TASK: To complete RO42 Coursework using the textbook and the following template

### LO1: Task 1: The principles of training

Before you are able to assist the coach they have asked you to demonstrate your knowledge of the principles of training.

Describe the principles of training in a sporting context.

**Principles of Training**

**Progression**

1. Describe progression in the principles of training?

Success criteria to achieve full marks:

* include definition of **progression/pressive overload**
* example of what would happen to your training if you did not overload
* describe what each letter in **F.I.T.T.A** means
* examples of how you would use F.I.T.T.A. for your sport

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**Specificity**

1. Describe specificity in the principles of training?

Success criteria:

* include definition of **Specificity**
* provide a sporting example related to your coursework

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**Reversibility**

1. Describe Reversibility in the principles of training?

Success criteria:

* include definition of reversibility/regression
* name the 3 different ways you can suffer from reversibility/regression (using **examples)**

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**Moderation**

1. Describe Moderation in the principles of training?

Success criteria:

* include definition of moderation,
* name the 4 types of moderations, using an **example** for each

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**Variance**

1. Describe Variance in the principles of training?

Success criteria:

* include definition of Variance,
* name the different ways to avoid boredom using **examples** of how you would apply it for your sport

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### LO2 Task 2: Training methods.

The coach has asked you to give a presentation to the group on the different training methods and how they target different fitness components. Your presentation must include the difference between aerobic and anaerobic exercise and examples of each. The presentation must also consider different components of fitness and their training methods.

**Aerobic and Anaerobic exercise**

**Aerobic exercise**

1) Describe Aerobic exercise

**Success criteria:**

* Include scientific definition
* Include word equation
* Duration and intensity
* Sporting examples

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**Anaerobic exercise**

2) Describe **anaerobic exercise**

**Success criteria:**

* Include scientific definition
* Include word equation
* Duration and intensity
* Sporting examples

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**Components of Fitness**

**Strength**

3) Describe and explain the fitness component ‘Strength’

 **Success criteria:**

* include scientific definition
* Sporting Examples
* What would happen if you didn’t have this fitness component in a particular sport

**Power**

4) Describe and explain the fitness component ‘Power’

 **Success criteria:**

* Include scientific definition
* Sporting Examples
* What would happen if you didn’t have this fitness component in a particular sport

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**Agility**

5) Describe and explain the fitness component ‘Agility’

 **Success criteria:**

* include scientific definition
* Sporting Examples
* What would happen if you didn’t have this fitness component in a particular sport

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**Balance**

6) Describe and explain the fitness component ‘Balance’

 **Success criteria:**

* include scientific definition
* Sporting Examples
* What would happen if you didn’t have this fitness component in a particular sport

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**Flexibility**

7) Describe and explain the fitness component ‘Flexibility’

 **Success criteria:**

* include scientific definition
* Sporting Examples
* What would happen if you didn’t have this fitness component in a particular sport

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**Muscular Endurance**

8) Describe and explain the fitness component ‘Muscular Endurance’

 **Success criteria:**

* include scientific definition
* Sporting Examples
* What would happen if you didn’t have this fitness component in a particular sport

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**Cardiovascular Endurance**

9) Describe and explain the fitness component ‘Cardiovascular endurance’

 **Success criteria:**

* include scientific definition
* Sporting Examples
* What would happen if you didn’t have this fitness component in a particular sport

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**Specific training methods for each of the fitness components**

**Cardiovascular training methods**

10) Describe the 3 cardiovascular training methods: Continuous training, interval training and fartlek training:

**Success criteria for all 3 training methods:**

* Include definition & state which fitness component this method improves
* Describe the changes to the body (aerobic exercise, Oxygen uptake)
* Example of what the training method looks like

 \* Other fitness components that can be improved in combination

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**Resistance training methods**

11) Describe the 3 resistance training methods: Resistance training using machines, free weights and circuit training

**Success criteria for all 3 training methods:**

* Include definition & state which fitness component this method improves
* Describe the changes to the body (hypertrophy)
* Example of what the training method looks like
* \* Other fitness components that can be improved in combination

