

Overview, lesson plan & curriculum links

AGED
11-14
YEARS



The Science of Sneezing

...and how handwashing helps



LESSON
PLAN

STICKERS

CALENDAR

EXPERIMENTS

VIDEOS

STIMULUS
PRESENTATION

POSTERS

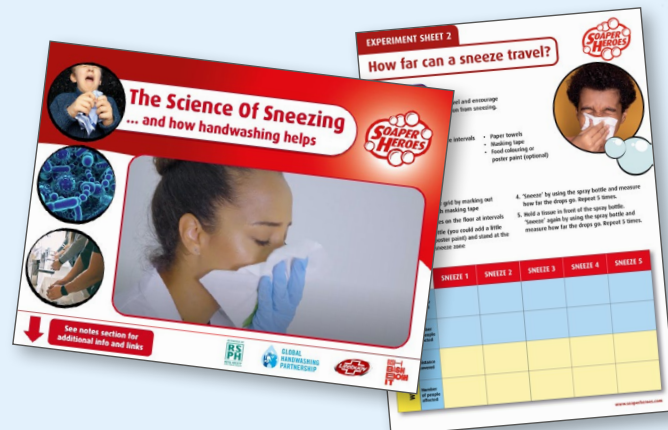
These materials have been created by one of the world's largest providers of handwashing behaviour change programmes, **Lifebuoy**, who have worked with NGOs and governments to reach over 1 billion people.

What is in this resource?



Digital download pack

- Lesson plan
- Stimulus Powerpoint presentation (N.B. there is comprehensive guidance within the notes section)
- Activity & experiment sheets
- Posters



Links to video channel

- Handwashing song
- How far can a sneeze travel?
- Germ-busting — how soap destroys viruses
- Crikey! It's cross-contamination — how to sanitise properly (and avoid missing important areas)



Postal packs

- Posters for washrooms & classrooms (wipeable)
- Washroom & Hygiene Hotspots stickers



Learning outcomes



Good health gives

- better **attendance** at school
- better **concentration** in class
- better chance to **learn**

The key to good health, is good hygiene and it all starts with **handwashing**.

This resource aims to support you to deliver these learning objectives:

- Recap on the different types of microbes and that some are good and others are bad
- Understand the risk factors that cause preventable infections
- Recognise places where germs hide
- Remember the 4 key handwashing occasions
- Know how and when to wash hands properly with soap or sanitiser and the impact this has on reducing the spread of germs
- Build healthy hygiene habits that last a lifetime



This resource contributes to the UN Sustainable Development Goals 3 and 4, as well as to Article 24 of the UN Convention of the Rights of the Child, ensuring that every child has the right to the best possible health.

Even before Covid-19 reached the UK, there was a need to support schools in the delivery of education on personal health and hygiene:

MILLIONS OF SCHOOL DAYS ARE LOST FROM AVOIDABLE ILLNESS

England: 31.3 million

Source: Department For Education, 2018-19

Scotland: 4.1 million

Source: Scottish Government, 2018-19

Wales: 2.1 million

Source: Llywodraeth Cymru/Welsh Government, 2018-19

Northern Ireland: 2.2 million

Source: Department Of Education, Northern Ireland, 2017-18

600,000 – 1,000,000 people in the UK catch norovirus (vomiting bug) every year

Source: NHS

Threadworms are parasites in faeces that spread easily. 40% of young children in the UK could have had an infestation at some time. Handwashing prevents re-infestation.

Source: www.gponline.com/basics-management-threadworms/gi-tract/article/1073433

Only 72% of teachers in England stated they have soap and warm water available to all pupils for handwashing

Source: Teacher Tapp, Mar 2020, base: 6,046 teachers

Handwashing and sanitising with ANY brand of soap and sanitiser helps us stay one step ahead of infections



In Spain, school children who washed their hands, complementing this with the use of hand sanitiser, had a 36% lower risk of school absenteeism due to acute gastroenteritis. (1)

Among school children, handwashing more than 5 times per day was the only statistically significant factor to protect against influenza. Children who washed their hands were approximately 40% less likely to contract influenza. (2)

Lesson Plan: The Science Of Sneezing

Overall objective: help students understand how germs spread, particularly through cross-contamination and sneezing, the differences between soap and sanitiser and how to lead behaviour change in our school.

