

**SISFFIT013 Instruct exercise to
young people aged 13 to 17
years**



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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.
 - **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. In young adults, how much of the skeleton is actual bone (versus cartilage)? ☒ Nine-tenths ☐ One half ☐ Two-thirds ☐ One-tenths	☐
2. Currently, what is the #1 health concern regarding teens? ☐ Bullying ☒ Weight management, obesity ☐ Concussions ☐ Injury	☐
3. This 'osteochondroses' is an overuse injury which creates an inflammation of the bone at the bottom of the patella, where the tendon from the tibia attaches. ☒ Larsen-Johansson disease ☐ Frielberg's disease ☐ Sever's disease ☐ Panner's disease	☐
4. This 'osteochondroses' is a painful condition mostly affecting the 2nd metatarsal head. ☐ Larsen-Johansson disease ☒ Frielberg's disease ☐ Sever's disease ☐ Panner's disease	☐
5. Which activity does not provide a significant increase in bone density at the spine and hip in prepubescent children? ☒ Swimming ☐ Running ☐ Jogging ☐ Jumping	☐
6. When designing resistance training programs for teens, which of the following is not true? ☐ Focus on correct technique ☒ Use higher volume, lower intensity ☐ Make sure the child has proper posture when performing the exercise ☐ Use lower volume, higher intensity	☐

7. This type of 'osteochondroses' is a painful knee condition that tends to affect adolescents. ☐ Sever's disease ☐ Frielberg's disease ☒ Osgood-Schlatter disease ☐ Panner's disease	☐
8. This type of 'osteochondroses' is a common heel injury in kids, due to inflammation of the growth plate in the heel. ☒ Sever's disease ☐ Frielberg's disease ☐ Osgood-Schlatter disease ☐ Panner's disease	☐
9. By what age is the child's brain nearly 100% of its adult weight? ☒ 6 years ☐ 8 years ☐ 10 years ☐ 12 years	☐
10. Which of the following activities would an 'introverted' teen most likely least enjoy? ☐ Skateboarding ☒ Being on a footy team ☐ Personal training ☐ Running	☐
11. This 'osteochondroses' is a rare but painful bone condition linked to overuse of the elbow. ☐ Larsen-Johansson disease ☐ Frielberg's disease ☐ Sever's disease ☒ Panner's disease	☐
12. This injury is a compression injury in the shaft of the bone. ☐ Sprain ☐ Strain ☒ Growth plate injury ☐ Tendonitis	☐

13. What are the signs and symptoms of exercise intolerance?

Select all that apply.

- ☒ Subtle breathing problems
- ☒ Shortness of breath out of proportion to what is expected for a given task
- ☒ Muscle weakness and tingling
- ☒ Look like they are uncomfortable doing the exercise

☐

14. Compared to adults, choose the correct answer with regards to the physiological differences / changes in adolescents/teens.

☐

Children and adolescents	Higher	Lower
Exercise tolerance time	☐	☒
Blood flow to working muscles	☒	☐
Lactic acid production	☐	☒
Maximal heart rates	☒	☐
LDH Activity	☐	☒
Sweating rate	☐	☒
Sweating threshold	☒	☐
Aerobic capacity	☐	☒
Skin temperature	☒	☐
Cardiac output / stroke volume	☐	☒
Peak power	☐	☒
Metabolic heat of locomotion	☒	☐
Anaerobic capacity	☐	☒
Oxygen carrying protein in their blood	☐	☒

Children and adolescents	Faster	Slower
Acclimatisation to heat	☐	☒
Metabolism	☒	☐
Recovery rate	☒	☐
Respiration rate	☒	☐
Rise in core temperature	☒	☐

Children and adolescents	More efficient	Less efficient
Respiratory system	☐	☒

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

SHORT ANSWER ACTIVITIES**ACTIVITY 1**

Safety is of utmost importance when working with clients. Respond to the following:

- List three (3) safety factors to be considered when delivery exercise programs to adolescents/teens.
- Identify three (3) reasons that can contribute to injury when working with adolescents/teens.
- Identify at least one (1) safety consideration/risk associated with each piece of equipment listed when working with adolescents/teens.

Safety factors

- Staff ratios
- Behavioural or medical problems
- Duty of care responsibilities
- 'Sunsafe' policy
- Staff ratio for excursions
- High risk activities
- Weather
- Location of activity

Injury factors

- Inadequate skill and physical preparation
- Overtraining
- Biomechanics and exercise technique
- Physical and mental preparation
- Fatigue and recovery

Equipment	Safety considerations / Risks
Cycle ergometers	• Inadequate familiarisation • Poor maintenance • Inappropriate protocols • Incorrect seat height
Outdoors	• Be aware of the 'elements' • Access to toilets and first aid supplies
Rowing machine	• Incorrect technique
Strength training / resistance equipment	• Too heavy weights • Poor technique • Repetition range too low • Lack of stabilisation for joint structure
Treadmill	• Inappropriate safety bars (too high) • Incorrect protocols when conducting a test • Incomplete maintenance

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

ACTIVITY 2

It is important to abide by legal requirements when working with clients. There are additional considerations that also apply for clients under the age of 18 years.

- a) Identify the 11 principles of the *Privacy Act 1988*. Discuss how this Act impacts on your ability to work with those under 18 years of age.
- b) Identify the relevant child protection legislation for your State or Territory. Summarise the requirements of the law and describe how this will affect you working with those under the age of 18 years.
- c) Identify at least one (1) way that you could gain parental or carer consent for participation in an exercise program.

Principle 1	Manner and purpose of collection of personal information
Principle 2	Solicitation of personal information from individual concerned
Principle 3	Solicitation of personal information generally
Principle 4	Storage and security of personal information
Principle 5	Information relating to records kept by record keeper
Principle 6	Access to records containing personal information
Principle 7	Alteration of records containing personal information
Principle 8	Record-keeper to check accuracy etc. of personal information before me
Principle 9	Personal information to be used only for relevant purposes
Principle 10	Limits on use of personal information
Principle 11	Limits on disclosure of personal information
Impacts	
Personal trainers must be aware they are collecting sensitive information about the client and treat it so.	

Child protection legislation

This answer will depend on the State / Territory on which the individual lives. Most areas require that anyone who works with children have a police check.

Consent

Sign an informed consent document

Outcome for Activity 2	☐ Satisfactory ☐ Not satisfactory
Trainer/Assessor comments	

ACTIVITY 3

Planning is essential when developing exercise programs. Consider the following:

- a) List three (3) possible needs or goals that a 13-17 year old client may want to achieve.
- b) Given an example of one (1) open-ended question and one (1) closed question you would ask a 13-17 year old when conducting a pre-exercise health screening.
- c) Identify at least six (6) exercise implications of age and stages of growth and developments that a personal trainer must be mindful of when developing and instructing exercise to young people.
- d) What are the common baseline functional capacity or fitness assessments that should be used on clients who are 13-17 years of age? Give an example of each one.
- e) You have conducted a pre-exercise health screening on a 15 year old and discovered a few issues (including high blood pressure, some postural deviations, gait issues, and unhealthy eating habits). Identify the medical or allied health professional/s you would consider referring your client to.

Needs or goals

- Lose weight
- Gain muscle
- Develop skills for a specific sport
- Tone up

Open question

What kind of physical activity / sports do you like to do?

Closed question

Have you ever used weights before?

Age and stages of growth and developments

- Changes in growth rate
- Effect of exercise on growth and development
- Social development
- Physiological characteristics of the child through developmental stages
- Session structures for different ages and/or abilities
- Coordination and motor development
- Communication and instructional skill difficulties
- Behavioural change and social needs
- Exercise requirements for different stages of development

Functional capacity or fitness assessments

- Cardiovascular: beep test, 1.6km run/walk
- Strength: 1RM strength test
- Agility: 4-cone agility test
- Flexibility: shoulder flexibility, sit and reach test
- Muscular strength / endurance: push-up test
- Body composition: BMI, height, weight

Referrals

- General practitioners
- Medical specialists
- Physiotherapist
- Accredited practising dietician
- Osteopath
- Chiropractor
- Podiatrist.

Outcome for Activity 3

- ☐ Satisfactory
☐ Not satisfactory

Trainer/Assessor comments

ACTIVITY 4

Positivity is a key factor for client success. Respond to the following:

- a) Identify at least six (6) ways you can give a teen a more positive experience when engaging in sport and physical activity.
- b) Name three (3) potential barriers to participation in physical activity that would be common for 13-17 year olds – both boys and girls.
- c) Verbal and non-verbal communication techniques can be used to encourage and support participants. Name two (2) other communication methods or strategies that can be used.

Positive experiences

- Allow experimentation, mistakes and successes;
- Eliminate fear and pressure;
- Do not structure activity the same as for adults;
- Ensure everyone gets equal opportunity;
- Do not over-emphasise winning;
- Avoid negative parental pressure;
- Emphasise fun and development;
- Use encouragement and praise;
- Practice positive technical coaching and instruction;
- Create a team atmosphere, encourage social interaction; and,
- Create an environment where physical activity is seen as a pleasure not a chore or ordeal that must be tolerated.

Potential barriers

- Lack of time (parents taking kids to activity)
- Cost
- Feeling self-conscious
- Neighbourhood / environment (safety)
- Access to facilities
- Injury or disability
- Lack of physical literacy

Communication methods

- In a group or individual discussions
- On regular basis and spontaneous
- Evaluation results
- Requests, chatting
- Discussions, meetings
- Listening to informal conversations
- Modelling and demonstration

Outcome for Activity 4	☐ Satisfactory ☐ Not satisfactory
Trainer/Assessor comments	

ACTIVITY 5

Training should be tailored to the individual and the desired outcome. Respond to the following:

- a) Describe the minimum and optimal exercise program for a 30kg, 13 year old boy.
- b) A parent has read that for major strength gains, weightlifters should use a resistance that can be lifted for only 3 to 6 repetitions. He knows that strength is important for some of the sports lifts his 13 year old son wants to play, so he asks for your advice. What should you tell him?
- c) Name one (1) element in each of the following areas that is suitable for the age groups listed:
 - Resistance training
 - Cardiovascular training
 - Flexibility
- d) Name at least three (3) exercises for the following skills:
 - Agility
 - Balance
 - Speed
- e) State the purpose and use of the listed pieces of equipment.

	Minimum exercise program	Optimal exercise program
Number of activity/sessions per day	3	3
Intensity of the activity sessions (Describe using words)	Moderate, alternate with rest	Moderate to vigorous, alternate with rest
Approximate duration of the activity sessions	30 minutes	60 minutes
Examples of the activity sessions	General physical activity (play)	Circuit exercises

Strength advice

Refer to the parent to the recommendations for resistance training in children, explaining that the emphasis should be on proper form, supervision, and endurance at this age. After puberty, he can include resistance training with fewer repetitions.

Age	Resistance training	Cardiovascular training	Flexibility
11-14 years old	- Teach basic exercises - Increase volume - Incorporate sport-specific training	- Basic cardiovascular training - Continue incorporating game-like elements, but with a higher focus on eliciting physiological responses - Reduced rest breaks - More sport / activity specific - Programming based on the child's goals	- Dynamic stretching - Static stretching of postural muscles due to rapid increases in growth - Yoga or tai chi stretches
14-15 years old	- Increase volume - Teach technique on more complex lifts	- Increase volume - Increase intensity - Emphasis on developing a CV base - More structured activities - Emphasis on the physiological requirements of the child's goals	- Dynamic and static - Introduction of sport specific stretching
16+ years old	Progress to adult programs according to maturity and training age	Progress to adult programs according to maturity	Progress to adult flexibility programs according to training age and maturity

Skill	Name of exercise/s
Agility	Slalom jump and sprint, Scissor splits, Cone jumps, Crossover steps, Single- or double leg jumps, Inside-out jumps, Relay games, Simple tumbling exercises, Explosive cone drill, Ladder, Agility wheel
Balance	Static balance: tandem stance balance, stability trainers, Balance / wobble boards, Weighted ball, BOSU Balance Trainers, Bongo Boards Dynamic balance activities: includes sport-specific activities, such as lateral movements, running and backward movements
Speed	File relay, Slalom relay, 'Fox and Squirrel', Partner Tag, Arm swing, Standing Start / Falling start, Quick steps, High knees, Harness running, Big steps, Acceleration Run, Beanbag relay/shuttle, Obstacle course, Low-obstacle relay, Forward/backward crossover, Foot touches

Equipment	Purpose / use
Free weights	Strength training
Pin-loaded resistance equipment	Strength training

Skipping ropes	Cardiovascular
Balls	Medicine balls can be used for strength, agility, speed
Resistance bands	Strength, possibly flexibility
Mats	Floor exercises
Treadmill	Cardiovascular

Outcome for Activity 5	☐ Satisfactory ☐ Not satisfactory
Trainer/Assessor comments	

ACTIVITY 6

Match the following terms with their associated definitions listed below:

- Ectomorph
- Endomorph
- Expiratory reserve
- Functional residual capacity
- Inertia
- Inspiratory capacity
- Inspiratory reserve
- Mesomorph
- Osteochondroses
- Residual volume
- Sandwich technique
- Tanner classification
- Test reliability
- Test validity
- Tidal volume
- Total lung capacity
- Vital capacity

Term	Definitions
Vital capacity	The volume of air breathed out after the deepest inhalation.
Inspiratory reserve	The maximal volume that can be inhaled from the end-inspiratory level.
Osteochondroses	A self-limiting developmental derangement of normal bone growth, primarily involving the centres of ossification in the epiphysis.
Residual volume	The volume of air remaining in the lungs after a maximal exhalation.
Test validity	The test measures what it is supposed to measure.
Mesomorph	A child with this body type is usually good at speed, strength and agility.
Inspiratory capacity	The sum of IRV and TV.
Expiratory reserve	The maximal volume of air that can be exhaled from the end-expiratory position.
Endomorph	A child with this body type is usually advantaged in 'power' activities.
Tanner classification	Examines changes in pubic hair growth.
Total lung capacity	The volume in the lungs at maximal inflation, the sum of VC and RV.
Test reliability	That test can be repeated over time and produce the same or similar result.
Sandwich technique	This is the most effective correctional model using commend, recommend, and commend.
Functional residual capacity	The volume in the lungs at the end-expiratory position.
Tidal volume	The lung volume representing the normal volume of air displaced between normal inspiration and expiration when extra effort is not applied.
Inertia	The resistance to a change in the state of motion.
Ectomorph	A child with this body type is usually advantaged in endurance-based activities

Outcome for Activity 6	☐ 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. Using the form provided (to be signed by the instructor of the session), you are to observe and evaluate two (2) youth-based training programs: • A single one-to-one session of a 13-17 year old with a personal trainer • A small group of youth between the ages of 13-17 years, who are participating in group PT or physical activity program In your evaluation, provide the following: • A description of the group and class type • An evaluation of the assessment process and the FITT and progression components in the program – including the use of music (where used) ○ This section of the evaluation should also identify the functional exercises for motor skills used in the session • An evaluation of the session • A discussion on the appropriateness of the trainer's use of equipment and facilities for the session • A discussion of the appropriateness of the fitness trainer's communication and their instructional and motivational techniques • Recommendations for areas of improvement in the training program	☐
B. You are to plan, implement and evaluate at least five (5) fitness programs for young people that reflect appropriate developmental stages, age and ability variations. Use fitness industry endorsed risk stratification procedures and conduct an age and skill appropriate baseline assessment on the client, advising the client of the outcomes: • Functional motor skills (i.e. hopping, jumping, throwing, kicking, running, walking, skipping) • Cardiovascular endurance • Muscle strength and endurance • Agility • Flexibility You are to plan, implement, and evaluate at least five (5) fitness programs for young people that reflect appropriate developmental stages, age and ability variations that incorporate: • Appropriate selection and monitoring of a range of gym-based cardiovascular and resistance equipment, according to industry guidelines • Demonstration, explanation, and instruction of exercises relevant to age group, explaining: ○ Injury prevention strategies ○ Signs/symptoms of exercise intolerance • Suitable order and sequence of activities – including warm up, conditioning and recovery • Session components that target the individual's needs and goals • Suitable duration, intensity and volume	☐

• Appropriate music selection, where appropriate • Developmental stages of children and adolescents and age variations in physical, mental and social abilities • Monitoring of client intensity, techniques, posture and safety • Technique correction • Program modification, as appropriate ◦ Review your own performance and identify areas needing improvement ◦ Explain what future sessions will entail • Appropriate communication skills, including: Clear verbal communication, modelling and demonstration, and motivational techniques Be sure to observe all organisational policies and procedures, including: • Gaining written parental / carer consent for all students participating • Keeping parents/guardians informed (e.g. in the event of incidents) • Working within your own scope of practice • Dressing appropriately and ensuring participants are appropriately dressed • Displaying a professional attitude (e.g. non-discriminatory) • Checking equipment for safety • Ensuring sufficient space is allocated for the session (e.g. ventilation, hygienic, sufficient emergency procedures) • Ensuring client information and documentation is appropriately documented, stored and evaluated	
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Outcome for Practical Task	☐ Satisfactory ☐ Not satisfactory
Trainer/Assessor comments	