

Date: 21st May 2017

This season's training has been much harder with the new coach the
ago! But at least it has paid off! We won the championship, just lik
to! We also reached our potential just at the right time and played
We won the cup as well!

Answer: .....

Reason for [illegible]: .....

.....

Answers

Activity 1 — Exercise and Physical Activity / Positive Risk-taking Activities: Q and

Answers should include the points below. Accept additional suitable answers.

Physical benefits

- Strengthened bones
  - e.g. jogging increases the pressure ... on the bones in the leg, encouraging
- Improved posture
  - e.g. yoga and Pil... ...ge good posture by increasing the flexibility of at... upri...
- Better ... ...ne, shape
  - e.g. ...nastics can target a wide range of muscles in the body, encouraging m...
- Reduced risk of diseases such as coronary heart disease, cancer and type II diabetes
  - e.g. walking regularly decreases the risk of diseases by helping to prevent the ... blood vessels, which is a leading cause of heart disease.

Psychological benefits

- Stress relief
  - e.g. yoga helps to clear the mind in a relaxing environment.
- Reduced depression and improved mood
  - e.g. exercise causes the release of endorphins (a type of hormone) that increa... satisfaction.

Social benefits

- Improved self-esteem
  - e.g. participating in physical activity and socialising with other people help to b... confidence in yourself.
- Improved social skills
  - e.g. participating in physical activit... ...th... people helps to improve social ... through a shared experien... ...ment.

Economic benefits

- Reduce... ...to ... ...s as people become healthier (less reliance on NHS resources)
  - e.g. ...ased rate of coronary heart disease because more people are exerci... disease) means that the NHS has to spend less time and money on treating the
- Less absence from work, so less time is wasted
  - e.g. exercising helps to make people healthier, including a more efficient immu... spend less time off work, ill.

Benefits of positive risk-taking activities

- Improved confidence
  - e.g. if a person overcomes a fear, or stressful situation (such as bungee jumpin... in confidence that they can overcome other obstacles.
- Feelings of self-accomplishment
  - e.g. achieving something you didn't think you could gives a person feelings of a... for example, scaling and abseiling a large cliff wall.
- Release of endorphins creates a happiness 'high'.

Activity 2 — Balanced Diets: Fill Your Plate

The student's plates should represent the following:

- **Scenario 1** – A balanced diet* such as that expressed by the Eatwell plate, e.g. 50%
  30 g fibre, with some vitamins and minerals.
- **Scenario 2** – A diet comprised of higher than normal levels of protein (e.g. 25%) to
  weight training and containing moderate levels of carbohydrates (e.g. 50%) and no
  may increase the fat percentage of the diet due to the weight gain needed to be su
- **Scenario 3** – A diet comprised of high levels of carbohydrates (e.g. 60–70%) to prov
  long distance events. Fats will be consumed in moderation (it may still be required
- **Scenario 4** – A balanced diet,* consumed at maintaining low consumption of fa
  consumption may be increased to promote weight loss, while gaining muscle mass
- **Scenario 5** – A diet higher than normal levels of carbohydrates (e.g. 60%) and
  45%). Protein should be consumed at normal rates to promote muscle growth
  muscle

*A balanced diet is one which consists of around 50% carbohydrates (of which 45% is fro
sugars and a maximum of 5% from free sugars), ≤35% fats, 15% proteins, 30 g fibre (equa
adult), vitamins and minerals.

*Students should recognise that fibre, vitamins and minerals will still be required in som

Activity 3 — Balanced Diet Strategies: Nutritional Expert

Answers should include the points below. Accept additional suitable answers.

Benefits of a balanced diet:

- **Improved immune system (reduced chances of illness)** – vitamins and minerals are
  function. For example, vitamin C helps in maintaining the health of tissue cells. Vita
  and longevity of skin, which is the first line of defence against disease, stopping ma
  entering the body.
- **Maintaining correct body weight** – a balanced diet pr the body with the corr
  tasks. Carbohydrates provide the body with the majority of its energy. Fats can be
  right quantities) keep the body healthy by providing warmth and protection to orga
  a balanced diet will vary from p n.
- **Reduced risk of type II di** – by limiting the amount of sugar (i.e. simple carbo
  able to respond to increased blood-glucose levels by releasing insulin. However, if
  the ins or the body is weakened, causing diabetes.
- **Reduce advancement of osteoporosis** – a balanced diet will have the correc
  (i.e. calcium) to promote bone growth. Having strong bones from an early age will
  weakened bones and eating a healthy diet throughout life, into old age, will also de
- **Reduced risk of hypertension** – an unhealthy diet (e.g. high in fats and sugars) will
  vessels. As a result, blood vessels become less elastic and narrower in dimension (d
  blood flow through the vessels, causing high blood pressure (hypertension).
- **Lowers cholesterol** – low density lipids (LDL – also known as 'bad cholesterol') are v
  liver that are deposited in the blood vessels, as a result of a bad diet. This can lead
  leading to heart attacks, strokes or coronary heart disease. A balanced diet minimi
  high density lipoproteins are released (HDL – also known as 'good cholesterol'). HD
  substance of LDL.
- Accept any other suitable answer.

Fluid intake:

- **Maintains hydration / avoids dehydration** – maintaining the correct balance of wa
  to its full capabilities. Dehydration can cause dizzines fusion and can inhib
  through the nervous system, and to the muscles.
- **Can be used to supplement exercise/r** – different types of sports drinks ha
  and carbohydrates (sugars). Fo
  - Isotonic dri ar ratios of sodium and sugars to those found
    isot are used to replace fluids lost by sweating (e.g. middle-d
    ype onic drinks contain higher ratios of sodium and sugar than those
    used to either boost energy during exercise or are used to aid reco
  - Hypotonic drinks have lower ratios of sodium and sugar than the huma
    are used to replace lost fluids, without providing boosts of energy.
- **Caffeine intake should be controlled** – caffeine is a diuretic and therefore causes a
  increasing the risk of dehydration. Caffeine can also put unnecessary stress on the
  beat faster. Intake of other diuretics (e.g. fizzy drinks or alcohol) should also be con
- Accept any other suitable answer.

Nutritional strategies:

- **Three meals should be consumed per day (breakfast, lunch and dinner)** – this min… glucose levels to naturally return to normal levels following meals. Small, healthy s… consumed between meals.
- **Food should not be consumed immediately before bed** – this encourages unhealth… means that your digestive system is working to digest food, when it should be resti…
- **Ensuring food intake is equal to energy expenditure** – to main…ain a constant weig… the energy used by the body.
- **Eating five portions of fruit or vegetables pe… da… –t… provides the body with all … sugars to maintain healthy bodily fun…tion.
- **Reduce salt intake** – high sa…l take… …ces pressure on the heart and kidneys as bl… to coronary heart di…e… …attacks or strokes.
- **Try to f… …lt… …natives for food** (e.g. fruit instead of sweets).

