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Fitness facts

Strand

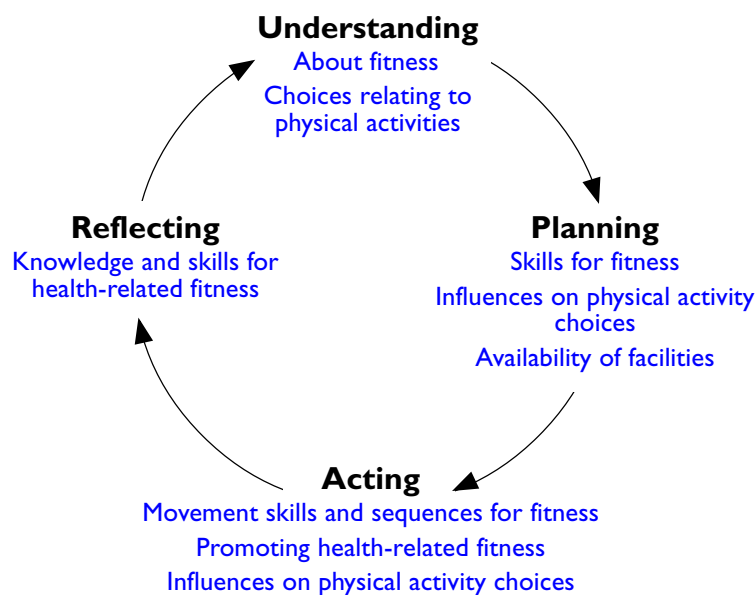
Developing Concepts and Skills for Physical Activity

Purpose

Students explore the meaning of 'fitness' and 'health-related fitness'. They participate in a variety of activities that contribute to health-related fitness and develop an understanding of the benefits of engaging in regular physical activity. They suggest how people and the availability of facilities influence choices relating to physical activity.

Overview of activities

Activities in this module are based on a learner-centred approach with an emphasis on decision making and problem solving. As the following diagram shows, activities are sequenced in **understanding**, **planning**, **acting** and **reflecting** phases.



Core learning outcomes

This module focuses on the following core learning outcomes from the Years 1 to 10 Health and Physical Education Syllabus:

Developing Concepts and Skills for Physical Activity

- 3.1 Students perform movement skills and sequences to meet the requirements of different physical activities and tasks.
- 3.3 Students describe what it means to be fit and demonstrate activities that promote health-related fitness.
- 3.4 Students suggest how people and the availability of facilities influence choices relating to physical activities.

Core content

This module incorporates the following core content from the syllabus:

Developing Concepts and Skills for Physical Activity

- fundamental movement skills encompassing locomotor, non-locomotor and manipulative skills;
- relationships between health, physical activity and fitness, particularly benefits of health-related fitness and skills for participation in fitness activities;
- factors that influence attitudes towards, and participation in, physical activities including: access to and availability of facilities; and role models and family.

Assessment strategy

The following are examples of assessment tasks that provide opportunities for students to demonstrate the core learning outcomes identified in this module.

Developing Concepts and Skills for Physical Activity 3.3

- Students design a poster, brochure or pamphlet that defines fitness and outlines the health benefits of engaging in regular physical activity. It is for distribution in the local community. The poster, brochure or pamphlet should also include information about existing facilities in the local area and how these facilities can be used for activities which promote health-related fitness.
 - Can the student describe what it means to be fit?
 - Can the student demonstrate activities that promote health-related fitness?
 - Is the student able to identify the facilities available for developing health-related fitness?

Developing Concepts and Skills for Physical Activity 3.1 and 3.3

- Students demonstrate movement skills and sequences — including an individual activity, a partner activity and a small group activity — which contribute to health-related fitness. They identify how these activities promote health-related fitness.
 - Can the student demonstrate physical activities that develop health-related fitness?
 - Can the student describe the ways in which these movement skills and sequences contribute to health-related fitness?

**Developing
Concepts and Skills
for Physical Activity
3.4**

- Students present the findings from their surveys to show how people and the availability of facilities influence choices relating to physical activities.
 - Can the student suggest how people influence choices relating to physical activities?
 - Can the student suggest how the availability of facilities influences choices relating to physical activities?

