

# Be Body Wise with Napo: Lesson One – Skin

(7–9 years)

## Teacher Guidance

It is never too early to introduce children to the basic safety concepts that for adults come under the umbrella of Occupational Safety and Health (OSH).

Napo is a charming character who can help children think, understand and act on safety issues. To find out more about Napo, click here: <http://www.napofilm.net/en/who-is-napo>  
There is a wide range of Napo films, so please feel free to explore them and use in your own classes.

Some of the basic safety concepts in this lesson plan can link to curriculum already being taught. This resource presents a range of great ideas which you can use to help integrate these safety concepts into your lessons. It can work as a lesson or be part of a wider project. It links to other subjects, as shown, but its main purpose is to use the engaging Napo films to teach children about how to take care of their bodies and avoid long-term damage, although not every risk the body faces is included here. In fact, this project focuses on risks to the skin (the back is covered in lesson two), but please check the Napo website for films covering other risks to the body, such as to the eyes, if you would like to incorporate those into your lessons.

The grid overleaf gives an overview of potential activities, objectives and resources required for the session. This is followed by a more detailed example three-part lesson plan with an idea for extending the lesson. In this lesson children will use the Napo video clips to discover the risks to their own physical health and safety and how to protect themselves against such risks.

This lesson can lead into a story writing work where the pupils can put some of the dangers they have been considering into a real context.

If you need more information on basic safety and health topics raised in this project, you can find it in the corresponding helpsheet for this lesson plan in the third section.



## Learning Objectives

- To recognise risks to physical health and safety
- To predict similar risks in new situations
- To explain how to avoid such risks

## Activity Overview

See **Detailed Lesson Plan**\*

40/45 minutes

### Possible activity 1:

Watch the first Napo clip provided with this lesson: [www.napofilm.net/en/napo-for-teachers/risks-to-skin/video](http://www.napofilm.net/en/napo-for-teachers/risks-to-skin/video)

- Protect Your Skin – introduction and an edited selection of scenes.
- Danger, Chemicals – Corrosive and Irritant scenes

Discussion about our skin and how it is vulnerable to damage. Extend the discussion to heat, cold, sun damage and chemicals, including detergents. Consider other dangers such as insects, plants that can cause skin-irritation (e.g. nettles) etc. Consider ways we can protect our skin.

Organise a game where the children should discover what could be dangerous to the skin in their outdoor and indoor environment (e.g. the children have to investigate if there are some plants that cause skin-irritation, spine-bushes or insects that sting).

### Possible activity 2:

Draw round their hands on a piece of plain paper; in each finger write a way to protect your skin from risk, such as wear gloves, don't touch, apply sun cream and wear a hat (to protect from the sun).

## EXTENSION WORK

### Napo's Hazard Holiday

Write or act out a story about when Napo goes on a holiday and learns about the risks to his body with specific reference to the skin.

This could include:

- Sunbathing without cream
- Getting bitten by a jelly fish
- Changing the oil in his car

## Resources Required

- Napo film clip (provided)
- Plain white paper and pencils
- Hand template (optional, provided)

To download the provided resources, go to: <http://www.napofilm.net/en/napo-for-teachers/Resources>

## Links to Subjects/ Curriculum

### Personal, social and health education

- Rules for and ways of keeping safe
- To recognise how their behaviour affects other people
- To evaluate risks to personal health and limit them where possible

### Physical Education

- To assess the risk within any physical activity and respond with preventive behaviours

### Science

- To recognise warning signs and take notice of them

### Citizenship/Education for civil life

- To recognise hazards, assess consequent risks and risk control

### Foreign/Native Language

- Writing simple sentences to complete a story with a beginning, middle and end structure



## \* Detailed Lesson Plan

### Learning outcome

I will be able to explain how to protect my skin from simple risks.

### Lesson Objectives

1. To recognise risks to physical health and safety from avoidable behaviour.
2. To predict similar risks in new situations.
3. To explain how to avoid such risks.

### Starter

#### 5 minutes

Possible activities are:

- Show a picture or photograph of a body

Pupils have to estimate an answer to this question –

How much skin covers the human body? (Answer: 1.8- 2.0m<sup>2</sup>)

- Discuss with the children if they (or their parents) have ever experienced problems to the skin

### Main Activity

#### 40 minutes

Show the first group of Napo scenes provided with this lesson:

Protect your skin, Danger chemicals – Corrosive and Irritant scenes.

#### Activity 1:

Discussion about our skin. Does your skin ever get sore? What causes that? How can you protect your skin? Why is it important to protect your skin? What chemicals are there in the home that you need to watch out for? Organise a game where the children should discover what could be dangerous to the skin in their outdoor and indoor environment (e.g. 1. Outdoor – the children have to investigate if there are some plants that cause skin-irritation, spine-bushes or insects that sting).

#### Activity 2:

Pupils should then draw round their hands on a piece of plain paper. In each finger, write a way to protect skin from risk. E.g. wear gloves, don't touch, apply sun cream and wear a hat (to protect from the sun).



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## Plenary and Assessment

### 5 minutes

Each pupil tells the class what it means to be body wise with specific reference to the skin and gives examples.

Test how far pupils have met the learning objectives using the continuum below.

Teacher and students assess their learning using this tool:

**Gold:** I can explain at least three types of risk to the skin and how to prevent it.

**Silver:** I can explain two types of risk to the skin and how to prevent it.

**Bronze:** I can explain one type of risk to the skin and how to prevent it.

## EXTENSION WORK

A. Write a story in which Napo goes on a holiday but he does lots of things that put his body at risk with specific reference to his skin. This can be turned into a drama performance if preferred.