Activity 4 — …overnment Recommendations: Report

Physical Activity Levels

Reports could include the following information but are not limited to it:

Age	UK Government Recommended Guidelines*	
Babies and toddlers (not walking)	• No specific guidelines in times of duration • Should encourage frequent floor-based/water-based activities • Should limit sedentary behaviours for extended periods (except when sleeping).	• Supports n… • Aids cogni… • Supports g… (Physical) • Enables so…
Toddlers (capable of walking)	• 180 minutes throughout the day • Unstructured active play • Combination of light- to high-intensity activities • Activities involving large… …scle groups	• Improves c… function (P… • Supports g… (Physical) • Maintains … • Allows soc… • Aids cogni…
Children (5–18 year olds)	• …inutes physical activity per day	• Strengther… • Encourage… • Can act as … (Psycholog… • Encourage… • Teaches te… for future …
Adults (19–64 year olds)	• 18 years old < – 75 minutes vigorous intensity physical activity or 150 minutes moderate intensity per week • 19–64 year olds – a minimum of 150 minutes moderate intensity aerobic exercise per week • The time spent engaging in physical activity (150 minutes) should be spread across the week	• Increases/… size/streng… • Acts as a s… people (So… • Releases e… stress and … (Psycholog…
Elderly (64 and above)	• Moderate intensity aerobic e… …e… a minimum of 150 mi… …r week. • The time sp… …e… …g in physical activity (150 mi… …be spread across the week	• Decreases … heart disea… • Maintains … (Physical) • Helps to lo… developing …

Accept other answers if from a reputable source.

* Correct at time of writing. Different sources may report different recommendations.

Useful websites for Government guidelines:

- https://www.gov.uk/government/publications/uk-physical-activity-guidelines

Alcohol Consumption (for men and women)*

- Drink no more than 14 units per week
- Drink consumption should take place over the week (i.e. not binging).
- Drinking sessions should include periods of water consumption and adequate meals.
- Accept other answers if from a reputable source.

* Correct at time of writing. Different sources may report different recommendations.

Useful websites for Government guidelines:

- https://www.drinkaware.co.uk/alcohol-fact[illegible]drinks-units/alcohol-limits-u
- https://www.gov.uk/government/[illegible]/alcohol-consumption-advice-on-low

Healthy Eating*

Age Ra[illegible]ears)	Recommended Daily Energy Intake (kcal)	
	Males	Females
7–10	1817	1703
11–14	2500	2000
15–18	2500	2000
19–64	2500	2000
65–74	2342	1912
75+	2294	1840

Age Range (years)	Macronutrient	Recommend
		Males
7–10	Protein	28.3
	Fat	71
	Carb[illegible]es	242
11–14	[illegible]ein	42.1
	Fat	97
	Carbohydrates	333
15–18	Protein	55.2
	Fat	97
	Carbohydrates	333
19–64	Protein	55.5
	Fat	97
	Carbohydrates	333
65–74	Protein	53.3
	Fat	91
	Carbohydrates	312
75+	Protein	53.3
	Fat	89
	Carbohydr[illegible]te	306

Accept other suitable answers/rese[illegible]
* Correct at time of writing. [illegible]ources may report different recommendations.

Useful webs[illegible] Go[illegible]rnment guidelines:

- https://[illegible]ov.uk/government/news/new-eatwell-guide-illustrates-a-healthy-ba
- https://www.nhs.uk/Livewell/Goodfood/Pages/eight-tips-healthy-eating.aspx

Activity 5 — Positive Lifestyle Factors and Their Effect on Health and Well-being: K

Section 1

1. Strengthened bones
2. Improved posture
3. *Coronary heart disease – the build-up of fats and plaque in artery walls that cause
4. *Type two diabetes – a non-genetic form of diabetes whereby bad diet causes the b to control blood sugar
5. Stress relief
6. Reduced depression
7. Improved social skills
8. *Self-esteem – the de[illegible] worth, importance or value a person gives themse
9. Econom[illegible]an

Section 2

10. Eatwell plate
11. Carbohydrates
12. Proteins
13. Fats
14. *Immune function – how well the immune system is working, giving it ability to def
15. *Body weight – a measure of how much gravity is acting on (the mass of) an object,
16. Diabetes
17. *Osteoporosis – a loss of mass or density of the bones, causing them to become we
18. *Hypertension – (high blood pressure) a condition whereby the blood exerts a high
19. *Cholesterol – a fatty substance found in blood and blood vessels that can cause hi
20. Caffeine consumption

Activity 6 — Negative Lifestyle Factors and Their Effects: Newspaper Report

Indicative content given below. Accept other suitable answers.

Smoking:

- **Coronary heart disease** – smok[illegible] suffer from build-ups of fat deposits in their atherosclerosis and re[illegible] blocks blood flow through the arteries altogether.
- **Numero[illegible]nce [illegible] throat and lung)** – cigarette smoke contains carcinogenics which c[illegible] mutations in the body, leading to cancer. The throat and lungs are high con[illegible]with cigarette smoke.
- **Lung diseases (e.g. bronchitis)** – smoking damages the cilia, which cover the airways (which traps and contains disease and harmful bacteria). Therefore, if cilia are dama enter the lungs. Lungs also become less efficient at inhaling and exhaling air, which capacity, even causing death.
- **Infertility** – the chemicals in cigarette smoke cause a range of issues that influence a balances, damage to sexual organs and low sperm counts.
- **Addiction** – smoking is highly addictive due to its high nicotine content, leading to pe cigarettes. This is especially true of smokers during stressful situations, where they b

Alcohol consumption:

- **Cirrhosis (liver damage)** – repeatedly abusing and damaging the liver, by consumin to scarring of the liver. Once scarring has become severe, the liver can no longer he occurs.
- **Increased risk of strokes** – alcohol can cause incr[illegible]d blood pressure as well as lim effect of not enough blood flow reachin[illegible]a stroke.
- **Hypertension (high blood pres[illegible]** – [illegible]ol interferes with the autonomic nervou in blood pressure. Chr[illegible]abuse causes a permanent rise in blood pressure stroke and [illegible]art
- **Increas[illegible]hood of depression** – alcohol is naturally a depressant, as it slows do (note: it [illegible]use a *temporary* increase in mood). People who are dependent on a depressed, to make them feel better. However, this will actually worsen their depr
- **Addiction** – dependency on alcohol is a serious addiction and often occurs when pe themselves happier, only for it to actually make them increasingly depressed, poten and develop a dependence.

