

New Zealand Blood Service Teaching Resource

Levels 3 and 4:
Healthy Me, Healthy Blood



www.nzblood.co.nz

NZBLOOD
Te Ratonga Toto O Aotearoa

Healthy Me, Healthy Blood

New Zealand Blood Service (NZBS) has developed a range of education resources linked to *The New Zealand Curriculum*. These resources provide engaging learning experiences on NZBS topics for teachers to use in the classroom. This resource focuses on developing students' knowledge about how to keep their body (and their blood) healthy by making healthy choices.

Curriculum links

The following tables include suggested curriculum links and achievement objectives. You are encouraged to adapt these to meet the needs of your students, the context for learning, and your school curriculum.

<p>Vision</p> <ul style="list-style-type: none"> connected and actively involved 	<p>Principles</p> <ul style="list-style-type: none"> community engagement future focus, particularly the future-focus issues of sustainability and citizenship
<p>Values</p> <ul style="list-style-type: none"> community and participation for the common good 	<p>Key Competencies</p> <ul style="list-style-type: none"> thinking – to make sense of information, experiences, and ideas participating and contributing – being actively involved in communities

Achievement objectives

<p>SCIENCE Nature of Science: <i>Understanding about science</i> Levels 3 and 4</p> <p>Students will appreciate that science is a way of explaining the world and that science knowledge changes over time.</p>	<p>SCIENCE Living World: <i>Life processes</i> Levels 3 and 4</p> <p>Students will recognise that there are life processes common to all living things and that these occur in different ways.</p>
<p>HEALTH AND PHYSICAL EDUCATION Personal Health and Physical Development: <i>Personal growth and development</i> Level 3</p> <p>Students will identify factors that affect personal, physical, social, and emotional growth and develop skills to manage changes.</p>	<p>HEALTH AND PHYSICAL EDUCATION Healthy Communities and Environments: <i>Community resources</i> Level 4</p> <p>Students will investigate and/or access a range of community resources that support well-being and evaluate the contribution made by each to the well-being of community members.</p>

Assessment for learning

This resource supports formative assessment. It does not include assessment tasks but offers opportunities for students to reflect on their learning and understanding of the concepts and information presented in the activities.

Science and Health classroom activities

The following classroom activities may be taught sequentially. However, you are encouraged to select and adapt the activities to meet the learning context, and the specific needs, interests, and experiences of your students – including the students' physical needs, and their cultural backgrounds and beliefs.

Getting started

Facilitate a class brainstorm. Ask: "What do I need to ensure my blood and body are healthy?" Record the students' responses on a mind map.

What are we eating today?

Ask the students what kinds of food they usually have for lunch at school and list their responses. Have the students research the different food groups on www.5aday.co.nz and [https://www.health.govt.nz/search?mode=pictureview&type=resource&f\[0\]=field_health_topics%3A23](https://www.health.govt.nz/search?mode=pictureview&type=resource&f[0]=field_health_topics%3A23) and then classify their listed lunch items into food groups.

What foods keep our blood and heart healthy?

Tell the students that their body and blood need nutrients, minerals, vitamins, and water. Discuss: "How much do we need to eat and how often? What food choices do we need to make? What's healthy/what's not?" Have the students describe the positive influences of healthy food choices on their own health. Ask: "What could happen if inappropriate choices are made?"

Have the students use the "What foods keep us healthy?" factsheet to design their own healthy meal options for breakfast, lunch, and dinner on the "My Healthy Choices Plan" graphic organiser.

Iron – what is it?

Explain that iron is essential for a healthy body and is found in the blood. Ask: "Why is it important?" (Haemoglobin – the body needs iron for transporting oxygen). "How do we 'get' iron?" To answer this question, have students use the information on the "What foods keep us healthy?" factsheet and the *Iron and You* brochure (available from <http://www.nzblood.co.nz/Give-blood/Donating/Information-leaflets-for-donors>). Have the students check their healthy choices plan for iron-rich foods needed to maintain healthy iron levels.

Fitness

Ask: "What is fitness? Are you fit? Fit for what? How do you know if you are fit?" Look at a range of images of people and athletes. Ask: "Are they fit? How do we know when someone is fit? How do you get fit? What are the components of fitness?" Have students share their answers and record them on a chart. Display this on the wall.

Why is exercise good for the blood?