Background information

Children and fitness

Research has shown that the physical activity level of a vast majority of children is lower than that desirable for health gains. It has also shown that girls are less active than boys and that activity levels decrease as children get older. Appropriate physical activity during childhood can confer health benefits such as increased bone density, regulation of body fatness and regulation of blood pressure. Unfortunately, research has shown that as a result of the changing social structure, there has been a significant decline in the freedom of children to be independently active outside the home.

Although fitness tests provide a good indication of activity levels in adults, this is not so for children as inherited characteristics greatly influence results. At this age, we should be more concerned with their level of participation in physical activity than with their fitness scores.

Consequently, the emphasis should be on personal involvement and improvement and not on comparison with others. Children need to succeed and progress at their own level to feel competent and confident when participating in physical activity. To this end, teachers need to cater for a wide range of developmental ages and physical abilities; to offer choices in areas such as pace, style, equipment or distance so that children can carry out tasks at their own level.

It is important to teach students about the benefits of a physically active lifestyle and ways to make physical activity part of their daily lives. By participating in a variety of physical activities that contribute to fitness, students are able to identify activities they enjoy and to develop the skills for lifelong participation in a physically active lifestyle. They also become aware of some of the factors that influence their choices relating to physical activity.

Students with medical conditions should be encouraged to be as active as possible, taking appropriate precautions before, during and after exercise. Encourage students to drink water before and after vigorous activity.

Terminology

Activities in this module involve use of the following language in the context of Health and Physical Education:

aerobic	facilities	muscular strength
agility	fitness	physical activity
barriers	flexibility	speed
cardio-respiratory fitness	health-related fitness	strength
endurance	movement sequence	vigorous physical activity

School authority policies

Teachers need to be aware of and observe school authority policies that may be relevant to this module.

Safety policies are of particular relevance in fitness activities. Some safety issues that teachers should consider are:

- including appropriate warm-up and cool-down activities;
- ensuring that the area to be used is suitable for the activity — for example, large enough for the number of students participating, level and free of loose objects;
- ensuring that the activities are appropriate to the skill and ability levels of students.

Social justice principles

This module provides opportunities for students to increase their understanding and appreciation of diversity and of supportive environments. It includes activities that encourage students to:

- explore different views about physical activity and fitness;
- recognise that the home, school and community are all settings for promoting health and fitness;
- acknowledge and understand the social and cultural factors that influence access to and participation in physical activities.

Students with disabilities or learning difficulties may require some activities to be modified to optimise both their participation and their ability to demonstrate the outcomes. Teachers should consult with parents/carers and specialist support staff to determine whether modification is necessary.

Support materials and references

Australian Council for Health, Physical Education and Recreation Inc. 1994, *Fitness, Upper Primary*, The Physical Education Primary series of resources, ACHPER, Hindmarsh, SA.

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Activities

Understanding

ABOUT FITNESS

Developing an understanding of fitness, particularly health-related fitness and the contribution of fitness to health

► Students identify someone who they think is fit and give the reason/s for their choice. They share their responses and list the components of fitness that have emerged — for example, strength, speed, flexibility, endurance.

Focus questions could include:

- Whom would you describe as being fit?
- What can this person do that leads you to the conclusion that he or she is fit?
- Can all fit people do this?
- Can you name someone else who is fit and provide a different reason for your choice?

Teaching considerations

Students should select people other than class members.

Compile a list of characteristics of 'fit' people as offered by the students then explain to students that fitness can be defined in many ways as it has a number of components — for example:

- We think some people are fit because they are strong (strength).
- Sprinters are fit when they can run a short distance in a fast time (speed).
- We consider people to be fit if they can run or swim for a long time without stopping or getting puffed (endurance).
- Gymnasts may be fit because they are agile (agility).



Resource
Sheet 1

► Students explore definitions of fitness. These could be researched in a library using books and fitness magazines or by searching the Internet. Students then compose their own definition of fitness. (See Resource Sheet 1 for some definitions of fitness.)

► Students discuss the question: 'Is fitness only important for taking part in sport?'. They explore why fitness is important for the performance of daily activities and identify which components of fitness will enable them to perform these activities without becoming tired.

Focus questions could include:

- How will being strong (in the legs, arms) benefit you?
- What daily activities require balance?

► Students work in small groups to brainstorm the ways in which physical activity can contribute to the different dimensions of good health — for example, helps you sleep better, heart gets stronger, muscles and bones get stronger, feel good about yourself, meet people, stay healthy, reduces stress, fun. These lists are then collated to produce a single list.

Teaching consideration

Highlight to students that to achieve a fitness benefit, at least 30 minutes of moderate physical activity three to four times a week is necessary.

► Students participate in a range of physical activities involving movement skills and sequences identified by the teacher. They reflect on whether these activities, done regularly, would improve their fitness.

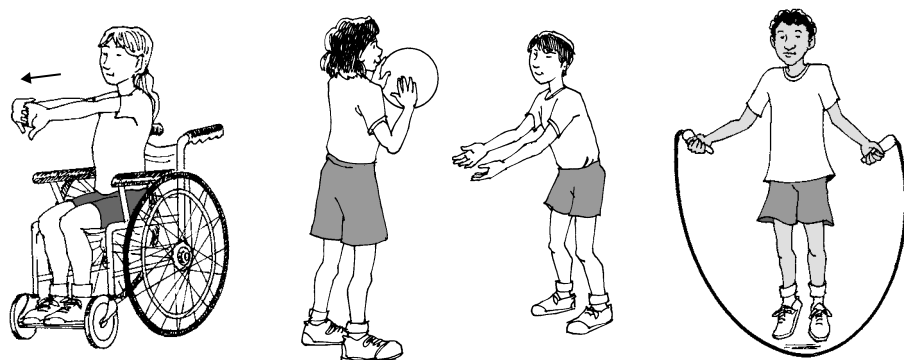
Focus questions could include:

- Which parts of your body did you exercise during the activity?
- Do you think this activity would improve your fitness if you did it regularly? Why?
- How can you tell if you are working hard enough to improve your fitness?

Teaching considerations

Select activities that use different aspects of health-related fitness (cardio-respiratory endurance, muscular strength and endurance, flexibility) such as jogging on the spot or skipping for one to two minutes; climbing a rope, traversing a horizontal ladder or continuous chest passes with a medicine ball or other large, heavy ball; shoulder stretches or leg stretches.

By monitoring the heart rate, students can see how vigorously they are working — the more vigorous the activity, the faster the heart rate.



► Students develop a class/group definition of health-related fitness (refer to definitions in Resource Sheet 1 and to definitions of fitness developed previously). They discuss positive and negative factors other than physical activity that influence fitness. These include rest, diet, sleep, smoking, drinking.

CHOICES RELATING TO PHYSICAL ACTIVITIES

Considering reasons for choices relating to participation in physical activities

► Students brainstorm a list of factors that may influence people’s choices of physical activities. They could begin by considering reasons for their own choices relating to physical activities. Reasons are likely to include: other people’s influence — for example, peers, family, teacher, sports stars; and environmental influences — for example, facilities, climate, school, community, media.

Planning

SKILLS FOR FITNESS

Developing the skills for participation in physical activities that promote fitness

► Students participate in warm-up activities — stretching, jogging — before engaging in fitness activities. They suggest reasons for the importance of warming up before engaging in physical activities and cooling down after activities.

Focus questions could include:

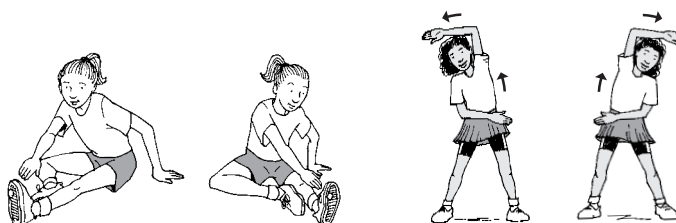
- Does your body feel different as you do the warm-up activities? How does it feel different?
- How does a warm-up prepare your body for physical activity?

Teaching considerations

Students should understand that warm-up activities are designed to gradually increase the physical activity level of the body. Warming up is necessary to prevent muscle soreness and strains, to increase the elasticity of muscles and to increase blood flow to the working muscles.

Warm-up activities should particularly target the muscle groups that are to be used in the physical activity to follow.

Cooling down with stretching and gentle activity allows the body to slowly recover from vigorous exercise and helps remove waste products from the muscles.