Stress:

- **Hypertension (high blood pressure)** – stress causes an increase in physiological proc breathing rate. An increase in heart rate causes an increase in blood pressure. If so therefore, repeatedly has a high heart rate), they put their heart under pressure, lea
- **Depression** – repeated and recurring episodes of stress can cause a person to feel l do not experience releases of 'feel-good hormones' (e.g. endorphins), but instead, depression due to cortisol and serotonin.
- **Angina / heart attacks** – due to the hypertension cau st ess, there is a link be the chance of angina and heart attacks occurring
- **Strokes** – high blood pressure (caus) can lead to burst blood vessels. If brain, a bleed on the brain w occu using a stroke.
- **Stomach ulcers** – so believe that excessive stress can cause stomach ulce to supp).

Lack of sleep:

- **Depression and insomnia** – depression can cause someone to have poor sleep, or e can cause a negative cycle of becoming more depressed, causing sleeping condition
- **Overeating** – irregular or disturbed sleeping patterns can cause someone to overeat, o late-night snacking). This can cause weight gain as the body digests food while it shou

Sedentary lifestyle:

- **Weight gain** – not participating in enough physical activity causes weight gain beca diet (i.e. energy being consumed is greater than energy being produced by the bod
- **Reduced social skills and depression** – sedentary lifestyles can cause people to bec with friends, family or peers, a person could become depressed. A sedentary lifest which some people may be embarrassed about, causing them to not socialise with
- **Increased risk of heart diseases** – exercise helps to keep the blood vessels clear of l elasticity. A sedentary lifestyle, however, can lead to hardening and narrowing of b disease as blood flow to the heart is reduced.
- **Diabetes** – sedentary lifestyles make it harder for the o educe blood-glucose glucose is not being used as energy in physical ac vit peatedly putting the bod weakened insulin response by the bod g blood-glucose levels cannot retur

Activity 7 — Lifestyle M echniques: Overcoming Barriers

Barriers:

- **Time co aints** – people may have limited time in which to participate in physical such as work, family or socialising.
- **Cost** – equipment costs (e.g. running shoes) or memberships to join gyms may not b due to other financial commitments.
- **Transport** – many gyms or other sporting facilities are not within walking distance o they rely on either their own transport (e.g. a car) or public transport, which both in
- **Location** – while there are options to exercise close to home, such as going for a jog live in areas with limited access to sporting facilities; for example, people who live i nearest towns/cities for gyms.

Strategies to include, but not limited to:

Increasing Physical Activity

- At home:
  - exercising in small but regular quantities
  - buying home-gym equipment
  - exercising while doing housework su hoovering
  - doing the gardening
  - engaging in pla with your children (if applicable)
  - pe s while in the shower
- At wor
  - sta g desks
  - small regular breaks from work
  - medicine ball seats
  - going for walks during lunch breaks

- During leisure time:
  - making exercise fun / not a chore, encouraging further physical activity
  - active, fun events (e.g. rock climbing, adventure playgrounds)
  - playing non-competitive sports, to allow everyone to participate
  - encouraging family members to participate, too
- Transport improvements:
  - finding local gyms/parks to exercise in to reduce transport distance and costs
  - walking to work, instead of by car or bus, to save money and also increase phy
  - cycling relatively short distances, instead of using cars

Stopping Smoking

- nicotine products (e.g. patches, gum) – act as a replacement for the source of ni that satisfy cravings
- acupuncture – alternative medicine technique that uses the insertion of needles int endorphins, helping to satisfy cravings
- Quit kit support packs
- NHS smoking helpline
- NHS smoking services

Reducing Alcohol Consumption

- self-help groups – discussing drinking habits with people in a similar situation can he altogether. Self-help groups act as support networks.
- counselling – counselling aims to get to the root cause of drinking habits and can ac that need to be let out
- hypnosis – hypnosis aims to change the thinking processes behind drinking habits th
- alternative medicine (e.g. herbal remedies)

Stress Management

- relaxation methods (e.g. breathing techniques) –help to focus energy away from ne Physiological responses include lowered heart and breathing rates, which help to lo
- meditation – if done correctly, can provide both physical and mental relaxation, rem
- goal setting –uses targets to provide a person with motivation (to reach the targets). Th obstacles and stress. Small but frequent success (i.e. meeting targets) provides freque
- time management – can be used alongside goal-setting, to meet short-term goals, a accomplishment when completing smaller tasks
- assertiveness training – stress can build up if people feel they are not in control of th encouraging an individual to express their thoughts and emotions, to take control of
- increasing physical activity (can act to reduce stress)
- positive self-talk – being able to view different situations in a positive manner will a and approach difficult or stressful tasks with a positive attitude
- changing the work-life balance (e.g. spending more time at home) – stress can be ca important to separate these aspects of life, so that stress from one isn't carried over by taking regular breaks at work, increasing physical activity at home and talking to p
- alternative therapies or medicine

Activity 8 — Screening Processes for Training: PAR-Q

The lifestyle questionnaire should aim to question an individual, and should include refer following:

- alcohol intake
- diet
- time they have available
- financial situation
- jobs and occupation
- family commitments
- sleep patterns
- exercise levels

The physical activity readiness questionnaire should include reference to the following:

- Disclaimer – a statement which participants sign to agree to, stating that they unders to complete and any potential dangers of such participation. A disclaimer could includ
  - acknowledgement that participation in activity is compulsory and that they may ac any time
  - possible risks associated with activity (e.g. strain on cardiovascular system)
  - acknowledgement that the answers given in their lifestyle and PAR-Q are truth ability
  - acknowledgement that damages, injuries or other serious events are not the r gym instructor) (provided the incident is outside of their control)

- Questions included in the PAR-Q could include, but are not limited to:
  - Have you any previous history of heart conditions?
  - Do you suffer from high blood pressure?
  - Are there any medical reasons why you should not exercise (e.g. bone or joint
  - Do you suffer from back pain?
  - Are you pregnant?
  - Are you currently on any prescribed medication?
  - Are you aware of any other reason why you should not participate in physical a

- If you answered YES to any of the questions above….
  - e.g. *'Consult your doctor or physician before participating in this activity/course. The appropriateness of this activity/course for you and whether you can participate*

- If you answered NO to any of the questions above….
  - e.g. *'You can participate in this activity/course without seeking permission or advice fr*
  - The participant declaration to include:
    - acknowledgement that they have read the information on the form
    - place to print name and sign
    - place for the date
    - place for a witness to sign

Follow-up questions:

1.
   - If required, participants can be referred to a doctor.
   - It gives trainers or testers a general idea of how fit a person is.
   - Suggests whether the physical activity is suitable or dangerous for the particip
   - Trainers and testers should not endanger their participants (legal aspects).
   - Accept any other suitable answers.