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**Power training methods**

12) Describe the 3 power training methods: Plyometric training, Interval training and Acceleration sprint training

**Success criteria for all 3 training methods:**

* Include definition & state which fitness component this method improves
* Describe the changes to the body (eccentric and concentric contraction)
* Example of what the training method looks like
* \* Other fitness components that can be improved in combination

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**Flexibility training methods**

13) Describe the 2 flexibility training methods: Static stretching (active and passive) and Dynamic stretching

**Success criteria for all 3 training methods:**

* Include definition & state which fitness component this method improves
* Describe the changes to the body
* Example of what the training method looks like
* \* Other fitness components that can be improved in combination

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**Agility training methods**

14) Describe the Agility training method: SAQ

**Success criteria for all 3 training methods:**

* Include definition & state which fitness component this method improves
* Describe the changes to the body
* Example of what the training method looks like
* \* Other fitness components that can be improved in combination

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**Balance training methods**

 15) Describe the 2 balance training methods: Balance boards and exercise boards

**Success criteria for all 3 training methods:**

* Include definition & state which fitness component this method improves
* Describe the changes to the body
* Example of what the training method looks like
* \* Other fitness components that can be improved in combination

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**Top tip:** The learner should ensure that they use appropriate examples and describe them in detail. They should also explain how the training methods target fitness components both individually and in combination.

### LO3: Task 3: Fitness tests

For LO3, learners must be able to conduct fitness tests safely. Consideration of protocols, guidelines and safe practice for the fitness tests must be demonstrated by the learner; however where teacher prompting or intervention is necessary to ensure safety this should be provided but also reflected in the assessment.

Learners must consider a number of fitness tests for different components but also be taught a number of tests that measure the same area of fitness so that when producing evidence, they can choose a test or tests that they feel are the most appropriate for the results they wish to obtain. Interpretations of the results must take into consideration the suitability of the test to the subject, comparison of results across a number of tests and whether the tests were carried out in the ideal way.

Fitness tests should include consideration of:

**Tests which assess fitness**

Protocols and guidelines set down by the fitness industry (e.g. does the performer need to seek medical advice before performing the tests? )

* 1. How does the test procedure ensure accuracy?

Success Criteria:

* Name the medical screening questionnaire before your client takes part in tests
* What happens if your client’s questionnaire responses raise **fitness** concerns – i.e. have not exercised in a long time (see model PAR-Q questionnaire)
* What happens if your client’s questionnaire responses raise **health** concerns – i.e. a heart condition (see model PAR-Q questionnaire)
* Name the fitness tests your client will be doing

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**Tests for each component of fitness**

Test result scores:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Component of fitness** | **Fitness test used** | **Result** | **Normative data comparison** | **Submaximal/Maximal** |
| Flexibility | Sit-and-reach test |  |  |  |
| Balance | Standing Stork test |  |  |  |
| Strength | The Wall squat sit test |  |  |  |
| Power | Standing long jump test |  |  |  |
| Agility  | Illinois Agility test |  |  |  |
| Muscular endurance | 30 second sit-up test |  |  |  |
| 1-minute press up test |  |  |  |
| Cardiovascular endurance | Multistage fitness test |  |  |  |

2. Describe how to conducts tests for each component of fitness and how to conduct the test

**Flexibility Test: Sit-and-reach Test**

Success Criteria for each test:

* Name the tests and describe the component of fitness for the test
* Is this a Maximal or sub-maximal effort test (describe why)?
* Equipment used
* Ste-by-step method to deliver the test (Protocols)
* How to score the test
* Normative data table for the test (tables can be found: <https://www.topendsports.com/testing/tests/>)
* Client’s score (and how they scored compared to the normative data table)

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**Balance Test: Standing Stork Test**

Success Criteria for each test:

* Name the tests and describe the component of fitness for the test
* Is this a Maximal or sub-maximal effort test (describe why)?
* Equipment used
* Ste-by-step method to deliver the test
* How to score the test
* Normative data table for the test (tables can be found: <https://www.topendsports.com/testing/tests/>)
* Client’s score (and how they scored compared to the normative data table)

