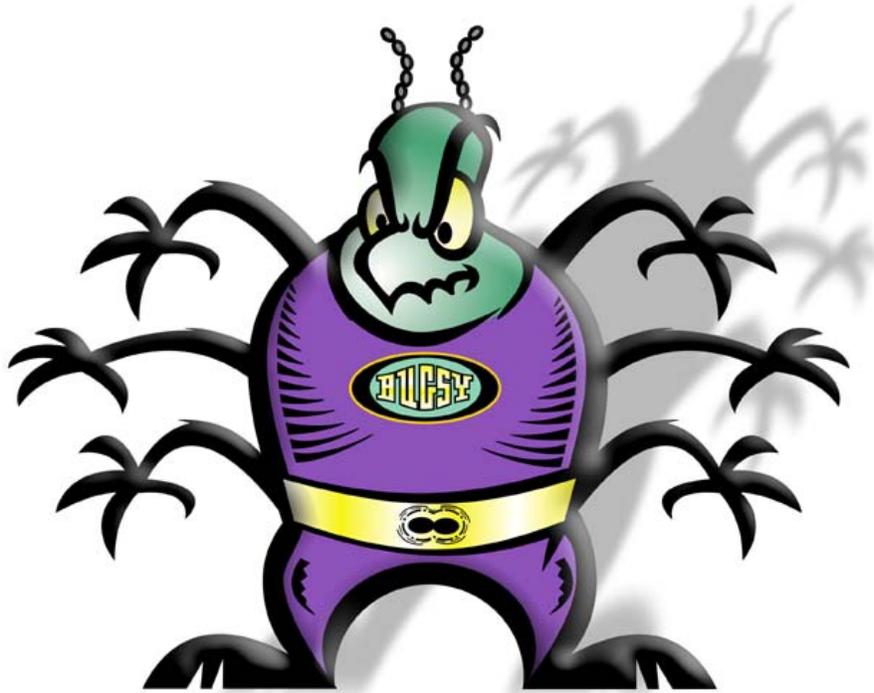


# Do Bugs Need Drugs?<sup>®</sup>



Grade Two

Teaching Kit

June 2012

## Tips on presenting to Grade 2 students



Curious: Grade two students will ask lots of questions. You may have to limit number of questions.

Energetic: They have lots of energy. There may be some students who have difficulty sitting through the presentation. There may be one or two students who seem to have the answer to every question. Encourage them to give their classmates a turn.

Special Needs: It is not unusual to have special needs students in a classroom. Try to include these students by having them help pass out sheets/paper towels, etc. They want to feel important too.

Sense of Play: They enjoy interactive learning. They still like to see dress up and play. They will laugh (maybe too much) at the skit.

They'll enjoy the puppet, but this is an expensive item and not meant to be played with by the children.

They can be unruly. Proper supervision is required at all times and in particular during the handwashing demonstration. It may be wise to discuss behavior expectations before this activity. Ask the teacher for help if there is too much noise or someone is being disruptive.

There may be a few "shy" types. Attempt to include them in the Q&A.

They want to be leaders/teachers. Ask them to teach their family members, and friends about what they learned today including proper handwashing technique.

Encourage them to read the printed materials as a way of remembering what they have learned today.

Have fun!

# Lesson Plan

## Grade Two Teaching Program



Activity	Description	Time
<b>Activity 1</b> <b>Do Bugs Need Drugs?</b>	Interactive dialog	15 minutes
<b>Germs Make Me Sick<sup>1</sup></b>	Resource Book	5 minutes
<b>Activity 2</b> <b>Bacteria and Viruses Are Different</b>	Coloring Sheets	20 – 25 minutes
<b>Activity 3</b> <b>Fluorescent Handwashing Demonstration</b>	Dark Light and Fluorescent Lotion	
<b>Activity 4</b> <b>Bacteria and viruses game</b>	Game with coloring sheets	3 minutes
<b>Activity 5</b> <b>Skit</b>	Skit with Buggy in doctor's office	5 minutes
<b>Optional Activities</b> <b>Those Bugs Don't Need Drugs?</b> <b>Do Bugs Need Drugs?</b> <b>Wash, Wash, Wash Your Hands</b>	Poems and song	2 minutes

<sup>1</sup>Berger, Melvin and Marylin Hafner. Germs Make Me Sick. New York: HarperCollins; 1995



## Activity 1

### Do Bugs Need Drugs?

- Notes:
- This script is an interactive teaching session for grade two students.
  - The “Bugsy” puppet can be used to deliver some of the message or the discussion can be led entirely by the instructor(s).
  - Ask questions, allow students to participate with answers and then sum up the message you wish to deliver.
  - Be careful of your time – when you ask a question, limit the number of students allowed to answer each time or allow the class to respond as a group.