2.
   - To get an image of the general health and well-being of an athlete
   - To identify any lifestyle factors that may influence athletic performance (e.g. s
   - Any other suitable answers

3.
   - Informed consent form – this is a legal document whereby the participant state to participate.
   - Data protection – data should be coded so that participants are unidentifia
   - Client confidentiality – athlete information and results should stay within the t information should be leaked to outside persons.

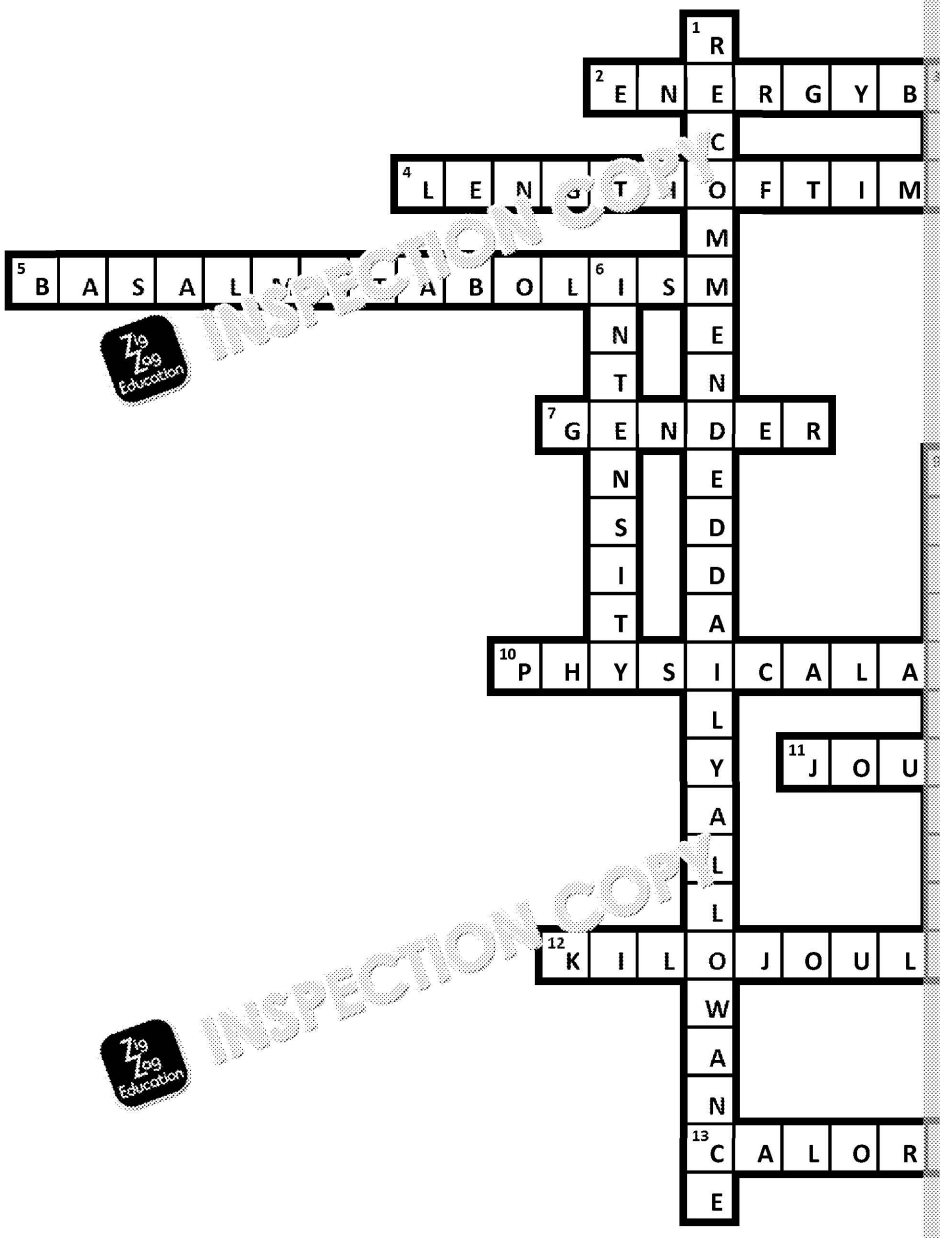
Activity 9 — Health Monitoring Tests: Test it!

Test	Equipment used	Instructions
Blood pressure	Blood pressure monitor	• Go to a quiet spot or room where you can ful take is at rest. • Roll the arm sleeve or cuff up to your upper a • Referring to the manufacturer's instructions, manually inflate let the monitor do this automatically if it can) • Slowly decrease the pressure in the sleeve. Note: Instructions will differ on whether a manual refer to equipment instructions.
Resting heart rate	Stopwatch (Heart rate monitor)	• Go to a quiet room and sit or lie down. • Have a partner locate your pulse (commonly i • Have them count the number of beats they fe and times this by four). • Make sure you do not count out loud as this ca
Body mass index	Scales Tape measure Calculator	• Weigh yourself (in kilograms). • Measure your height (in metres). • Divide your weight by your height. • Divide this value by your height again. • Compare the resulting number to normative
Waist-to-hip ratio	Tape measure	• Using a tape measure, measure the circumfer slimmest point. • Measure the circumference of your partner's gluteals (buttocks). • Divide the waist measurement by the hip me

Activity 10 — Interpreting the Results of Health Monitoring Tests: Interpreting Da

Students should accurately mark their results onto the relevant health range for each test against the following:

- Popula m. These are the benchmarks for normal health ranges.
  - No MI range – 18.5–25
  - Target blood pressure range is between 60/90 mm/Hg and 120/80 mm Hg.
  - Waist-to-hip ratio – males: between 0.90 and 0.95; females: between 0.80 and
  - Resting heart rate can vary by age and gender.
- Sports performers would be expected to have results that fall between elite athlete
  - Normal BMI range – 18.5–25 (this may vary depending on the sport. For exam classed as obese, despite being fit and healthy. Marathon runners may be cla being fit and healthy).
  - Target blood pressure range is between 60/90 mm/Hg and 120/80 mm Hg.
  - Waist-to-hip ratio – males: between 0.90 and 0.95; females: between 0.80 and
  - Resting heart rate can vary by age and gender.
- Elite athletes would be expected to have results near the top end. They would be b
  - Normal BMI range – 18.5–25 (this may vary depending on the sport. For exam classed as obese, despite being fit and healthy. Ma runners may be cla being fit and healthy).
  - Target blood pressure range is bet /5 mm/Hg and 120/80 mm Hg.
  - Waist-to-hip ratio – males ales: <0.75 (this is a guideline – some sp different weight
  - Res vary by age and gender.



