



your body matters



Teacher Notes I: Physical activity and children

Nourishing Body & Mind for a Healthy Life

A Primary Health and Wellbeing Curriculum Pack

Revised Version 2023



Teacher Notes I: Physical activity and children

Associated lesson plans		
Primary Stage	Lesson	Title
1	1.2	Activity and energy.
2	2.2 (1) (2)	Effort and relaxation (1). Effort and relaxation in the classroom (2).
3	3.2	Keeping my body in balance
4	4.2	Physical activity; keeping fit
5	5.2	Physical activity; staying healthy
6	6.5	Potential links to body image, self-esteem and the media?
7	7.2	Leisure choices
Useful websites	<p>http://www.healthscotland.scot/health-topics/physical-activity/physical-activity-overview</p> <p><i>Public Health Scotland – Information on Physical Activity Information</i></p> <p>https://www.nhsinform.scot/healthy-living/keeping-active/keeping-active-guidelines/#children-and-young-people-5-18</p> <p><i>NHS Inform - Physical Activity Guidelines</i></p> <p>https://www.gov.uk/government/collections/physical-activity-guidelines</p> <p><i>Physical Activity Guidelines Scotland (2019)</i></p> <p>https://sportscotland.org.uk/schools/</p> <p><i>An overview of school sport in Scotland including; information about the national Active Schools Network, Young Ambassadors, the Sport Scotland School Sport Award, the Active Girls programme and our contribution to Physical Education in Scotland.</i></p> <p>https://www.playscotland.org/</p> <p><i>Play Scotland - Ideas for physical activity</i></p> <p>https://blogs.glowscotland.org.uk/gc/pepassglasgow/curricular-resources-for-primary-teachers/</p> <p><i>PEPASS resources and information for physical activity ideas in school</i></p>	

What is Physical Activity?

Physical activity can be defined as any bodily movement produced by skeletal muscles that requires energy expenditure. Physical activity can be categorised based on the amount of energy used and the type of activity. This means that, although exercise and sport are forms of physical activity, they have their own sub-definitions:

Physical activity is any bodily movement caused by contractions of the muscles, resulting in energy expenditure. Types of physical activity include walking, active travel, housework (e.g., Hoovering), climbing stairs, swimming and taking part in structured exercise (e.g., exercise and sports).

Exercise is a form of physical activity and can be described as; planned, structured and repetitive movements that are done to improve fitness levels. For example, weight training or fitness classes such as Joe Wicks PE lessons or Cosmic Kids Yoga (please see Additional resources and useful websites section of the Your Body Matters pack).

Sport is a form of physical activity and exercise. Sport is a planned, structured activity that is undertaken competitively or in a social group for the purpose of improving fitness, forming social relationships or for performance in competitions at any levels.

Physical activity for children and young people should naturally occur throughout most days and within numerous settings. This could range from active travel to school, outdoor play in the park, indoor play in dedicated play centres, physical education, school playtime, participation in sports and dance clubs, swimming or cycling, outdoor and adventurous activities (e.g., girl guides/scout groups) or martial arts clubs.

Younger children begin their active lives through play. This is important for their physical, cognitive and social development and is largely dictated by the opportunities that parents and carers give them. Young people become independent of their parents through the teenage years and are more influenced by friends and external role models.

Activity can be structured or unstructured. Unstructured activity can be described as informal or free play and activities with little input or direction from parents or carers. Structured activity might include elements of formality or facilitation by adults.

Examples of some activities are given in the table below. This is not an extensive list and there will be some other examples not included.

Types of activity	Examples
Unstructured (children)	Play (indoor and outdoor), active travel, walking, wheeling, cycling.
Unstructured (young people)	Walking, wheeling, cycling, active travel, social dancing, household chores, gardening, temporary work.
Structured (children and young people)	Organised, small-sided games with equipment that maximises success (large racquets, low nets, big balls etc.) Educational instruction (through teaching and coaching) that promotes skill learning and development. Sport and dance.
Muscle strengthening and bone health (children)	Activities that require children to lift their body weight or to work against resistance. Jumping and climbing activities, combined with the use of large apparatus and toys would be categorised as strength promoting exercise.
Muscle strengthening and bone health (young people)	Resistance type exercise during high intensity sport, dance, water-based activities or weight (resistance) training in adult-type gyms.