TOPIC	LEARNING OUTCOMES	RESOURCES	TIME
Germs & microbes	<u>Recap</u> on the types of microbes and their classification	Quiz Clustering exercise, video Slides 1–8	20 min
How far can a sneeze travel?	<u>Understand</u> what sneezes are, how they can spread disease and how to manage them	'How far can a sneeze travel?' slide, video Experiment sheet Slides 9–11	18 min
Hand-washing	<u>Understand</u> the important differences between soap and sanitiser <u>Remind</u> why handwashing is important and the 4 key times to handwash	'Fighting germs: soap or sanitiser' chart, video Song Pledge Slides 12–17	9 min
Hygiene Hotspots	<u>Learn</u> where unseen germs hide <u>Understand</u> the need to pay attention to all areas of hands <u>Learn</u> that we need to wash both hands equally	'Where do most germs hide?' slide Activity sheet Slides 18–25	10 min
Wrap-up quiz	<u>Consolidate</u> learning and <u>create</u> posters to support behaviour change for us, our school and our families	Slides 26–28	3 min

Total: 60 min

(1) Azor-Martínez E, Cobos-Carrascosa E, Gimenez-Sanchez F, Martínez-López JM, Garrido-Fernández P, Santisteban-Martínez J, Seijas-Vazquez ML, Campos-Fernandez MA, Bonillo-Perales A. Effectiveness of a multifactorial handwashing program to reduce school absenteeism due to acute gastroenteritis. *Pediatr Infect Dis J*. 2014 Feb; 33(2):e34-9.

(2) Torner, N., N. Soldevila, et al. Effectiveness of non-pharmaceutical measures in preventing pediatric influenza: a case-control study. *BMC Public Health* 2015 15: 543.

Curriculum links

– The Science Of Sneezing



England

- **The National Curriculum in England Framework document December 2014**
- KS3: evaluate risks (pg.201)
- KS3: cells as the fundamental unit of living organisms, (pg. 203)
- KS3: the importance of bacteria in the human digestive system (pg.203)
- KS3: Citizenship: the roles played by public institutions and voluntary groups in society, and the ways in which citizens work together to improve their communities, including opportunities to participate in school-based activities (pg.228)
- **Relationships Education, Relationships and Sex Education (RSE) and Health Education Statutory guidance for governing bodies, proprietors, head teachers, principals, senior leadership teams, teachers 2019**
- KS3: Pupils should know about personal hygiene, germs including bacteria, viruses, how they are spread, treatment and prevention of infection, and about antibiotics

Wales

- **Curriculum for Wales: area of learning and experience: science and technology 2019**
- KS3: I can understand how my actions and the actions of others impact on the environment and living things
- KS3: I can describe the features of organisms and recognise how they allow them to live, grow and reproduce for survival in their environment
- KS3: I can identify the threats to the development and health of organisms and recognise some natural defences, preventions and treatments
- **Curriculum for Wales: area of learning and experience: health and well-being 2019**
- KS3: I can describe the behaviours, conditions and situations that affect my physical health and well-being, and I know how to respond to and/or manage these in order to actively reduce the risk of harm to myself
- KS3: I can recognise that some decisions I make will have a long-term impact on my life and the lives of others
- KS3: I can identify and assess risks, and I can take steps to reduce them

Scotland

- **Curriculum for Excellence: health and wellbeing (experiences and outcomes) 2016**
- S1-S3: I have contributed to investigations into the different types of microorganisms and can explain how their growth can be controlled (SCN 3-13b)
- S1-S3: I have explored how the body defends itself against disease and can describe how vaccines can provide protection (SCN 3-13c)
- S1-S3: I am learning to assess and manage risk, to protect myself and others, and to reduce the potential for harm when possible (HWB 0-16a / HWB 1-16a / HWB 2-16a / HWB 3-16a / HWB 4-16a)
- S1-S3: I can demonstrate my developing understanding of moral values through participating in events and projects which make a positive difference to others (RME 3-02b)

Northern Ireland

- **The Northern Ireland Curriculum 2019, Science and Technology at Key Stage 3:**
- KS3: Developing pupils as individuals: explore physical, chemical and biological effects on personal health
- KS3: Pupils are learning to: understand that there are many hazards at home; stay safe at home; carry out a risk assessment at home; and identify measures to prevent accidents (pg.7)
- KS3: Pupils are learning to: think more deeply about what we can tell about someone from their skin; and understand and describe the structure of skin (pg.4)
- KS3: Pupils are learning to: identify and explain the functions of the skin (pg.7)
- KS3: Pupils are learning to: think critically about information; and describe common skincare products and assess their usefulness (pg.11)

How to use these resources

These materials have been designed to be flexible, for use in:

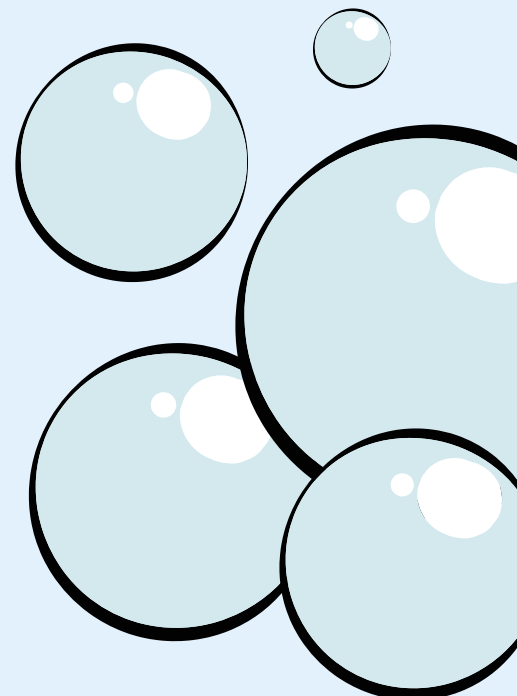
- regular Science lessons
- during a dedicated hygiene session in an induction week
- broken into smaller chunks to start the day off in form time

Key times of the year to use these resources

While we need to wash hands everyday, there are particular occasions throughout the year when it's worth a bit more focus on personal hygiene: gatherings and festivals. With the associated excitement of seeing friends, eating special meals and going to special places, some people can forget to look after their hygiene. A holiday or break from normal routines should not be a break from handwashing.

Encouraging behaviour change at school and home

Clearly it's important to reinforce hygiene messages in the home too. To facilitate this, 'Soaper Heroes' resources include materials that can be shared electronically with homes. There are posters on handwashing and sanitising, as well as activities and experiments that can be performed at home. Teachers, students, parents and guardians can find out more at www.soaperheroes.com



'5 Levers' for behaviour change



'Soaper Heroes' has been created using behavioural science techniques developed by teams of psychologists and academics. These have been summarised in the Unilever '5 Levers' for behaviour change.

It's key to strike a balance between encouraging people to change behaviour while not driving fear and anxiety. This resource necessarily provokes a little worry while, importantly, providing techniques and strategies to help control raised anxieties.

Lever No.1: Make it understood

- Many people believe their hands are clean if they look visibly clean. Unfortunately, that's not true. The 'Glo-germ' demonstration helps students understand that washing hands with water alone is not enough to get rid of germs.

Lever No.2: Make it easy

- For a new behaviour to become a habit, it needs to be seen as easy to do and it must fit into daily routines. This resource makes it easy for students to remember when they need to wash their hands through a song, washroom stickers and posters.

Lever No.3: Make it desirable

- People don't usually do something unless they want to. To encourage students to want to wash their hands, this resource includes fun elements like demonstrations, quizzes and stickers.

Lever No.4: Make it rewarding

- People want to feel good about achieving something, for instance improving their hygiene habits. With this resource, students are given the opportunity to take responsibility, solve problems and help others to change behaviour. They are invited to create posters and to display these within the school, to inspire others and, in so doing, to boost their own self-esteem.

Lever No.5: Make it a habit

- Habits are created over time through repetition. Practising a new behaviour every time you encounter a key occasion, for at least 21 days, helps to make it permanent. This programme gives students activities to repeat handwashing in the classroom, until it becomes a routine.

About the creators of this resource



These materials have been co-created with one of the world's largest providers of handwashing behaviour change programmes, **Lifebuoy**, who have worked with NGOs and governments to reach over 1 billion people, since 2010.

Lifebuoy was created in the UK in 1894 to provide an affordable way for people to protect against cholera.

This resource has been developed with input from a wide range of experts including:

Chartered members of the **British Psychological Society**: Prof. Angel Chater (University of Bedfordshire); Prof. Lucie Byrne-Davis (University of Manchester) and Prof. Madelynne Arden (Sheffield Hallam University).

Teachers and advisors across the UK including Steve & Ana Banks, Megan Bellis, Fran Dunworth, Paul Gordon, Clare Mercer, Nicola S. Morgan, Helen Porter, Martin Staniforth.

APPROVED BY



ROYAL SOCIETY
FOR PUBLIC HEALTH

The **Royal Society For Public Health** is an independent health education charity and the world's oldest public health body, with over 6,000 members worldwide. Their vision is that every community, workplace and individual should have the opportunity to optimise their own health and wellbeing.



GLOBAL
HANDWASHING
PARTNERSHIP

The **Global Handwashing Partnership** is a coalition of international stakeholders working to strengthen handwashing access and practice, as a pillar of international development and public health. Member organisations include government agencies, corporations, non-governmental organisations and academic institutions.



**Promoting handwashing and sanitising
with ANY brand of soap and sanitiser**

**BISH
BASH
BOSH
IT**