Activity 12 — Components of a Balanced Diet: Greedy Chops

Steps 1–3

Carbohydrates (50%)	
Function	The main source of energy. They are broken down into glucose the fuel for some energy systems.
When and how are they used in sport?	Consumed before exercise for energy during exercise through energy drinks for quick release energy, and after exercise to re

Proteins (15%)	
Function	small source of energy. Aid tissue repair, reducing the recove Also help to stimulate muscle protein synthesis.
When and how are they used in sport?	Mostly consumed after resistance exercise in order to build mu

Fats (≤35%)	
Function	A major source of energy while exercising at low intensity. Fat glycogen. Following glycogen depletion, stored adipose tissue is
When and how are they used in sport?	Consumed prior to endurance exercise in order to provide an e exercise in order to replenish energy stores.

Minerals	
Function	Most common minerals include magnesium, sodium and calciu the minerals lost via sweating, increasing bone strength, maint maintaining metabolic processes and the immune system. Aid Accept other suitable answers.
When and how are they used in sport?	Mostly consumed before exercise as part of a balanced diet bu lost during and after exercise, e.g. electrolyte sports d includes sodium and calcium.

Vitamins	
Function	Most common vitamins include vitamins D, E and K. Functions system, fighting infections, increasing bone strength, blood reg efficiency, cell growth, haemoglobin synthesis, energy metabol
When and how are they used in sport?	Mostly consumed before exercise as part of a balanced diet.

Water	
Function	Prevents dehydration and heat illness, maintains optimal functi body temperature, maintains blood circulation, removes waste
When and how is it used in sport?	Consumed before, during and after exercise to maintain hydrat exercise in order to replace water lost as sweat. Hypotonic spo during exercise and hypertonic and isotonic drinks are consume stores as well.

Step 4: Below are example ... the hydration worksheet, covering the main spec suitable answ...

In hot and hu...nmates...

... cyclists should consume greater quantities of water to maintain the correct body temp temperatures the body cools itself through sweating, which leads to fluid loss. In humid maintain body temperature as sweating is not as effective, due to the high water conten

When training or competing in the summer...
... cyclists should ensure they are consuming enough fluids before, during and after train
dehydration, instead of treating it when it is too late to do so.

Race Strategies

- **Before the start of each race...**
  ... the cyclist should be fully hydrated. This allows them to start the race in optimal
  not fighting dehydration throughout the whole race.
- **During the races...**
  ... the cyclist should drink small volume s regularly to top up their fluid level
  and allows the body to deal with the intake of fluids (e.g. avoiding stitches, stomach
  of large volumes of water. Fluids taken during the race should give the cyclist an e
  (isotonic drinks).
- **Follow completion of each race...**
  ... the cyclist should consume fluids that help to replace fluids lost from the physica
  energy boost, to replace lost energy stores in the body (i.e. hypertonic drinks).

We must ensure that dehydration is avoided by our athlete, because it affects perform

- onset of exhaustion
- lack of cognitive ability (thinking skills)
- early onset of fatigue / extreme fatigue

The signs and symptoms of dehydration and hyperhydration to look out for:

- headaches and dizziness
- lack of urine production
- extreme fatigue
- dry mouth
- short and sharp brea
- vomiting or nausea

Activity 13 — Adapting Diets: Poster

Points that students should cover in the poster:

- Weight loss is achieved primarily by red e amount of fat in the body.
- Weight loss is achieved by cons calories than you are expending (weight l
  expenditure).
- Strength ing mes are used in conjunction with a weight loss programm
- Strengt g must be progressive to allow the body to gradually adapt (hypertr
- Athletes should consume less fats in their diets to promote weight loss.
- Carbohydrates can also be cut to a degree (e.g. sugars).
- Protein intake should be increased to promote muscle mass gain.
- Low-intensity aerobic exercise is the perfect intensity exercise for weight loss.

Follow-up question for Discussion:
Athletes who may want to lose or gain weight:

- boxers (to meet a weight category)
- jockeys (to reduce the weight the horse carries)
- weightlifting (greater body mass = greater power)
- other suitable examples

Some debate points that could be discussed:

Energy gels and bars

- (Positive) Provide a quick fix of carbohydrates to replenish energy stores.
- (Positive) Can be consumed before, during, or after an athletic event (e.g. before a
  after a long-distance cycle).
- (Negative) Energy boost is not immediate so nee
- (Negative) Only so much carbohydrate
- (Negative) The energy taken fr

Protein drinks

- (Positi
- (Positive
- (Positive) More easily consumed after physical activity than a large, protein-dense m
- (Negative) Protein shakes can cause bloating.
- (Negative) High-protein diets can cause an increase in urine production (and excreti

Carbohydrate loading

- (Positive) Ideal for aerobic, endurance athletes.
- (Positive) Maximises energy stores in the run-up to an event.
- (Negative) However, good planning is needed to optimise the effects, which may be
- (Negative) Can leave athletes feeling bloated.
- (Positive) Athletes will still need a top-up of carbohydrates during an endurance eve
  this need.

Sports drinks

- (Positive) Easy to digest.
- (Positive: Isotonic drinks) Used by aerobic athletes who n
  Typically made using 8 g glucose per 100 ml wate
- (Positive: Hypertonic drinks) Taken after
  during physical activity. Made of
- (Positive: Hypotonic dri
  boost. Typ
- (Negat
- (Negativ
  consequences if consumed more regularly than required.

Activity 15 — Components of Physical Fitness to be Trained: Be a Star for the Day

Students could put any of the following fitness components with each sporting example,

- Mo Farah – Aerobic endurance – The capability of the heart and lungs to supply oxy efficiently over a prolonged period of time.
- Usain Bolt – Speed – The ability to move a certain distance in a short period of time
- Chris Froome – Muscular endurance – The ability to repeatedly contract a muscle o without tiring.
- Zulfiya Chinshanlo – Strength – The abil[illegible]ercome a large resistance and exert
- Simone Biles – Flexibility – The [illegible]oduce a large range of movement at a jo

Follow-up Questions:

1. Body c[illegible]io[illegible]the make-up of a body represented by the relative amounts of
2.
   - Mo [illegible]rah – extremely low body fat and high lean muscle mass (slow-twitch fib performance as slow-twitch muscle fibres are best suited for aerobic events.
   - Usain Bolt – very low body fat. High amounts of lean muscle. This body type s requires strength and power for short amounts of time.
   - Chris Froome – very low body fat as he does not want to carry extra, unnecess amounts of lean muscle on his legs to provide power for sprint finishes.
   - Zulfiya Chinshanlo – high amounts of lean muscle and body fat. This is suited t mass creates an increased power output, used to lift greater weights.
   - Simone Biles – very low body fat and very high percentage of lean muscle. Th powerful anaerobic contractions, required in gymnastics.