Why should we be doing physical activity?

There has been extensive research on the benefits of physical activity which have found similar results. The evidence shows that leading a physically active lifestyle has a positive impact on both your physical and mental health and wellbeing. When children and young people are active, their bodies can do the things they want and need them to do. Benefits of an active lifestyle include:

Physical benefits	Psychological benefits
<ul style="list-style-type: none">• Strong muscles and bones• Promotes growth and maintenance of healthy bones and joints• Maintain healthy weight• Decreased risk of developing Type 2 diabetes• Better sleep• Are better able to handle physical and emotional challenges – from running to catch a bus to studying for a test	<ul style="list-style-type: none">• Increased self confidence• Increased self esteem• Increased positive mood• Increased cognitive functioning• More likely to be academically motivated• Alert and successful• Improved mental wellbeing

Being physically active, reduces the risk for a variety of diseases, particularly cardiovascular disease. For children and young people, becoming active at an early age and remaining active throughout life significantly reduces the risk of disease. Children and young people who are physically active are more likely to remain physically active in adulthood compared to those who are physically inactive as children.

Physical activity has benefits for children and young people. During the early life stages, physical, social and psychological developments are occurring at a high rate. Physical activity plays an important role in the developmental stages of a child's growth; for example: through movement, a child learns the potential and limitations of their own body and how it moves to enable healthy mobility throughout life; weight bearing activity can help to promote bone density in young people and reduce the risk of osteoporosis in later life; the use of games and physically active play can help children to develop healthy social skills. As well as the benefits to individuals, increasing the Nations physical activity levels will reduce the cost to the National Health Service (especially for palliative care and management of diseases like coronary heart disease), and will reduce the cost to the wider local and national economies from sickness and sickness absence.

How much physical activity should we do?

The recommendations for physical activity are different for children and adults. Physical activity recommendations for children and young people place emphasis on accumulating activity levels over the course of a day and encourage the idea of active living; choosing active options as much as we can through the day e.g., active travel to school or work instead of travelling by car with emphasis on walking, wheeling and cycling.

Physical Activity Guidelines for children and young people aged 5-18 years (2019):

It is important for children and young people to keep active and to grow up strong and healthy into adulthood by doing exercises that strengthen bones and muscles. To maintain a basic level of health, children and young people aged 5 to 18 need to do:

- at least 60 minutes of aerobic activity every day - this can be anything from cycling, walking, skateboarding or swimming
- on 3 days a week, these activities should involve exercises for strong muscles, such as football, gymnastics, or climbing, and exercises for strong bones, such as dancing, aerobics and tennis.

The best way to achieve 60 minutes of aerobic activity each day is to build it in to your daily routine. Try walking or cycling to school, playground games at break times, and activities or sports at weekends.

Popular activities with young people include dancing, karate, football, swimming and gymnastics. Schools often have activities in the evenings to help you keep active.

See Infographic 1 overleaf.

Physical activity for disabled children and disabled young people (2019):

For good health benefits, do 20 minutes of physical activity per day. When starting, build up slowly. Ask: can you do this today?

Do bitesize chunks of physical activity throughout the day and challenging but manageable strength and balance activities 3 times per week. Small amounts of physical activity are good for you as well.

See Infographic 2 overleaf.

Moderate physical activity will raise your heart rate, make you breathe faster and feel warmer. One way to tell if you are working at a moderate intensity is if you can still talk, but you can't sing the words to a song.

Vigorous physical activity means you are breathing hard and fast, and your heart rate has gone up quite a bit. If you are working at this level, you won't be able to say more than a few words without pausing for breath. In general, 75 minutes of vigorous intensity activity can give similar health benefits to 150 minutes of moderate intensity activity. Vigorous activity can bring health benefits over and above that of moderate activity.

Muscle-strengthening exercises are counted in repetitions and sets. A repetition is one complete movement of an activity, like lifting a weight or doing a sit-up. A set is a group of repetition.

The available evidence suggests limiting sedentary behaviour to maintain a healthy weight in children and young people. However, there is insufficient evidence to quantify a precise time limit for sedentary behaviour. Therefore, based on the evidence available, reducing total sedentary time and breaking up extended periods of sitting is strongly advised.