Resource Sheet 2

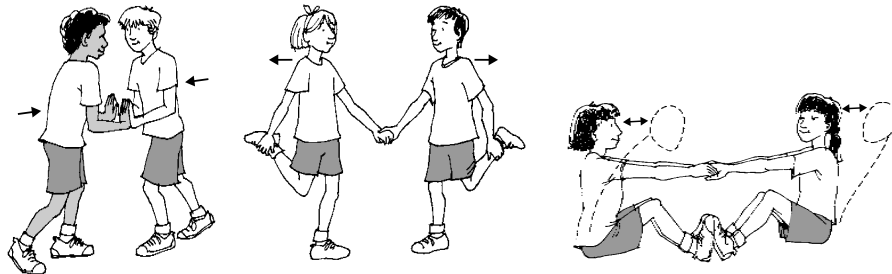
► Students learn to measure their heart rate by taking their pulse at both their wrist and their neck (see Resource Sheet 2). They should take and record their pulses before engaging in physical activity, after performing some vigorous, whole body activity and again two minutes after completing the activity in order to note the changes. Students discuss why the heart beats faster with exercise.

Focus questions could include:

- Does your heart rate increase more rapidly after a few minutes of stretching or after a few minutes of jogging? Why do you think this is?
- Can you think of other times when your heart rate increases? Why does this happen?

► Students participate in different individual physical activities such as skipping, jogging, swimming, walking, aerobic dancing, circuits or fun runs. They identify the effects on the body of doing these activities — for example, jogging causes the heart to beat faster, raises body temperature, increases breathing rate and makes the legs tired. They then suggest how these activities contribute to health-related fitness — for example, jogging develops cardio-respiratory endurance and leg strength. Students record their findings and discuss them with others.

► Students participate in partner activities such as relays, partner tag games and partner contests. They identify the effects on the body of doing these activities and suggest how these activities contribute to health-related fitness. Students record and discuss their findings with their partner before sharing them with others in the group.



► Students participate in group activities such as small group relays, tag games and group games. They identify the effects on the body of doing these activities and suggest how these activities contribute to health-related fitness. Students record their findings and discuss them with others.

► Students participate in cooling-down activities — stretching and gentle activity — after engaging in fitness activities.

INFLUENCES ON PHYSICAL ACTIVITY CHOICES

Researching the choices of others as they relate to participation in physical activities for fitness

R Resource Sheet 3

► Students develop and conduct a survey of three or four of their peers and three or four adults to collect information about fitness (see Resource Sheet 3). The survey questions should include the following:

- What do you understand by fitness?
- Which activities do you do regularly for fitness?
- Why have you chosen these activities?
- Which other activities would you like to participate in for fitness?
- What are the things that prevent you from doing these activities?

AVAILABILITY OF FACILITIES

Investigating the availability of and access to facilities in the local community which can be used for fitness activities

► Students list facilities in their local area that could be used for activities to promote fitness and identify the types of activities that could be undertaken at these. Once the list is completed, students discuss who has access to these facilities, who is denied access and whether or not this is fair. Examples of facilities include: park, gym, bikeway, basketball court, state forest, pool, skateboard bowl/ramp, sporting clubs.

Teaching consideration

Include equity and cultural issues in the discussion of access to facilities. These could include access available to girls, various cultural groups and people with disabilities.

Acting

MOVEMENT SKILLS AND SEQUENCES FOR FITNESS

Designing and demonstrating physical activities that promote different aspects of health-related fitness

- ▶ Students select or design three physical activities — an individual activity, a partner activity and a small group activity — that will promote different aspects of fitness. They demonstrate these activities and explain how they promote health-related fitness.

PROMOTING HEALTH-RELATED FITNESS

Developing a health-related fitness promotion to support regular use of local facilities for physical activities

- ▶ Students design a poster, brochure or pamphlet that includes a definition of fitness and the health benefits of engaging in regular physical activity. The poster, brochure or pamphlet is for distribution in the local community. It should also include information about existing facilities in the local area and how these facilities can be used for activities which promote health-related fitness.

INFLUENCES ON PHYSICAL ACTIVITY CHOICES

Presenting findings of research into factors influencing choices relating to participation in physical activities

- ▶ Students work in small groups to present their survey findings. They outline the reasons for participation in different physical activities and the factors that have influenced these choices with an emphasis on those factors relating to other people and the availability of facilities. As part of the presentation, students should refer to the barriers to participation in physical activities identified by the respondents.