Time: 15 minutes

Materials: Script, puppet (optional), overheads (4), overhead projector

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### Script

Today we are here to talk about germs – sometimes called “bugs.”

Do you know what germs are?

*Let students give some answers.*

*Sum up* – Germs or bugs are tiny living things.

How big are they?

Are they this big? *(arms in a circle over your head)*

Are they this big? *(hands together in a circle)*

Are they this big? *(finger and thumb in a circle)*

Are they this big? *(finger and thumb very close together)*

## Can you see them?

Can you see them in the air?

Can you see them on your desk?

Can you see them on your hands?

*Sum up* – Germs are so small that you can't see them.

## Where are germs?

Are they in the dirt?

Are they on your desk?

Are they in the air?

Are they on your skin?

Are they in your mouth and nose?



*Sum up* – Germs are everywhere.

## If germs are everywhere, why don't we get sick all the time?

*Sum up* – Our body has ways to fight germs and it is pretty good at it. For example, our skin keeps germs out of our body. There are even good bugs on our skin. These good bugs help fight off the bad bugs.

## How else can you protect yourself from bad bugs?

*Sum up* – One of the best ways to protect your self against bad bugs is to wash your hands with plain soap and water.

## When should you wash your hands?

*Sum up – OVERHEAD #1*



Overhead #1

1. Before you eat
2. After you go to the bathroom
3. After you sneeze or blow your nose
4. After playing

## How do you wash your hands?

*Sum up - OVERHEAD #2*



Overhead #2

- Use plain soap and water.
- Wet your hands.
- Apply soap (plain soap, not antibacterial soap).
- Rub your hands together for at least 20 seconds or the time it takes to sing Twinkle Twinkle Little Star. Get in between your fingers and under your fingernails.
- Rinse your hands for 10 seconds to get all of the germs off.
- Dry your hands with a towel.

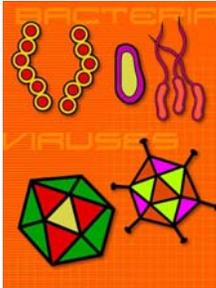
*Teach the song.*



Twinkle, twinkle little star,  
Look how clean my two hands are,  
Soap and water wash and scrub,  
Get those germs off rub-a-dub,  
Twinkle, twinkle little star,  
Look how clean my two hands are.

There are different kinds of germs or bugs.

*OVERHEAD #3*



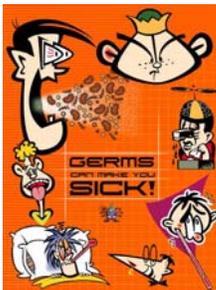
Overhead #3

There are bacteria and viruses.

Bacteria and viruses are very different from each other.

Germs can make you sick.

*OVERHEAD #4*



Overhead #4

When you get sick from a germ or bug, it is called an infection.

Viruses can cause colds and the flu and make you feel terrible.

How many of you have had a cold before?

How did it make you feel?

Do you know what kind of bugs causes colds and the flu?

*Sum up* – Viruses cause colds and flu and make you feel miserable.

Have you ever heard of antibiotics?

How many of you have had to take antibiotics before?

*Sum up* – Antibiotics are drugs that work against bacteria. Antibiotics don't work against viruses like colds and flu.

Do you know what happens when someone takes antibiotics when they have a cold or the flu?

Do you think it helps them?

*Sum up* – People hope that antibiotics will help them get better faster, but antibiotics don't work at all against viruses like colds and the flu.

Do you know what else happens when people take antibiotics for colds and the flu?

The big problem is that bacteria get used to the antibiotics and can become resistant to antibiotics when you take them for colds and the flu. The antibiotics don't help the cold, but they cause resistance.