Explain that depending on the activity, exercise helps to build stamina, strength, flexibility, power, agility, and cardiovascular health. Conduct a class survey (this could be done using Survey Monkey so the responses are anonymous). Ask: "Do you play sport? Do you belong to a club? Do you have regular fitness sessions at school? Do you walk or ride a bike to school? What exercise do you do? How much? How often?" Graph or chart the results.

What can I do?

Explain that aerobic exercises strengthen your heart and lungs, so more blood and oxygen can be pumped around your body. Ask: "What do you do to keep your heart and body in good condition?" Have the students review the exercise they do over a week and consider whether they need to do more exercise. Have the students use the "My Healthy Choices" graphic organiser to plan a weekly exercise programme (or share what they already do). This may include exercises such as: brisk walking, jogging, swimming, walking the dog, dancing, or cycling.

What do athletes do?

Have an athlete come and talk to the class about their dietary needs and how they maintain their health during training, and before and after a game or event. Alternatively, you could contact the New Zealand Olympic Committee to have a New Zealand Olympic Ambassador visit your school: <http://www.olympic.org.nz/education/nz-olympic-ambassador-programme>

Possible assessment activity

To assess their understanding of how to keep their body (and their blood) healthy, have the students write a report identifying why it is important to make healthy choices.

Factsheet: What foods keep us healthy?

A balanced diet will give you lots of energy and help you to stay healthy and grow. Every day, we need to eat lots of different foods from the four main food groups.

<p>Vegetables and fruit:</p> <ul style="list-style-type: none">■ include fresh, frozen, or canned fruit and vegetables■ full of carbohydrates and lots of fibre, vitamins, and minerals■ low in fat■ should be eaten with most meals and as snacks■ eat a variety of different colours – for example, a red tomato, green broccoli, orange carrot, purple plum, and yellow banana■ avoid eating too much dried fruit and drinking too much juice as both have lots of sugar■ eat five or more servings of raw or cooked fruit and vegetables a day.	<p>Breads and cereals:</p> <ul style="list-style-type: none">■ full of carbohydrates and fibre, and some vitamins and minerals■ include breads, breakfast cereals, rice, noodles, and pasta■ best source of energy – so you need to eat lots of this group■ always choose wholegrain varieties when possible (rolled oats, brown rice, or whole-grain bread) as these are higher in fibre, vitamins, and minerals■ eat at least five servings a day.
<p>Milk and milk products:</p> <ul style="list-style-type: none">■ include milk, yoghurt, custard, milky soups, and cheese■ full of protein and lots of vitamins and minerals, including calcium, which helps build strong bones and teeth■ eat at least 2 to 3 servings a day.	<p>Meat and meat alternatives:</p> <ul style="list-style-type: none">■ include lean meats, chicken, seafood, eggs, legumes (beans, peas, and lentils), nuts, and seeds■ full of protein, and contain fat, vitamins, and minerals (especially lots of iron), which are important for the blood and brain■ avoid eating too much fat by choosing lean meats or cutting off fat.■ eat only small amounts of processed meats (luncheon, salami, bacon, and ham) as these are high in fat and salt■ eat at least 1 serving a day.
<p>Remember: Drink plenty of water every day!</p>	

Iron

Iron is an important part of red blood cells. It is needed to make haemoglobin – the protein that carries oxygen around the body and gives blood its red colour.

We need iron to:

- make red blood cells
- help provide energy in our tissues
- provide iron stores that can be used when needed.

Iron in our diet

- Kidneys and liver are the best source of iron, but not everybody likes the taste of these meats.
- The next best source is red meat and then white meat.
- Vegetables and legumes are sources of iron, but the body absorbs iron more easily from meats than from plants.
- Fruit is not a good source of iron, but fruit and vegetables, such as oranges, kiwifruit, tomatoes, and broccoli, are rich in vitamin C which helps the body absorb iron. So next time you eat a steak, follow it with half a cup of broccoli!

Links

- [https://www.healthed.govt.nz/search?mode=pictureview&type=resource&f\[0\]=file_id_health_topics%3A23](https://www.healthed.govt.nz/search?mode=pictureview&type=resource&f[0]=file_id_health_topics%3A23)
- <http://www.kidspot.co.nz/familyhealth/Healthy-Living-Healthy-food-pyramid+3098+164+article.htm>
- <http://www.nutritionfoundation.org.nz/nutrition-facts/food-groups>

Graphic organiser: My healthy choices plan

Healthy food choices	Fitness/exercise choices
Breakfast:	Daily:
Lunch:	
Dinner:	Weekly:
Snacks:	Sometimes: