

SISFFIT003 Instruct fitness programs



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ASSESSMENT FOR SISFFIT003

Student name	
Date of assessment submission	Click here to enter a date.
Trainer/Assessor's name	
Date of assessment marking	Click here to enter a date.
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	Implies specific modes of training will produce results that have little transfer to other systems
Progressive overload	Training that places extra demands client's system above and beyond the amount that their body is used to; must have overload to have maximal gains in the training program Often achieved through changing frequency, intensity, duration or type of training.
Contraindications	Contraindications are exercises that could cause harm or would be detrimental to your health or physical well-being. Doctors or AHP clearance should be sought before re-introducing into your client's exercise program.
Isolation exercise	Exercises that work a specific muscle across one joint, i.e. Bicep Curl.
Split programming	Involves splitting a program of exercises, performing half 2 days a week and the other half on 2 different days. Involves more exercises and sets Spreads workout over 4 days rather than 3
Dynamic flexibility	Dynamic flexibility can be used as a stretch for a warm-up or to increase range of motion, core temperature and nervous system activity preparing the body for the session. An example of a Dynamic flexibility stretch is walking leg kicks.
DOMS	DOMS stands for Delayed onset muscle soreness and is the pain and stiffness felt in muscles several hours to days after intense or strenuous exercise. The soreness is felt most strongly 24 to 72 hours after the exercise.
Maximal heart rate	The Maximal Heart Rate is roughly calculated as 220 minus your age and is the upper limit of what your cardiovascular system can handle during physical activity. It 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.
Training matrices	Training method consisting of full and partial rep movements for example top half reps, bottom half reps finishing with full reps within a set to stimulate a difference response to lifting weights.
Super-sets	When two exercises are performed in a row with little or no rest in between- usually two different muscle groups.
Pre-fatigue	Training an isolation movement first then finishing with one or two compound exercises to force the muscle to work twice as hard and fatigue.
Interval training	Training program in which movements are performed in alternating periods of high and low activity.

Outcome for Activity 1	☐ Satisfactory ☐ Not satisfactory
Trainer/Assessor comments	

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 determine the Client's health profile, training base line for goal setting and experience level as well as special considerations and injuries to assist with exercise programing.

Most important factor when beginning

When creating a Fitness program ensure it effectively and efficiently meets your clients stated fitness goals and it takes into consideration the needs of your client, building upon their weaknesses and enhancing their strengths. Ensure your Client has doctor/ AHP clearance if necessary before commencing training.

Outcome for Activity 2

- ☐ Satisfactory
☐ Not satisfactory

Trainer/Assessor comments

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

1. Choice of exercise
2. Order of exercise
3. Number of sets
4. Rest period lengths
5. Intensity
6. Repetition speed
7. Training Frequency
8. Specificity Concept:

Endurance= <70% 1 RM, Reps 12-20, Sets 2-3, Rest 20- 30 Seconds

Muscular Strength= 80-100% RM, Reps 1-8, Sets 3-5, Rest 2- 5 minutes.

Programming for both components

Yes, writing a program that incorporates muscle strength exercises and some that involve muscle endurance is important to round out your client's training.

Outcome for Activity 3

- ☐ Satisfactory
☐ Not satisfactory

Trainer/Assessor comments

ACTIVITY 4

Consider the training methods involved with aerobic and anaerobic systems.

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

Aerobic system training methods

Method 1:

Jogging at moderate intensity (60- 80% of maximum heart rate) for at least 20- 30 minutes.

Method 2:

30 minutes low/moderate intensity cycling or swimming without change in intensity.

Anaerobic system training methods

Method 1:

High Intensity Interval Training (HIIT) - a training method that is programmed to work at one hundred percent effort through quick, intense bursts of exercise, with only a short, sometimes active, recovery period.

Method 2:

Sprint Training- short bursts of sprinting at maximum effort for up to two minutes to activate the fast twitch muscle fibres and utilise the anaerobic system.