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**Strength: The Wall Squat [sit] Test**

Success Criteria for each test:

* Name the tests and describe the component of fitness for the test
* Is this a Maximal or sub-maximal effort test (describe why)?
* Equipment used
* Ste-by-step method to deliver the test
* How to score the test
* Normative data table for the test (tables can be found: <https://www.topendsports.com/testing/tests/>)
* Client’s score (and how they scored compared to the normative data table

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**Power Test: Standing Long Jump Test**

Success Criteria for each test:

* Name the tests and describe the component of fitness for the test
* Is this a Maximal or sub-maximal effort test (describe why)?
* Equipment used
* Ste-by-step method to deliver the test
* How to score the test
* Normative data table for the test (tables can be found: <https://www.topendsports.com/testing/tests/>)
* Client’s score (and how they scored compared to the normative data table

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**Agility Test: Illinois Agility Test**

Success Criteria for each test:

* Name the tests and describe the component of fitness for the test
* Is this a Maximal or sub-maximal effort test (describe why)?
* Equipment used
* Ste-by-step method to deliver the test
* How to score the test
* Normative data table for the test (tables can be found: <https://www.topendsports.com/testing/tests/>)
* Client’s score (and how they scored compared to the normative data table

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**Muscular Endurance Test 1: 30-second sit-up Test**

Success Criteria for each test:

* Name the tests and describe the component of fitness for the test
* Is this a Maximal or sub-maximal effort test (describe why)?
* Equipment used
* Ste-by-step method to deliver the test
* How to score the test
* Normative data table for the test (tables can be found: <https://www.topendsports.com/testing/tests/>)
* Client’s score (and how they scored compared to the normative data table

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**Muscular Endurance Test 2: One-minute Press up [push up] Test**

Success Criteria for each test:

* Name the tests and describe the component of fitness for the test
* Is this a Maximal or sub-maximal effort test (describe why)?
* Is this a Maximal or sub-maximal effort test (describe why)
* Equipment used
* Ste-by-step method to deliver the test
* How to score the test
* Normative data table for the test (tables can be found: <https://www.topendsports.com/testing/tests/>)
* Client’s score (and how they scored compared to the normative data table

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**Cardiovascular Endurance test: Multistage Fitness Test**

Success Criteria for each test:

* Name the tests and describe the component of fitness for the test
* Is this a Maximal or sub-maximal effort test (describe why)?
* Equipment used
* Ste-by-step method to deliver the test
* How to score the test
* Normative data table for the test (tables can be found: <https://www.topendsports.com/testing/tests/>)
* Client’s score (and how they scored compared to the normative data table

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**Maximal or sub-maximal**

3. a) Describe what is meant by Maximal effort and Submaximal effort test

 b) Name which test in your coursework were Maximal effort or Submaximal effort

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**Testing sequence**

4. Name the testing sequence you have followed (e.g. always conduct tests in the same order to aid validity of results, the order in which fitness tests are performed can affect the outcome of further tests).

Success criteria:

* Describe the order in which they will be doing their test (warm up, and testing order, then cool down)

 > Why will this give them more valid and reliable results

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**How to interpret the results of fitness tests**

5. How is data interpreted?

Success Criteria:

* Describe a normative data table and how do you compare results.
* Describe valid in a test and provide an example.
* Describe reliability in a test and provide an example.

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**Top tip: The evidence for this task could be provided in the form of a written report, spreadsheets/graphs; feedback sheets and a witness statement.**

### Task 4: Design a fitness training programme

Following your assessment of the individual performer you have been asked to develop a fitness training programme for them. You will monitor the performer and evaluate the programme, making recommendations for improvement where necessary.

**Learning Outcome 4 is assessed in this task**

For this task the learner should design a fitness training programme to address specific needs identified in Task 3 including:

**Design a fitness training programme**

**Details about the client’s programme is for**

1. a) Describe the details of your participant.

**Success criteria for the question:**

* **Brief information on the clients sports level**
* **Age, Weight/Height, Any recent or current injuries, Health problems, Access to facilities.**

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**Aims of the training programme**

1. Describe the purpose of a ‘client progress review’ (e.g., an interview used to set goals and re-evaluate if any changes need to be made to the training programme)

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1. Create your own Sports Participation questionnaire

Success criteria: In your answer, consider:

* Example of questions you can create:
* **Participants fitness weaknesses**
* **What is the participant’s medical history**
* **Does the participant have any current injuries**
* **What are the aims of the training programme**
* **What type of training should be used**
* **What goals does the participant hope to achieve**
* **How long should the training programme last**
* **What type of equipment [if any] is required**
* **How can the participant reflect on how training is going/has gone**
* **When should the participant retest their fitness to see if improvement has occurred.**

(use the above to help you create aims)

**2. a)** clarifying the aims of the training programme

**Success criteria for the question:**

* **Linked to their sport, which component of fitness does your client want to improve (refer to test results)**
* **How will improving this component of fitness improve their sports performance**

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**Realistic goals of the training programmme**

b) Set realistic goals which can be measured

**Success criteria for the question:**

* **Use S.M.A.R.T (specific, measurable, achievable, realistic and time-bound) targets to set realistic goals.**

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**Duration of the training programmme**

c) How long will this training programme last to achieve their targets

**Success criteria for the question:**

* **How long will this training progrmame last?**
* **What will happen once the training programme ends (will you repeat the test to compare)?**
* **What days are best for your client (what days do they already train/what day to their compete)?**

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d) Complete 6-week training programme

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday |
| Week 1 |  |  |  |  |  |  |  |
| Week 2 |  |  |  |  |  |  |  |
| Week 3 |  |  |  |  |  |  |  |
| Week 4 |  |  |  |  |  |  |  |
| Week 5 |  |  |  |  |  |  |  |
| Week 6 |  |  |  |  |  |  |  |

**Suitability of activities**

e) How are activities suitable for your client

Success criteria:

* Are the activities linked to the fitness component they are aiming to improve (consider the sport they play)?
* Which training methods for these components of fitness are you using?
* Consider which training days they rest and why?

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**Organisation of activities**

f) How are training activities organised for your client

Success criteria

* Does the training programme include the principles of training?
* How have you made your client’s training varied (using *variance*)
* How have you made your client’s training include rest days to prevent overtraining/reversibility
* How have you made your client’s training adaptable (using *adaptability)*
* How have you made your client’s training progressive overload (using *FITTA – frequency, intensity, time, type, adherence*)

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**Evaluation**

**3. Evaluate the effectiveness of the training programme**

Measurement

1. Measurement: what happened at the end of the 6-week training

Success criteria:

* What will you do to ensure progress is shown (explain why you will do the same tests again)
* Input data for re-doing all the test after 6-weeks.
* Was there an improvement when you re-did the tests (compare to the normative data again)?

1. **Improvement (question and answers from the post-training ‘client progress review’):**Complete a ‘client progress review’ again with new post-training programme questionnaire (e.g. did you adhere to the programme, what did they list about the programme? etc)?

Reflection

**i. Results: were the results of the programme acceptable (if not, why)?**

Success criteria:

* Recall the fitness test which they had to re-do? (improvement in scores? If no improvement were made, what would you do next)
* Were the aims of the programme met? (use the normative data scores to indicate success/failure) – use the SMART targets you set to see if you were successful

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**ii. Boredom/variety:**

Success criteria:

* **Recall the definition of variance.**
* **How did you use variance to ensure no aspects of the training programme**was boring?

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**iii. Intensity:**

**Success criteria:**

* **Was the programme too easy, causing progression to be limited or slow**?
* **Recall Progressive overload?**
* **How did you use FITTA in your training programme?**

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**iv. What would you do differently in future (relating to the training programme)**

**Success criteria:**

* What changes would you make to the 6-week training plan/training methods?
* Was 6-week enough time?
* Would you add more variety in future? Give examples

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