Activity 16 — Skill-related Fitness Components: Match-up

Note: All of the sports will require some degree of each fitness component. Students sho
fitness components in each sport, or argue why they have matched a particular fitness co
answers given below:

- Sprinting – balance/coordination/power/reaction times
- Formula 1 – coordination/reaction time
- Tennis – agility/balance/coordination/reaction tim
- Ice skating – agility/balance/coordination/
- Boxing – balance/coordination/
- Rugby prop – balance/
- Football – coordination/power
- Balanc gymnastics) – balance/coordination/power

Speech points should include a definition of each fitness component, links to sporting ex
each fitness component is suitable for that sport.

- **Agility**
  - the ability to change direction at speed, while maintaining balance
  - e.g. football/rugby/hockey
  - e.g. a rugby player will need the ability to perform a sidestep (changing directi
    opponent and get past them.
- **Balance**
  - the ability to remain upright by keeping the centre of mass within the base of
    (stationary) or dynamic (while moving)
  - e.g. balance beam / floor routine (gymnastics) / surfing
  - e.g. a gymnast on a balance beam must keep their centre of mass within the bas
    balance beam). If their centre of mass falls outside the base of support, they wil
- **Coordination**
  - the ability to successfully control a e than one body part to create
    smoothly and efficiently
  - e.g. tennis/squash/ ersion
  - e.g. a tenni eus to coordinate their legs and arms at the same time.
    st e at the same time, their arms will move to prepare and execute a re
- **Reaction time**
  - the time taken to identify and respond to a stimulus and initiate their respons
  - e.g. sprinting (from the blocks) / game sports that require a response to oppor
  - e.g. a sprinter requires excellent reaction times to contract their leg muscles a
    the gun, to give them a good start and advantage over their opponents.
- **Power**
  - the ability to produce a large force in a short period of time
  - e.g. rugby/weightlifting/basketball/gymnastics
  - e.g. a basketball player requires power to forcefully contract their leg muscles
    an oncoming shot by an opponent.

Students should include the following points in their notes. They may additionally make reference to each training method is performed.

Interval training:

- Short periods of work
- Short periods between the exercise bout
- Intensity is altered, but is made of sets and reps
- Periods between exercise bouts can involve complete rest or light recovery

Advantages and disadvantages:

+ It improves the body's ability to recover from rapid bursts of exercise
+ Useful for games players
+ Improves ability to handle lactic acid through improved removal and increased tolerance
+ Can be used to improve power and anaerobic fitness
+ Fitness improvements can be made with relatively little time spent exercising
+ Can improve both aerobic and anaerobic fitness
– Physically demanding
– Requires high levels of motivation

Continuous training:

- Extended periods of work for at least 30 minutes
- Exercise sessions are performed at a continuous intensity
- Intensity: ≤70% VO_2 max

Advantages and disadvantages:

+ Used to improve aerobic endurance and muscular endurance
+ Useful for athletes who compete in endurance events such as marathon running
– Can become boring
– Not sport-specific
– Increased risk of overuse injuries

Fartlek training:

- Extended periods of work
- Exercise sessions can be performed at various intensities
- Exercise sessions can be performed on a variety of terrains

Advantages and disadvantages:

+ More varied than continuous training
+ Used to improve aerobic endurance and muscular endurance
+ Useful for athletes who compete in endurance events such as long-distance cycling
+ Useful for games players (e.g. rugby, hockey and football)
+ Can be sport-specific
+ Athletes can control the intensity and timing of training
+ Can be used to improve balance
– Requires access to different terrains
– Can't be performed in all weather conditions

Circuit training:

- Short periods of work performed at individual stations
- A range of exercises are performed at different stations
- Each station is completed to make the circuit
- Intensity is self-prescribed and dependent on the number and duration of stations

Advantages and disadvantages:

+ The stations can be tailored to the needs of the athlete
+ Used to improve muscular endurance primarily but can be used to improve a range of the exercises performed at each station
+ Skills can also be practised at stations to make it sport-specific
+ Avoids tedium as each circuit can be modified or changed
– Requires equipment and space

Pyramid sets:

- Gradually increasing the weight used in weight training then gradually increasing th

Advantages and disadvantages:

+ Lighter weights can act as a warm-up
+ Relatively safe as the body gradually adapts to changing weights
– If too hard, a pyramid set might be too hard for someone to complete, reducing the

Fixed resistance machines:

- Mechanical weight machines that can be altered to provide different weight resista

Advantages and disadvantages:

+ Safer than using free weights
+ Provide a variety of w... progression can be made by increasing resistance
– Too exp... fo... households

Free weights:

- Weights not constrained by a machine, such as dumbbells and barbells

Advantages and disadvantages:

+ Affordable for home and gym use
+ Can be used during dynamic movement, working different muscles
– Can be dangerous if weights used are too great (spotters are often required)

Pilates:

- The use of gentle or resistance exercises to increase core strength; it also focuses o movement

Advantages and disadvantages:

+ Most people can complete Pilates, even the elderly
+ Can be tailored and adapted to suit different people
– There is limited scientific evidence backing claims that Pilates dramatically improves

Yoga:

- Using stretches and holding positions to increase fl... co... strength and promo

Advantages and disadvantages:

+ Most people can complete yoga ... elderly
+ Can be tailored and adap... different people
– There is limited ... evidence backing claims that it dramatically improves hea

Gym-based ... s (plank, bridge, V-sit):

- The use ... gym equipment to increase core strength, similar to Pilates and yoga

Advantages and disadvantages:

+ Additional equipment providing variations in activities (e.g. exercise balls)
+ Use of different equipment and weights allows tailoring of activities to suit individu
– The use of additional weights may be unnecessary or unrealistic for some people (e

Resistance training:

- A form of training which utilises equipment, e.g. pulleys, resistance bands and para

Advantages and disadvantages:

+ It increases the effort which the athletes must exert in order to overcome the resist
+ Can improve strength, muscular endurance and power
– Requires specialist equipment which is expensive and not available to all athletes

Flexibility training:

- Performance of a range of stretching exercises

Advantages and disadvantages:

+ Static stretching and propriocep... ...muscular facilitation can improve flexibili
+ Increased flexibility can ... h... risk of injury
+ Increased ... at a joint can improve performance of a range of skills, e
– Ballisti... in... should be avoided as it can lead to injury

Students should identify the training zone they are working in and be able to establish w
component of fitness. Ideally students should be working at 70–80% of maximum heart

Continuous Training

Advantages

- Easy to complete in terms of instructions
- Suitable for most people, including the elderly or
- Little equipment required
- General increase in cardiorespiratory fitness

Disadvantages

- Can be
- Not alw
ort-specific activity

Fartlek Training

Advantages

- Intensity can be altered by changing speed or by using different environments
- Can be tailored to be more sport-specific
- Less tedious than continuous training
- Intensity can be controlled by the performing athlete
- Improves aerobic and anaerobic fitness

Disadvantages

- May be hard to complete in gyms or halls
- Requires motivation to keep going and changing to harder intensities

Interval Training

Advantages

- Athletes get some rest between exercises
- Improves both aerobic and anaerobic fitness
- The work-to-rest ration can be altered
individual athlete

Disadvantages

- The rest-to-work
e carefully monitored and controlled
- Athlete
for motivation following a rest period

Circuit Traini

Advantages

- Every circuit can be designed differently to focus on different components of fitnes
- The number of circuits/stations can be changed to suit the athletes
- Athletes get some rest between stations
- Stations can be made with little or no equipment
- Can be completed outside or inside

Disadvantages

- Careful planning must be undertaken to make the circuit suitable (e.g. avoiding a ci
should be well-balanced)
- Some circuits will require more specialised equipment

1. **Sets are:** the name given to a specific number or repetitions (reps); for example, on
2. **Reps are:** the number of times a specific activity is completed in a row, without rest particular weight is lifted, without rest.
3. • Fixed resistance machines
   • Free weights
   • Other suitable answer
4. The basic principle of streng ain, is **low** reps and a **low** number of sets and a h
   The basic principle o endurance training is **high** reps and a **high** number o

Pyramid Set isc ar Strength

The general s e of a pyramid set should show that at the greatest point of the pyra the lowest amount of reps (which works on muscular strength). At the bottom of the py more repetitions (which works on muscular endurance).

Students should provide an example of a pyramid set, for example:

- Set 1–15 reps – 50% of 1RM
- Set 2–12 reps – 60% of 1RM
- Set 3–10 reps – 70% of 1RM
- Set 4–8 reps – 80% of 1RM
- Set 5–6 reps – 90% of 1RM
- With two-minute rests in between

Set 1 should be at the bottom of the pyramid, as it involves the most reps.

Students should then annotate the diagram to indicate:

- Lighter weights at the beginning reduce chances of injury as the allow the muscles to
- Lighter weights at the beginning prepare muscles for xe on, allowing muscles to b
- Reduction in reps as weight increases, as it be or es harder to lift heavier weight.
- Set 1 focuses more on muscular st h e urance.
- Set 5 focuses more on ma str gth.
- Any other appro e ample.

Methods of for Muscular Endurance

Students shou dentify the ways in which each training method can be effective in trai could include, but are not limited to:

Circuit training:

- High reps and a high number of sets and a low weight
- Modification of stations / the circuit to include muscular endurance exercises
- Short rest period between stations

Fixed resistance machines and free weights:

- High reps and a high number of sets and a low weight

Activity 20 — Core Stability and Flexibility Training: Plan and Implement

Core Stability Training – training that aims to improve the strength of the muscles in and provide a strong foundation and base of support for the rest of the body.

Equipment:
- Free weights
- Fixed resistance machines
- Kettle-bell training
- Resistance bands
- Medicine balls

Methods:
- Yoga sessions
- Circuit training
- Pilates
- Gym-based activities

Instructions:
- Relevant answer based on equipment and methods used

Flexibility Training – training that aims to improve the range of movement at joints and t athletes to have greater movement of their body and also reduces the risk of injury.

Equipment:
- Resistance bands / stretching belts
- Partner / spotter
- Yoga / stretching mat
- Towels

Methods:
- Static stretching (act
- Dynamic stretching
- Proprioceptive neuro

Instructions:
- Relevant answer based on equipment and methods used

Follow-up Questions:

1.
   - **Pre-activity** – stretches that are performed before the start of activity, during a aim to slowly increase the length and therefore elasticity of muscle groups, in p
   - **Maintenance** – maintenance stretches are used by athletes as part of a cool-do reduce the effects of DOMS and slowly bring muscles back to their pre-stretche
   - **Developmental** – developmental stretches aim to cause long-lasting increases achieved by gradually stretching muscles further in each flexibility training ses

2. Yes
   - Allows greater flexibility to reduce the risks of injury (i.e. muscle strains)
   - Helps maintain range of motion to better execute skills
   - Makes movement more efficient – giving energy for other parts of performance
   - Reduces aches and pains, i.e. back pain

Activity 21 — Speed and Agility Training Methods: Plan and Implement

Speed Training – training that aims to improve the rate at which an athlete can move fro important in nearly all sports in some form; for example, in 100 m sprinting, during hock opponent, or in basketball, to quickly go from an offensive attack to defence.

Equipment:

- Resistance bands
- Parachutes
- Bungee ropes
- Resistance tyres
- Hill (for hill sur

Methods:

- Hollow sprints – alter[illegible]en maximum sprinting and walking or jogging. It
- Accelera[illegible]or[illegible]wly increasing the speed of running using incremental dist jogging[illegible]aximum speed is met.
- Interval [illegible]g – working with varying length and intensity of exercise, alongside r work at high intensities for short periods of time, before resting for a short period.
- Resistance drills – any drill that requires the athlete to work against a force when sp running becomes significantly easier and the athlete can run at greater speeds.

Instructions:

- Relevant answer based on equipment and methods used
- Participants should be working at **90–100** per cent of heart rate max, with a work:re minutes of rest between sets.

Agility Training – training that aims to improve the speed an athlete can move at, while c balance. This allows athletes to move around the sporting arena at greater rates and ca such as sidesteps in rugby.

Equipment:

- Dependent on exercise or training completed. Normal instrumentation are cones, a

Methods:

- Speed, agility and quickness (SAQ) drills – drill[illegible]th[illegible]t w[illegible]on short, sharp, powerful commonly used in sports.
- Sport-specific drills. For exam[illegible], n[illegible]n athlete run at 100% towards a coach, b which direction to run [illegible]of them) at the last moment. This trains the ath quickly in[illegible]or[illegible]opponent's actions.