Differences in methods

Aerobic system simply means "with oxygen" involving or improving consumption of oxygen in the body, therefore enhancing respiratory and circulatory efficiency. Aerobic movements require slow-twitch muscles for activity over a long period of time (greater than two minutes to hours). Anaerobic system means "without oxygen" does not require oxygen to generate force. Anaerobic exercises use fast-twitch muscles for short bursts of intense activity lasting only brief durations of time (ranging typically from a few seconds to up to two minutes).

Achieving best results

Aerobic system- longer and consistent work periods at 60- 80% of maximum heart rate.

Anaerobic system- shorter rest periods, work effort prescribed at 80- 100%, bursts of work under 2 minutes to ensure the Aerobic system is not engaged.

Outcome for Activity 4

- ☐ Satisfactory
☐ Not satisfactory

Trainer/Assessor comments

ACTIVITY 5

Explain the effects of different exercises on the following major body systems:

- Nervous
- Skeletal

Nervous

Aerobic exercise is the most beneficial type of exercise on the nervous system. Exercise contributes to brand new brain cells and it increases the number of pathways for oxygen, energy, and to remove waste from the brain. Exercise improves cognitive function and makes you more alert (especially in active children) as well as reduces stress.

Skeletal

Weight-bearing exercises or resistance training stimulates an adaptive response in the body that leads to increased bone density becoming stronger and flexible and making bones less susceptible to fractures. When exercising for long periods of time, ligaments become stronger and more resistant to injury- exercises such as dancing, aerobics, hiking, jogging, jumping rope, stair climbing and tennis are recommended to help maintain strong bones.

Outcome for Activity 5

- ☐ Satisfactory
☐ Not satisfactory

Trainer/Assessor comments

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

Assessor's discretion

AHP recommendation

Assessor's discretion

Training style

Ignoring cardiovascular training

Assessor's discretion

Resistance training alone

Assessor's discretion

Basic circuit training session

Assessor's discretion

FIT TO LEARN PROGRAM CARD					
Name	Assessor's discretion				
Trainer					
Date					
Goals/Aims					
Contraindications					
Session length					
Exercise	Sets	EPC	Reps	%1RM/Weight	Rest
<i>Squat</i>	3	202	8-10	70%	60 sec
Cardiovascular training method		Time/Distance		Level/Resistance/Intensity	
Cool down					
Stretches					

Outcome for Case Study 1	☐ Satisfactory ☐ Not satisfactory
Trainer/Assessor comments	

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	Assessor's discretion				
Trainer					
Date					
Goals/Aims					
Contraindications					
Session length					
Exercise	Sets	EPC	Reps	%1RM/Weight	Rest
<i>Squat</i>	3	202	8-10	70%	60 sec
Cardiovascular training method	Time/Distance			Level/Resistance/Intensity	
Cool down					
Stretches					

Program justification
The program is designed to address the needs of the community by providing a safe and secure environment for the residents. The program is designed to provide a safe and secure environment for the residents, and to provide a safe and secure environment for the residents.

RESISTANCE EXERCISE						
Exercise	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
<i>Example: Calf Raise</i>	<i>Reps: 10 Sets: 3 %1RM: 70%</i>	<i>Reps: 12 Sets: 3 %1RM: 75%</i>	<i>Reps: 8 Sets: 3 %1RM: 75%</i>	<i>Reps: 10 Sets: 3 %1RM: 80%</i>	<i>Reps: 12 Sets: 3 %1RM: 85%</i>	<i>Reps: 8 Sets: 4 %1RM: 80%</i>
Assessor's discretion						
CARDIOVASCULAR EXERCISE						
Exercise	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
<i>Example: Treadmill</i>	<i>Time: 20 minutes Level: 4 Incline: 0%</i>	<i>Time: 25 minutes Level: 4 Incline: 3%</i>	<i>Time: 30 minutes Level: 5 Incline: 3%</i>	<i>Time: 15 minutes Level: 6 Incline: 3%</i>	<i>Time: 20 minutes Level: 6 Incline: 3%</i>	<i>Time: 30 minutes Level: 7 Incline: 0%</i>
Assessor's discretion						

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

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