Teaching consideration

Encourage students to analyse their findings in a number of ways to see whether differences exist in responses given by males and females or by different age groups.

Reflecting

KNOWLEDGE AND SKILLS FOR HEALTH-RELATED FITNESS

Reviewing and reflecting on knowledge and skills related to participation in physical activities that promote health-related fitness

- ▶ Students reflect on the movement skills that they currently possess which enable them to participate in physical activities that promote health-related fitness. They also identify skills that they would like to acquire to enable them to engage in other fitness activities.
- ▶ Students review what they have learned about health-related fitness and how regular physical activity contributes to a healthy lifestyle. They ask themselves if they think they will continue participating in physical activity for the next 5 or 10 or 20 years. In answering the question, they identify possible barriers to continued participation or things that will assist them to continue participating. Students also consider how their choices of physical activity may change in the future and the factors that may influence these changes.

Definitions of fitness



Fitness

Fitness is the ability to perform daily activities without becoming tired, leaving enough energy in reserve to enjoy leisure time.

Physical fitness is the capability of the body to perform physical activities and daily tasks at optimum efficiency.

Health-related fitness

Health-related fitness is that level of physical capability in an individual sufficient to acquire and maintain good health.

Health-related fitness is a state of wellbeing that can be achieved through a variety of physical activities performed at a comfortable level regularly enough to result in dynamic health.

Source of the second, third and fourth definitions: Giles, H. 1988, *Health-Related Fitness, A Fitness Program for Queensland Secondary Schools*, Book 1, Physical Education Branch, Department of Education, Queensland.

Measuring the heart rate

R2

Resource Sheet 2

FITNESS FACTS • MIDDLE PRIMARY

Taking the carotid pulse (at the neck)

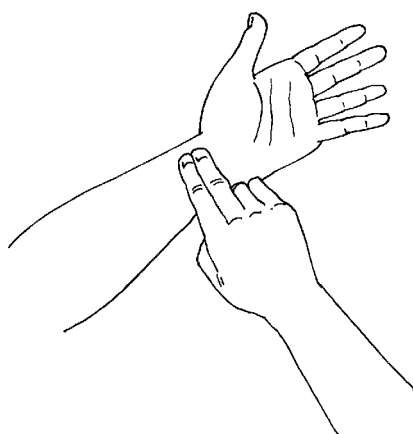
Place your index and middle fingers gently on the main artery of the neck (the carotid artery) on one side only. Count the number of pulses that you feel for fifteen seconds and multiply this by four to obtain the number of beats per minute.

Be careful not to press too hard or for too long on the carotid artery as this can cause a change in the heart rate. Also, don't use the thumb when measuring heart rate as there is a pulse in the thumb.



Taking the radial pulse (at the wrist)

Place the pads of your index and middle fingers gently on the palm side of the wrist close to the thumb and count as for the carotid pulse. (Again, do not use your thumb as there is a pulse in the thumb.)



Source: Adapted from National Heart Foundation 1996, *Heart Health Manual — A Resource Kit for Primary Teachers*, p. 613.

Resource Sheet 3

Sample survey questionnaire



Name	What is fitness?	Current fitness activities	Reasons for choosing these activities	Desired activities	Barriers to participation
Ben	<ul style="list-style-type: none"> being able to swim fast 	<ul style="list-style-type: none"> swimming walking 	<ul style="list-style-type: none"> pool at home need to exercise the dog 	<ul style="list-style-type: none"> in-line skating 	<ul style="list-style-type: none"> no skates
Jane	<ul style="list-style-type: none"> doing lots of exercises 	<ul style="list-style-type: none"> badminton running 	<ul style="list-style-type: none"> other family members do it good at it 	<ul style="list-style-type: none"> tennis 	<ul style="list-style-type: none"> no court

Acknowledgments

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Department of Education, Queensland, for material from *Health-Related Fitness, A Fitness Program for Queensland Secondary Schools*, 1988 by H. Giles;
National Heart Foundation for material adapted from *Heart Health Manual — A Resource Kit for Primary Teachers*, 1996.

This sourcebook module should be read in conjunction with the following Queensland School Curriculum Council materials:

Years 1 to 10 Health and Physical Education Syllabus

Years 1 to 10 Health and Physical Education Sourcebook: Guidelines

Health and Physical Education Initial In-service Materials

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