



# **North Independence:**

## **PE – Student Booklet**

### **KS4 BTEC**

#### **Unit 1- Fitness for Sport and Exercise**

##### **Contents:**

- I. Quizzes – 10 credits each
- II. Reading Task – 50 credits
- III. Research Task – 30 credits
- IV. Website Task – 80 credits
- V. Long Answer Questions – 100 credits
- VI. Videos – 50 credits

## I. Quizzes

Complete the quizzes.

*10 credits.*

### Multiple Choice Quiz

1. Which component of fitness will hollow sprints help to develop?
  - a. Agility
  - b. Speed
  - c. Flexibility
  - d. Muscular Endurance
  
2. Which of the following is another name for aerobic endurance?
  - a. Muscular Fitness
  - b. Muscular Endurance
  - c. Aerobic Power
  - d. Aerobic Fitness
  
3. Chris is interested in training for a marathon and has been advised that he should do continuous training to prepare for it. Which of the FITT principles does this advice relate to?
  - a. Frequency
  - b. Intensity
  - c. Time
  - d. Type
  
4. Which component of fitness will resistance training improve?
  - a. Flexibility
  - b. Aerobic endurance
  - c. Muscular endurance
  - d. agility

5. In a resistance training session, exercises should be performed in a particular order. Which of the following would be an example of the correct order of exercises?
- Calf raise, squat, bicep curl, seated row.
  - Squat, seated row, calf raise, bicep curl.
  - Bicep curl, calf raise, squat, seated row.
  - Seated row, bicep curl, calf raise, squat.
6. The agonist is:
- The working muscle that produces the movement.
  - A stabiliser for the origin of the prime mover.
  - Also known as the secondary mover.
  - An insertion point where a muscle attaches to a bone.
7. Which of the following methods can be used to improve aerobic endurance?
- Fartlek
  - Interval
  - Circuit
  - Plyometrics
8. What are the units of measurement for VO<sub>2</sub> max?
- ml/kg/min
  - kg/m<sup>2</sup>
  - kgm/s
  - kg/w
9. What type of speed training would be most appropriate for a hockey player?
- Interval training
  - Resistance training
  - Hollow sprints
  - Acceleration sprints

10. Which of the following is a characteristic of interval training?
- a. Periods of work followed by periods of rest.
  - b. Running over different terrains
  - c. Working for 30 minutes with no breaks.
  - d. Accelerating over a 20 minute run.
11. An individual reports an RPE of 13 on the Borg Scale. What is their approximate heart rate?
- a. 120
  - b. 130
  - c. 140
  - d. 145
12. Which of the following aspects of fitness is least important to a boxer?
- a. Power
  - b. Muscular endurance in the arms
  - c. Balance
  - d. flexibility
13. Which of the following is an example of static balance?
- a. A footballer dribbling a ball.
  - b. A headstand
  - c. A backflip
  - d. A sprinter competing in the 100m
14. Identify the pieces of equipment required for the sit and reach test.
- a. Ruler, Tape measure, CD player
  - b. CD player, cones
  - c. Sit and reach box, chalk
  - d. Sit and reach box, Ruler

15. What does the vertical jump test measure?

- a. Anaerobic power in the arms
- b. Anaerobic power in the legs
- c. Agility in the legs
- d. General fitness

16. Maja plays netball. Which of the following tests is least relevant to her sport?

- a. Illinois Agility Run test
- b. 35m Sprint
- c. Vertical jump test
- d. Sit and Reach Test

17. Which of the following statements about fartlek training is not correct?

- a. Fartlek training means speedplay in Swedish
- b. Fartlek training is continuous but with changes of pace.
- c. Fartlek training contains period of work and rest.
- d. Fartlek training is used by team sports players

18. Which two types of physical fitness is power made up of?

- a. Strength
- b. Aerobic Endurance
- c. Flexibility
- d. Speed

19. What are the units for speed?

- a. Kg/min
- b. m/s
- c. W
- d. KG

20. If a group of people run for 30 minutes on a treadmill at the same pace, what method of training are they using?

- a. Fartlek
- b. Interval
- c. Hollow Sprints
- d. Continuous

### Fill in the Gap Quiz

1. \_\_\_\_\_ is important for a golfer to be able to swing further.
2. \_\_\_\_\_ speed is the most important for a long jumper.
3. \_\_\_\_\_ is important for a basketball player to dodge around other players.
4. The \_\_\_\_\_ Borg scale is one way of determining exercise intensity.
5. \_\_\_\_\_ is the principle of making your body work harder.
6. It is good to allow for \_\_\_\_\_ and \_\_\_\_\_ between training.
7. \_\_\_\_\_ is when your fitness decreases because you stop training.
8. \_\_\_\_\_ is the test for flexibility.
9. There are two ways to measure aerobic endurance- \_\_\_\_\_ and \_\_\_\_\_.
10. Tricep dips, skipping and sit ups are good examples of stations for \_\_\_\_\_ training.
11. \_\_\_\_\_ training is when you have periods of work followed by periods of rest.
12. Plyometric training includes \_\_\_\_\_ and bounding to improve power.
13. The type of stretching that you do with a partner to increase the range of movement is called \_\_\_\_\_.

