SISFFIT003 Instruct fitness programs

ASSESSMENT FOR SISFFIT003

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Date of assessment submission	08102018

Trainer/Assessor's name	Kymberley Sant
Date of assessment marking	15102018
Outcome for units	☐ Competent ☒ Not Yet Competent

TASK INSTRUCTIONS

- The assessment for these units of competency consists of the following:
  - **Quiz:** You are required to complete a series of multiple choice questions to demonstrate your knowledge and skills.
  - **Short answer activities:** You are required to provide short written responses to a series of activities to demonstrate your knowledge and skills.
  - **Case studies:** You are required to provide written responses to a series of case study scenarios to demonstrate your knowledge and skills.
  - **Practical task:** You will be required to put your knowledge and skills into practice, through observed tasks and work experience.
- At times, you will be provided with a specific context to which you must respond, otherwise it is anticipated that you will use a scenario of your choosing to provide context to the task.

QUIZ

QUESTIONS	CORRECT
1. Which of the following provide the best definition of 'overload'? Select all that apply. ☒ Placing additional demands on the body to ensure consistent improvement ☒ Placing more weight on the bar every set ☐ Ensuring physiological improvement by gradually increasing training load	☐
2. What is muscular endurance? ☐ The ability to sustain repeated contractions ☐ The ability for a muscle to never stop working ☐ Working with oxygen and carbohydrates to produce non-stop energy ☒ The amount of force a muscle produces in one instant	☐
3. What is ROM an indication of? ☐ Strength ☒ Balance ☐ Flexibility ☐ Speed	☐
4. Age, sex, goals, occupation and diet are some areas to establish when considering a client's… ☒ Screening ☐ Individuality ☐ Progression ☐ Programming	☐
5. Initially, which of the following should be included in a fitness program? ☐ Weights, Running, Swimming ☒ Resistance, Cardiovascular, Flexibility ☒ Crossfit, Stretching, Recovery ☐ Curls, Chin ups, Rowing	☐
6. Select three (3) key variables that produce overload. ☒ Frequency ☒ Weight ☐ Intent ☒ Duration	☒

7. What does RPE stand for? ☐ Rating personal excellence ☒ Rating personal experience ☐ Rate of perceived exertion ☐ Resistance program expectations	☐
8. What are the 4Rs of resistance overload? ☒ Repetitions, Rest, Recovery, Repeat ☐ Repetitions, Resistance, Rate, Rest ☐ Resistance, Rotation, Resting, Regulation ☐ None of the above	☐
9. Generally, which of the following is the best type of exercise for beginner clients? ☐ Isolation ☒ Easy ☐ Squats ☐ Compound	☐
10. What is rate? Select all that apply. ☒ The speed or tempo of eccentric movement ☐ The speed or tempo of concentric movement ☐ The length of pause in a movement	☐

Outcome for Quiz	☐ Satisfactory ☒ Not satisfactory
Trainer/Assessor comments	

SHORT ANSWER ACTIVITIES

ACTIVITY 1

Define the following terms, identifying their importance to fitness training and programming.

Specificity	the observation that the adaptation of the body or change in physical fitness is specific to the type of training undertaken. Quite simply this means that if a fitness objective is to increase flexibility, then flexibility training must…
Progressive overload	The progressive overload principle basically states: In order for a muscle to grow, strength to be gained, performance to increase, or for any similar improvement to occur, the human body must be forced to adapt to a tension that is above and beyond what it has previously
Contraindications	A contraindicated exercise is defined as “known to be risky.” It is deemed risky, because it weakens vertebral discs, ligaments, and tendons that may be damaged at a later time or injured at the time of performance. The most common area of the body that is abused is the spine.
Isolation exercise	Isolation exercises help you fix muscle imbalances. For example, squats
Split programming	A split routine is when workouts are divided up by muscle groups. Here are some examples: 2 day split: Monday - Chest/Shoulders/Triceps. Tuesday - Back/Biceps/Legs.
Dynamic flexibility	Dynamic stretching is ideal as the core of a warm-up routine for several reasons: It activates muscles you will use during your workout. For example, a lunge with a twist is a dynamic stretching exercise that engages your hips, legs, and core muscles. ...
DOMS	Delayed onset muscle soreness (DOMS) is the pain and stiffness felt in muscles several hours to days after unaccustomed or strenuous exercise. The soreness is felt most strongly 24 to 72 hours after the exercise. ... The other is acute muscle soreness, which appears during and immediately after exercise.
Maximal heart rate	is recommended that you exercise within 55 to 85 percent of your maximum heart rate for at least 20 to 30 minutes to get the best results from aerobic exercise. The MHR (roughly calculated as 220 minus your age) is the upper limit of what your cardiovascular system can handle during physical activity.
Training matrices	The Matrix training system, originally created by Ron Laura, focuses on a range of full and partial repetition movements within sets to stimulate muscle growth.
Super-sets	The number of reps and sets you do with an exercise depends on a number of factors including how much weight you're using, the muscle groups you're working, and your personal fitness level, explains Kennedy
Pre-fatigue	Pre-exhaust, as the name implies, is pre-fatiguing or pre-tiring a certain muscle of a body part (e.g., chest, legs, deltoids) using an isolation or "single-joint" exercise first and then finishing with one or two compound or "multiple-joint" movement(s).
Interval training	Interval training is a type of training that involves a series of low- to high-intensity workouts interspersed with rest or relief periods. The high-intensity periods are typically at or close to anaerobic exercise, while the recovery periods involve activity of lower intensity.