## HELP SHEET FOR TEACHERS

### Be Body Wise with Napo: Lesson One – Skin

In this lesson plan ONLY some health effects on certain parts of the body are mentioned. Many other impacts on the body can happen and will be raised in future lesson plans.

#### Napo in... Protect your skin!

The film raises awareness of the dangers of exposing the skin to harmful (and sometimes not so harmful) substances, the situations where exposures occur, and what can be done to avoid risks, protect the skin and prevent damage.

Napo discovers many different situations where exposure to chemicals and other substances can cause skin problems. He learns about the amazing qualities of the skin, and strips naked to show the audience: 'Everything you always wanted to know about... your skin'. He identifies measures to prevent problems and has three important messages: **Avoid – Protect – Check**.

Avoiding or minimising contact with chemicals is achieved through elimination – using a mechanical method instead of a chemical one; by substitution – using a safer alternative; and by employing a safe working distance – using tools rather than handling directly. Personal protective equipment (PPE) is designed to protect the skin but Napo reminds us of the importance of taking care of the skin by showing prompt removal of contamination, washing skin properly, drying skin thoroughly and applying skin creams regularly.

Finally Napo recommends regular checks for early signs of skin problems.

#### How your skin works

The skin is the most extensive organ in the human body, with a surface area of about two metres square and weighing about three kilos in adults.

Your skin is amazing! Tough, yet sensitive; permeable, yet waterproof. It's flexible, yet strong, considering that it's very thin, and houses millions of tiny units that regulate its fluid levels and temperature. It can change colour, repair itself and is your body's biggest organ.

Skin regulates body temperature; to keep it at the optimal 38 degrees Celsius (98.6 degrees Fahrenheit); it secretes sweat and then evaporates from bare skin, cooling it. Additional cooling is provided by dilation of the blood vessels in the dermis, which allows for the heat to dissipate from the blood as it is pumped through them.



To conserve body heat, the blood vessels contract, restricting blood flow. Hair follicles stand erect, causing the hair to rise, in an attempt to trap a layer of warm air close to the skin. Where the body hair is too thin to accomplish this, it results in goose flesh.

Skin also forms a physical barrier against injury and infection. The skin's sebaceous glands secrete an oil which provides an effective barrier against the growth of bacteria. When skin is dry it cracks open, allowing in bacteria and reducing its ability to ward off infection.

The skin has its own immune system, called the skin-associated lymphoid tissue (SALT), a network of immune cells that recognise and destroy foreign matter, such as bacteria and toxins.

**Here's how it works:**

The strike troops in the war on infection are called Langerhans cells, which are derived from bone marrow. They react immediately to any incursion by foreign matter, and then attract white blood cells such as lymphocytes and macrophages to the area. They first prevent the invaders from advancing into the body, and then destroy them.

The skin consists of three layers: the epidermis on the outside, then the dermis and the hypodermis. The skin you see is actually a layer of dead cells called the corneal layer; the final stage in a cycle that lasts around 28 days and starts below the surface in the epidermis, which comprises keratinocytes, living epidermal cells, and the corneal layer. The epidermis has a water-resistant component which prevents the skin absorbing water like a sponge.

The dermis is a busy place, almost like an industrial area. Within it operate an array of devices such as sweat and oil glands, and hair follicles, as well as a network of blood vessels and nerve fibres, some supporting tissue, collagen and subcutaneous fat. It's the elastin and collagen fibres in the dermis which provide the skin with its elasticity. The dermal layer has elastin fibres which are neatly layered and relatively thick – particularly in children and people whose skin hasn't been damaged by the sun.



### Skin problems

The Napo film aims to raise awareness of the dangers of exposing the skin to harmful (and sometimes not so harmful) substances, the situations where such exposures occur, and what can be done to avoid risks, protect the skin and prevent damage.

#### The objective of the film is to answer the following two questions:

- What can cause skin problems?
- What measures can be taken to prevent those problems?

#### The answer to the first question is conveyed in a series of scenes showing different tasks and the use of materials that can typically lead to skin problems, for example:

- Construction – wet cement
- Construction – floor tiling
- Metal working fluids – using solvents to clean parts
- Motor vehicle repair – oils and lubricants
- Catering - ‘wet work’ – dishwashing
- Cleaning – use of cleaning products
- Hairdressing – shampooing

To answer the second question there are three key messages:

#### Avoid-Protect-Check

**Avoid** or minimise contact with chemicals that cause skin problems by showing:

- Elimination – use a mechanical method instead of a chemical one (such as using a scraper rather than a chemical stripper to remove paint)
- Substitution - use a safer alternative
- Reduce emission – enclosures, splashguards, etc
- Employ a safe working distance – handle mechanically or use tools rather than handling directly; choose tools with long handles rather than short ones

**Protect** your skin where you can't avoid contact; use Personal Protection Equipment (PPE) and good skin care, for example:

- PPE – use of coveralls, aprons, gloves etc.
- Skin care – where PPE isn't practical other alternatives can be used, such as prompt removal of contamination, washing skin properly, drying skin thoroughly, applying skin creams regularly

**Check** skin regularly for early signs of skin problems. Simple, visual checks to spot problems early mean that:

- Conditions are easier to treat
- The development of more serious problems can be prevented
- Checks preventative measures are working

7/7



*The second lesson of Be Body Wise with Napo introduces risks to the back.*