Instructions:

- Relevant answer based on equipment and methods used

Activity 22 — Balance and Coordination Training Methods: Match-up

Step 1

Static Balance

- Maintaining the centre of gravity within the base of support
- Balance while remaining stationary
- Can be practised by balancing on stable surfaces
- Can be tested using the Stork Balance Test

Dynamic Balance

- Maintaining the centre of gravity within the base of support
- Maintaining balance while moving
- A key factor in good agility
- Can be practised by balancing on unstab[illegible]ces
- Balance boards or exercise ball[illegible]d to improve this type of balance

Step 2

- Coordin[illegible]th[illegible]ity to use more than one body part at the same time – TRUE.
- Coordina[illegible]he ability to use one or more body parts at the same time – FALSE.
- The sit-and-reach test is used to determine coordination levels of an athlete – FALSE
- Coordination allows complex movements or skills to be completed – TRUE.
- The wall-toss test is used to determine coordination levels of an athlete – FALSE.
- The sit-up test is used to determine coordination levels of an athlete – FALSE.
- Coordination allows a squash player to run to the ball and bring their arm back, ready

Activity 23 — Reaction Time Training Methods: On Your Marks, Get Set...

Example answers and key considerations given below:

- Reaction time is important in sports as it allows athletes to quickly respond to **stimu** between winning and losing a sprint, or reacting too late to a cue in football, leadin
- Nearly all examples of reaction times in sport are in response to an **external** stimul bodies).
- External stimuli can be further categorised as being e**uditory** or **visual**.
- Athletes respond to **auditory** stimuli by hearing a noise that acts as a cue to respon responding to the gun sound.
- **Auditory** stimuli can also be used in many other sports, such as in squash, when a p bounces off walls, but sometimes to locate the fast-moving ball and respond by hittin
- **Visual** stimuli occur in more open games, such as rugby, hockey and football. For ex an oppo making a break for the line, must respond to this and cut them off be

Activity 24 — Power Training Methods: Email

Example answer given below.

To whom it concerns,

I am writing to inform you of the use of plyometric training in power-based sports, suc Gymnastics. Plyometric training is a training method widely used to ***improve explosive*** *p* ***component of fitness*** *in many sports, such as gymnastics, it should be strongly considere training programmes. This is because plyometrics can easily be* ***adapted to be sport-spe*** ***muscle groups****, that are vital to successful performance – meeting the needs of each ind*

Gymnastics uses explosive power in nearly all events; for example, during floor routines, bars, to name a few. ***Plyometrics can target both the upper a*** ***ver body*** *and so all training, regardless of their discipline.*

Plyometric training improves explosi ***sing short, maximal explosive exercises*** *allowing eccentric and conc* *to be greater than pre-training. This improves* ***strength and*** *muscles are stretched (for example, when landing from a ju power for th* *ing jump.*

Plyometric training ***is easy and cheap to run.*** *Common equipment used in plyometrics* ***hurdles, jump ropes and benches****, for lower-body plyometrics. These pieces of equipmen* ***Medicine balls*** *can be used for upper-body plyometrics as the athlete is required to prod rate, to move the medicine ball.*

Don't hesitate to contact me with any queries you have.

Yours sincerely

Activity 25 — Principles of Fitness Training Programmes — Goals: Be SMARTER

1) **Specific** Goals should not be vague but should describe what you want to a
Measurable Goals should be tracked in order to see your progress as you comp
Achievable It should be possible to reach your goal.
Realistic The goals should be something that is possible given your individu
time you can dedicate to training or the facilities and equipment a
Time-related It should be clear when your goals should be achieved by.
Exciting It should be fun and engaging in order to maintain interest.
Recorded It should be possible to track your progress in order to identify wh

2) a) Measurable
b) Realistic
c) Exciting
d) Specific
e) Achievable
f) Recorded
g) Time-related

3) Evidence of the goal, demonstrating the SMARTER principle, including the following
- Specific, e.g. achieving a certain time
- Measurable, e.g. a fitness test that can be completed
- Achievable, i.e. not trying to achieve too much
- Realistic, i.e. have the required resources in order to achieve the goal
- Time-related, i.e. a clear time period is set in which to achieve the goal
- Exciting, e.g. including a range of activities during training
- Recorded, i.e. progress is tracked

Activity 26 — Principles of Fitness Training Programmes — FITT: Plan It!

The following definitions for the FITT principles should be provided:
- Frequency – the number of times you train per week (how often)
- Intensity – how hard you train during each training session (how hard)
- Time – the length of each training session ('how long')
- Type – the method of training during each training session (what method)

Students should accurately match their goals in line with the correct principles of train

Activity 27 — Principles of Fitness Training Programmes — Additional Principles: C

Students should identify the correct training principle and apply it to the situation with a
given below:
1. **Overload** – the weight should be gradually increased so that you are always stressi
2. **Progression** – overload helps to keep advancing improvements – if progression is n
performance is shown, the athlete needs to train harder.
3. **Rest and recovery** – athletes should get enough rest to fully recover from exercise b
again. This helps to avoid fatigue and injury.
4. **Specificity –** try to incorporate the ball into running drills so that you are practising b
5. **Adaptation** – similar and frequent exercises should be completed to promote adap
hypertrophy and repetition of exercises make it easier for the body to complete sim
6. **Reversibility** – try not to take long breaks from training during the season or perfor
7. **Variation** – it is important to complete a variety of exercises to avoid tedium and m
8. **Individual needs** – it is important to tailor the training programme to the requireme
training is beneficial for the sport that they are training for.

- **Macrocycle –** a long-term goal or underlying aim that runs through a training progr
  mesocycles, a macrocycle lasts from one to four years and is usually an outcome go
  aim of macrocycles is to have peak performance levels at the end of the period.
- **Mesocycle** – mesocycles are one-month to six-month goals that work on a broad ta
  tennis serve). Mesocycles are often implemented with work - est periods, whereby
  weeks, followed by a rest period. Mesocycles are ma of umerous microcycle
- **Microcycle** – microcycles are short periods (fi e t te days) that work on very spec
  the FITT principles of training, to ma se ive training adaptions. For example
  of improving their tennis se vou se microcycles to work on specific aspects, s
  striking of the ball

Training Dia
17th July 201

- Mesocycle
- 'My aim for the next six months is to improve on my aerobic fitness', is a medium-te
  completed within 24 weeks. It is therefore not an immediate goal but an underlyin

4th August 2016

- Microcycle
- 'I concentrated on improving the accuracy of my long passing', shows that a specific s

18th September 2016

- Macrocycle
- 'Coach gave us a target at the start of the season... made sure that we all maintain
  strive to reach top position in the league', shows that a continuous, long-term (one
  aimed for throughout the season.

12th December 2016

- Mesocycle
- 'I've been working on my defensive play ove a month now' and 'all I've done
  set pieces', show that training c s number of mesocycles over the period of

7th May 2017

- Microc
- 'We hav en working on our defensive positions in the last week', shows that the
  aspect of performance over the last week.

21st May 2017

- Macrocycle
- Peaking
- 'This season's training' and 'we won the championship, just like we had always wan
  to a number of mesocycles that have targeted a season-long goal.
- 'We also reached our potential just at the right time', shows that they peaked at the