Outcome for Activity 1	☐ Satisfactory ☒ Not satisfactory
Trainer/Assessor comments	Please review your answers as indicated in red. Josh please be careful not to plagiarise your answers- please do not copy and paste word for word from the internet. You will learn more if you use your own wording.

ACTIVITY 2
It is integral that a thorough screening and testing process is undertaken prior to the writing of an exercise program. a) Why is this an important process? b) What is the most important factor when beginning the program creation process?

Importance of screening and testing process
To know what the client wants to do with his body so you write a program out for him
Most important factor when beginning
What's the clients age, height, weight, heath

Outcome for Activity 2	☐ Satisfactory ☒ Not satisfactory
Trainer/Assessor comments	Please go into more detail for both of your answers.

ACTIVITY 3
Muscular strength and muscular endurance are outcomes of specific training methods. a) What specific variables need to be manipulated in a training program to get either muscular strength or endurance? Discuss the differences in programming that would have to occur to achieve either of these desired outcomes. b) Is it possible to write a program that would achieve maximal results for these two (2) components of fitness at the same time?

Manipulating variables
Running Muscle work Cardio
Programming for both components
No, you can't achieve **maximum results** because you can't run and lift weights at the same time because it will take the energy out of you if you go back for another set so the answer is no because you can run while lifting weights you either do one or the other

Outcome for Activity 3	☐ Satisfactory ☒ Not satisfactory
Trainer/Assessor comments	Please go into more detail for question 1- talking about how to program for each. Please review your answer for question 2.

ACTIVITY 4
Consider the training methods involved with aerobic and anaerobic systems. a) Identify and describe two (2) methods of training that would best train a client to improve their cardiovascular endurance (aerobic system). b) Identify and describe two (2) methods of training that would best train a client to improve their anaerobic system. c) Describe why the methods in a) and b) are so different. d) What training variables are manipulated to achieve the best results for these components of fitness?

Aerobic system training methods
Method 1: Work on more cardio
Method 2: Run to the gym from the clients place
Anaerobic system training methods
Method 1: .30 minutes low/moderate intensity cycling, swimming or jogging without change in intensity
Method 2: .Run of two minutes at mod/high intensity, followed by two minutes at low intensity (active recovery) repeated for 30 minutes
Differences in methods
With aerobic exercise oxygen is carried through your breath to the muscles giving them the energy needed to sustain the effort. Oxygen is not present with anaerobic exercise. Exercise requires energy. When we exercise aerobically our bodies use glycogen and fat as fuel.
Achieving best results
In an interval session, high-intensity periods of work are interspersed with rest intervals. In this way athletes can cover more distance at a high intensity than they could if they worked continuously. Because interval training is intense, it is a great method for improving both aerobic and anaerobic fitness

Outcome for Activity 4	☐ Satisfactory ☒ Not satisfactory
Trainer/Assessor comments	Please review your answers for **Aerobic system training methods** and **Anaerobic system training methods.** Also go into a little more detail for **Achieving best results** question, talking about programming for each training methods.

ACTIVITY 5
Explain the effects of different exercises on the following major body systems: • Nervous • Skeletal

Nervous
Not only does exercise increase the production of new neurons in the hippocampus, it also increases the production of glial cells, which are the brain's support network: These cells have protective effects and support the function of neurons, and they are produced throughout the brain
Skeletal
Exercise of specific muscles can often result in hypertrophy in the opposite muscles as well, a phenomenon known as cross education. Increases in muscle mass are not the only long-term effect of exercise. With sufficient training the metabolic capacity of a muscle can change, delaying the onset of muscle fatigue

Outcome for Activity 5	☐ Satisfactory ☒ Not satisfactory
Trainer/Assessor comments	Please make sure your answers are your own work Josh. Please review answering the **different types** of exercise and how they affect both major body systems.

CASE STUDIES

CASE STUDY 1

Mark is an 18 year old who has some experience (less than 6 months) with resistance training. He is not interested in cardiovascular training, but has listed in his goals that he wants to reduce body fat and improve his general feeling of wellbeing. Mark is a non-smoker, but drinks most weekends. His other listed goals include improve strength and growth.

Mark is interested in training three (3) times per week for up to 90 minutes per session. He will be training with a training partner, who is of similar experience. Mark is currently working as an apprentice carpenter, and complains of tightness in his lower back.

Respond to the following points:

a) Consider what you should do with Mark before he even enters the gym:
   - Identify some general advice you could give Mark with regards to meeting his goals. Consider the signs and symptoms of training intolerance.
   - Would you recommend Mark to an Allied Health Professional (AHP) before commencing work with him?

b) Consider the most appropriate training style for Mark:
   - Is it a good idea for Mark to completely ignore cardiovascular training?
   - With his listed goals, is resistance training alone going to be the best method to achieve them?
   - Suggest a basic circuit training session that Mark could use to keep up his cardiovascular fitness while still suiting his preferences. Calculate Mark's maximum heart rate (roughly calculated as 220 minus his age) and include the rate of perceived exertion in your description.

c) With Mark's goals in mind, create a program that best suits his current experience and time commitment to training. Use the *Fit to Learn Program Card* template.

Before entering the gym
General advice Run one a week for half an hour than do something strength workouts after the run and for the next 2 days.
AHP recommendation No, because he don't have no elderly problems and his not a smoke but his is quite big which doesn't matter anyway.
Training style
Ignoring cardiovascular training No because if he wants to lose weight he much ride or run once a week to lose weight and keep fit.
Resistance training alone Yes because he will be building muscle down on his lower back on the bones.
Basic circuit training session Take shorter breaks and higher repetitions will keep your heart rate up.

FIT TO LEARN PROGRAM CARD					
Name	Joshua flett				
Trainer	Unknown				
Date	05-09-18				
Goals/Aims	Build muscle				
Contraindications	--				
Session length	45 minutes				
Exercise	**Sets**	**EPC**	**Reps**	**%1RM/Weight**	**Rest**
Squat	*3*	*202*	*8-10*	*70%*	*60 sec*
Glute bridges	3	202	10-15	70%	30 secs
Seated row	3	202	10-15	70%	30 secs
Lat pulldown	3	202	10-15	70%	30 secs
Dumbbell row	3	202	10-15	70%	30 secs
Back stretches	--	--	--	--	--
Hamstring strechering	--	--	--	--	--
--	--	--	--	--	--
--	--	--	--	--	--

Cardiovascular training method	**Time/Distance**	**Level/Resistance/Intensity**
Running on treadmill	10mins over 5k	Level 10 Intensity 5
Riding a exercise bike	5mins over 3k	Level 5 Intensity high

Cool down	1k run
Stretches	Leg stretches/ Triceps stretcher/ Bicep stretches/ back strechers

Outcome for Case Study 1	☐ Satisfactory ☒ Not satisfactory
Trainer/Assessor comments	A good try Josh. Please retry taking a little more care with your answers.

CASE STUDY 2

Refer to a pre-exercise health screening you have conducted with an individual of the general public (e.g. Case Study 3 of *SISFFIT001, SISFFIT006 & SISXCCS001* Workbook).

Respond to the following points:

a) Use this information to create an exercise training program that suits the needs and goals of the individual. Use the *Fit to Learn Program Card* template.
b) From the exercise program created, select five (5) movements to examine further (include at least one body weight movement). Identify the muscles targeted by the movement as well as the joint action the movement encompasses.
c) Write a 300 word justification of your client's fitness program. Be sure to discuss:
   - Exercise selection
   - Exercise order
   - Connection to the client's goals
   - Programming requirements for balance and coordination
   - The importance of rest, EPC, %1RM, Sets
   - How you, as a trainer, can contribute to the ongoing fitness and health of your client over the long term
   - What you would change six (6) months in to your client's training, to ensure continued improvements and progressions
d) Plot the progressive overload that will exist for your client in both their cardiovascular and resistance training, using the table provided. Begin with Week 1 information and show how, over the course of six (6) weeks, you will adapt this training to ensure the client is continually going to improve their fitness and be challenged by your program.