Are we doing enough physical activity?

Although including physical activity into daily life can be as simple as walking every day, as a Nation, Scotland has developed an inactive lifestyle. Several factors have played a part in the development of inactive lifestyles. For example, long working hours, the use of individualised transport (e.g., cars) and a greater reliance on these, urbanisation, building on green-site areas, changes in diet, and increased availability and affordability of fast foods have all played a part in our changing lives and contributed to people doing less activity in their life. Individual health factors may also influence levels of physical activity for example, poor mental health, physical abilities, addiction/substance misuse and socio-economic factors such as, access to greenspace, experiences of poverty, education.

Physical activity levels in Scotland – The Scottish Public Health Observatory (2020)

- 51% of men and 42% of women met the recommended physical activity guidelines.
- In 2019, an estimated 69% of children (aged 2-15 years) in Scotland met the physical activity guideline for children when including activity done at school.

Physical inactivity carries serious health risks that have become increasingly evident. Research has shown that when compared to those who lead active lifestyles, people living physically inactive lifestyles:

- Double their risk factors for coronary heart disease (CHD)
- Have increased blood pressure, a risk factor for CHD
- Have a higher risk for colon cancer
- Have a higher risk of developing Type 2 diabetes
- Are more likely to be overweight or obese; leading to an increased risk of other types of cancer, osteoarthritis, back problems and other health complaints
- Have a lower bone density; a risk factor for osteoporosis, fractures and falls particularly in older women
- Have a greater number of sickness absences from work

It is alarming that physically inactive lifestyles are already established in young people before they leave secondary school. For some children this is before they have left primary school. Physically inactive lifestyles of children and young people have been linked to:

- Decreased likelihood of being a physically active adult
- Increased likelihood of illegal drug use, smoking, alcohol use
- Poorer self-esteem
- Higher anxiety and stress levels

matters

Encouraging people to be more physically active

The recommendations for physical activity are easy to understand and the link between risk factors for disease and other health problems are well evidenced. Indeed, many people report to being aware of the health benefits associated with an active lifestyle and to having a desire to do more physical activity. However, the majority continue to lead relatively inactive lifestyles. Therefore, physical health benefits alone are not enough motivation to encourage people to lead active lifestyles. It is necessary to consider the barriers that people perceive preventing them from being physically active if we are to encourage them to do more.

There has been a wide variety of research and investigation into the perceived barriers that prevent engagement in physical activity and many of the barriers to physical activity that are perceived by adults are common to all. However, the individual's economic status and gender may affect the priority of weighting of perceived barriers. Children report slightly different barriers to adults, however, and surprisingly, many of their perceived barriers are similar to those perceived by adults.

Perceived barriers to exercise	
Adults	Children
<ul style="list-style-type: none"> • Lack of time • Lack of energy • Bad weather • Lack of facilities • Lack of motivation • Cost • Don't have correct equipment • "Not sporty" • Not enjoyable • Childcare problems • Workload 	<ul style="list-style-type: none"> • Lack of own/parental time • Maturation/ body changes • Safety concerns (own/parental) • Poor facilities • Lack of motivation • Expense • Self-conscious/ lack of confidence • Image among peers • Non enjoyable activities • Body image/ weight concerns • Lack of choice in PE

The barriers to physical activity that adults and young people perceive can be categorised into four main types:

1. Biological: age, gender, weight/body image, fitness level
2. Psychological: motivation, perceived barriers, competence to perform, self-efficacy, knowledge
3. Social and cultural: parental influences, significant others, socio-economic status
4. Physical: weather, season, day of the week, access to facilities/equipment, promotion of activity

Some of these perceived barriers are easier for an individual to overcome than others but there is much that Governments and organisations can also do to reduce the perception of barriers that are out with the individual's control and thereby encourage more frequent participation.

As a population group, children tend to perceive the physical barriers as the most limiting and report positive experiences of social, cultural and psychological factors as motivating influences for physical activity. Therefore, if the physical factors (e.g. provision of facilities, fun opportunities, competent and professional staff) can be altered or influenced to reduce the perceived barriers, children are more likely to be motivated to increase their physical activity than their adult counterparts. Encouraging children to become more physically active will increase the likelihood that the future adult population will be more physically active.

The factors that children and young people report as motivating them to participate are:

Perception of physical activity to be fun	Cheaper cost of organised activities
Previous positive experience	Choice and consultation in PE
Confidence	Single-sex activities (females)
Enjoyment and social interaction	Positive relationships with PE staff
Provision of social facilities e.g. youth club	Provision of sport specific facilities (e.g. basketball)

Using the information that has been gathered about the barriers and motivators that young people perceive, teachers can influence and inspire pupils by enthusing about physical activity and sport, and by helping pupils to overcome their barriers and use their motivations for physical activity to increase the amount that they are involved in.

Physical activity for children and young people (5 – 18 Years)

 BUILDS CONFIDENCE & SOCIAL SKILLS	 MAINTAINS HEALTHY WEIGHT
 DEVELOPS CO-ORDINATION	 STRENGTHENS MUSCLES & BONES
 IMPROVES CONCENTRATION & LEARNING	 IMPROVES HEALTH & FITNESS
	 MAKES YOU FEEL GOOD


Be physically active

**Spread activity
throughout
the day**



**Aim for an
average of at least
60
minutes per day
across week**

**All activities
should make you
breathe faster
& feel warmer**

 PLAY	 RUN/WALK	 BIKE	 ACTIVE TRAVEL
 SWIM	 SKATE	 SPORT	 PE
 SKIP	 CLIMB	 WORKOUT	 DANCE

**Activities to
develop
movement
skills, and
muscle and
bone strength
ACROSS
WEEK**

Get strong



INACTIVITY

Move more

Find ways to help all children and young people accumulate an average of at least 60 minutes physical activity per day across the week

UK Chief Medical Officers' Physical Activity Guidelines, 2019

Physical Activity for Disabled Children and Disabled Young People

Getting and staying active is about



Equality



Inclusivity

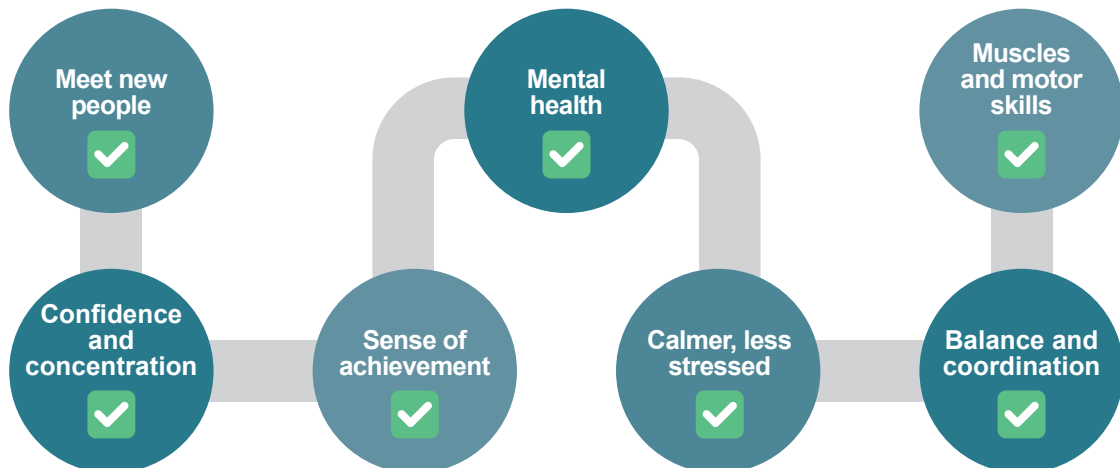


Finding what's
fun



Exploring what activities
make you
feel good

Benefits of physical activity



How much physical activity should I do?

**When starting
build up slowly**
Ask: Can you do this today?

Do bitesize chunks
of physical activity
throughout the day

For good health
benefits do
20 mins
of physical
activity per day

**Do challenging
but manageable**
strength and balance
activities 3 times per week

**Small amounts
of physical activity**
are good for you as well

UK Chief Medical Officers' Physical Activity Guidelines for Disabled Children and Disabled Young People 2022.
This infographic was co-produced with disabled children, disabled young people, parents and carers.