14. An advantage of the \_\_\_\_\_ is that a whole team can do it at the same time.

15. Passive stretching is when you stretch using \_\_\_\_\_.

16. \_\_\_\_\_ strength is producing movements in quick succession.

17. To improve maximum strength you should train at \_\_\_\_\_ of your 1 rep max.

18. \_\_\_\_\_ is how accurate a set of results are – do they measure what you set out to?

19. \_\_\_\_\_ is being able to repeatedly carry out the same test with the same results.

20. The skin fold test is named after \_\_\_\_\_

### **Open Ended Question Quiz**

1. Give the definition of balance.
2. What is the difference between muscular strength and muscular endurance?
3. Give two examples of how variation can be applied in training to improve aerobic endurance.
4. Give three examples of stations suitable to use for circuit training.
5. Colin is 34 years old. Calculate Colin's target heart rate zone for continuous training.
6. State one way in which plyometric training could be incorporated in the training routine of a rugby player?
7. Outline one difference between acceleration and hollow sprints.
8. Give two reasons why it is important to allow a recovery period after weight training.
9. State one reason why it is important to record baseline fitness scores.
10. Discuss how it may be possible for a test to be valid but not reliable.
11. Give one advantage of BMI testing over skinfold testing.
12. Name three methods that can be used to estimate body composition.

13. Why would the press up test not be an appropriate measure of abdominal endurance?
14. Define Vo2 max and give the unit of measurement used.
15. Explain why you think a hurdlers score in the sit and reach test would be high?
16. Explain why a high level of agility is important for a rugby player?
17. Describe what PNF stretching is and how its carried out.
18. Describe the role of the cardiorespiratory system
19. How is the aerobic target zone calculated?
20. Explain how a sprinter requires reaction time.

## II. Reading Task

Read and summarise the key ideas within the article – ideally in ten points. Create 5 questions relating to both the article and your specification.

*50 credits.*

<https://www.ptdirect.com/training-delivery/client-assessment/the-pro2019s-and-con2019s-of-fitness-testing>

<https://www.livestrong.com/article/356650-the-components-of-fitness-used-in-football/>

<https://www.independent.co.uk/life-style/health-and-families/bmi-stop-measuring-weight-height-health-measure-fitness-fat-a7894951.html>

<https://www.mayoclinic.org/healthy-lifestyle/fitness/in-depth/exercise-intensity/art-20046887>

### **III. Research Task**

Research and find an article which supports or disclaims the ideas in the original article. Write a paragraph to summarise your findings. In this paragraph you must provide a sporting example to support your findings.

*30 credits.*

#### **IV. Website Task**

Website task: Select a website and design a power point presentation you could give to a group of students just beginning the BTEC Sport course. Include of each slide key notes you could discuss.

*80 credits.*

<https://www.brianmac.co.uk/eval.htm>

<http://www.teachpe.com/training-fitness/training-theory/principles-of-training>

[http://www.bbc.co.uk/schools/gcsebitesize/pe/exercise/1\\_exercise\\_principles\\_rev1.shtml](http://www.bbc.co.uk/schools/gcsebitesize/pe/exercise/1_exercise_principles_rev1.shtml)

<https://www.btecpe.com/unit-1>

## V. Long Answer Questions

Choose a longer answer question from the question bank below- each is worth 8 marks. Write a response to the question. You must include a plan of what you are going to include, a key word board and your final written answer which is completed in full sentences and paragraphs.

*100 credits*

1. Body Mass Index (BMI) can be used to find out if a sports performer is an ideal weight. Discuss the use of BMI in determining whether a sports performer is at their ideal weight.
2. Fitness tests are used to determine baseline fitness levels and set realistic goals for improvement. The Step test is a popular fitness test used by sports coaches and performers. Discuss the use of the step test in determining the level of fitness of a performer.
3. An athletics coach is deciding whether to use the forestry step test or the multi-stage fitness test to gain the best results for the aerobic endurance of the athletics group. Discuss whether the athletics coach should use forestry step test or the multi stage fitness test to assess the aerobic endurance of the athletics group.
4. Free weights and circuit training can both develop strength in performers. Discuss the different factors an invasion games coach would consider when choosing to implement one of those training methods.

## VI. Videos

Produce a video that shows the topic chosen in a practical way. The video must include key sporting examples and clear explanations.

Try to include the whole unit topic in one video.

*50 credits per topic.*

- Fitness Testing
- Principles of training
- Components of skill related fitness
- Components of health related fitness
- Methods of training.