FIT TO LEARN PROGRAM CARD					
Name					
Trainer					
Date					
Goals/Aims					
Contraindications					
Session length					
Exercise	**Sets**	**EPC**	**Reps**	**%1RM/Weight**	**Rest**
Squat	*3*	*202*	*8-10*	*70%*	*60 sec*

Cardiovascular training method	Time/Distance	Level/Resistance/Intensity

Cool down	
Stretches	

Exercise	Muscles targeted	Joint action
Example: *Calf raise*	*Gastrocnemius, Soleus,* *Tibialis Anterior*	*Ankle: Dorsi and Plantar* *Flexion*

Program justification

RESISTANCE EXERCISE						
Exercise	**Week 1**	**Week 2**	**Week 3**	**Week 4**	**Week 5**	**Week 6**
Example: Calf Raise	*Reps: 10 Sets: 3 %1RM: 70%*	*Reps: 12 Sets: 3 %1RM: 75%*	*Reps: 8 Sets: 3 %1RM: 75%*	*Reps: 10 Sets: 3 %1RM: 80%*	*Reps: 12 Sets: 3 %1RM: 85%*	*Reps: 8 Sets: 4 %1RM: 80%*

CARDIOVASCULAR EXERCISE						
Exercise	**Week 1**	**Week 2**	**Week 3**	**Week 4**	**Week 5**	**Week 6**
Example: Treadmill	*Time: 20 minutes Level: 4 Incline: 0%*	*Time: 25 minutes Level: 4 Incline: 3%*	*Time: 30 minutes Level: 5 Incline: 3%*	*Time: 15 minutes Level: 6 Incline:3%*	*Time: 20 minutes Level: 6 Incline: 3%*	*Time: 30 minutes Level: 7 Incline: 0%*

Outcome for Case Study 2	☐ Satisfactory ☒ Not satisfactory
Trainer/Assessor comments	Not answered

PRACTICAL TASK

You are required to have a suitable observer verify your ability to complete the following tasks. These tasks may be simulated or real.

TASKS		VERIFIED

A.	Over a period of at least eight (8) hours you are to plan, document, implement and evaluate five (5) fitness programs to suit clients' health-related goals and three (3) circuit training sessions with interrelated components. Each program/session must be developed during a separate client contact session, across which you are to complete the following:
	• Advise client of outcomes of pre-exercise health screening procedures
	  ○ Refer client to medical or allied health professionals, as required
	• Select an appropriate area for the delivery of circuit training sessions, assemble resources and check equipment for safety and maintenance requirements. Research and document the facilities' policies and procedures with regards to:
	  ○ Overcrowding
	  ○ Ventilation and/or climate control
	  ○ Hygiene
	  ○ Participant to instructor ratio
	  ○ Emergency
	  ○ Standards of personal presentation
	  ○ Participants' clothing and footwear
	• Demonstrate, explain and provide clear, supportive instruction for the following, including sets and reps, and program types (such as matrices, super-sets-, pre-fatigue and interval training):
	  ○ Cardiovascular exercises
	  ○ Dynamic warm-up and cool-down components
	  ○ Resistance exercises (i.e. squat, static lunge, push-up, triceps dips, prone back extension, shoulder press, abdominal crunches, bent over row, lateral raise, modified dead lift, prone hover)
	  ○ Flexibility exercises (i.e. static and dynamic stretches)
	• Use a variety of standard equipment for resistance and cardiovascular training (e.g. free weights, machines, proprioception and stability training equipment). Take into consideration the number of participants, documenting a floor plan illustration of your equipment layout to set out the circuit program.
	• Provide guidance on injury prevention strategies specific to client needs and the program
	• Monitor/evaluate exercise program at appropriate intervals:
	  ○ Monitor client participation and performance to identify signs of exercise intolerance
	  ○ Monitor clients' rate of perceived exertion
	  ○ Observe loads lifted and adjust as required
	  ○ Request feedback from clients
	  ○ Respond to clients experiencing difficulties and answer questions as required
	• Modify programs for clients, addressing at least three (3) of the following:
	  ○ Technical requirements
	  ○ Changing needs due to fitness adaptations
		☐

○ Changing goals ○ Client needs/objectives/likes/dislikes ○ Technical difficulty adjustments of exercises • Complete client record forms and document session plans including identified modifications/adjustments needed) • Review own performance and identify areas needing improvement, emphasis or attention in future sessions	

Outcome for Practical Task	☐ Satisfactory ☐ Not satisfactory
Trainer/Assessor comments	