I'll bet you don't know what resistance means.

*Sum up* – Antibiotic resistance means that antibiotics don't work any more. The bacteria become stronger and harder to kill.

Some people call these superbugs. This is very serious because antibiotics won't be able to help you if you have an infection caused by a superbug.

## So, today we learned

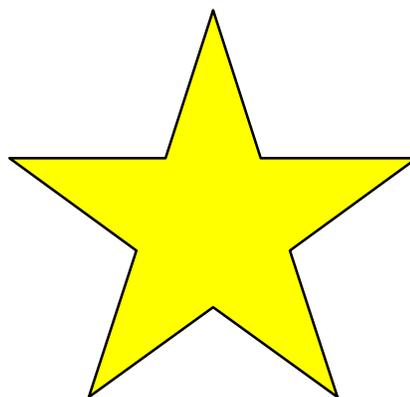
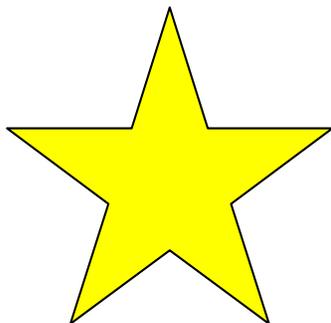
Wash your hands. Washing your hands is the best way to prevent the spread of infections.

Viruses and bacteria are very different from each other.

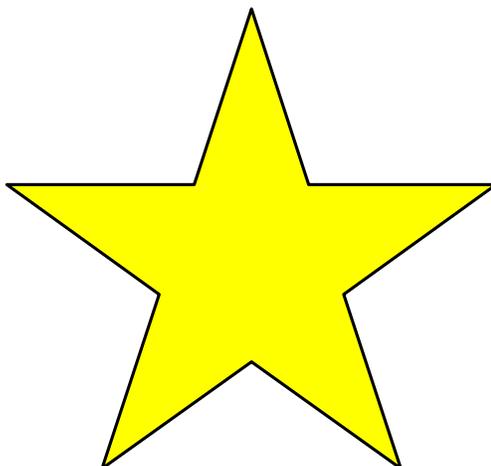
Not all bugs need drugs. Viruses like colds and the flu don't get any better with antibiotics.

Using antibiotics for colds and the flu can cause antibiotic resistance





Twinkle, twinkle little star,  
Look how clean my two hands are,  
Soap and water, wash and scrub  
Get those germs off rub-a-dub,  
Twinkle, twinkle little star,  
Look how clean my two hands are.





## **Activity 2**

### **Bacteria and Viruses Are Different**

### **Coloring Sheets**

Materials: Coloring sheet master copies: 2 viruses (angular shapes), 3 bacteria (rounded shapes); overhead #3 (bacteria and viruses), crayons or colored markers

Preparation: Photocopy coloring sheets so that each student receives only one sheet (either a virus or bacterium of varying types)

Time: 20 - 25 minutes

Note:

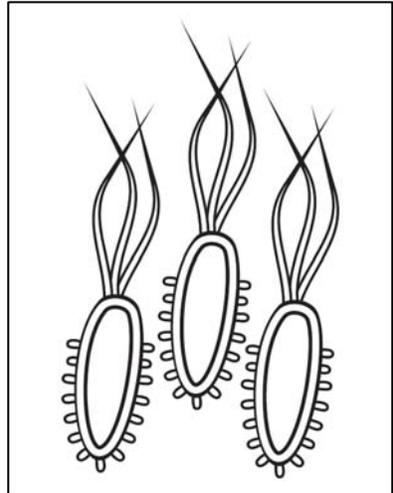
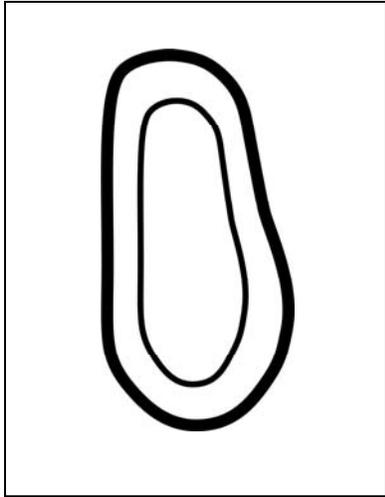
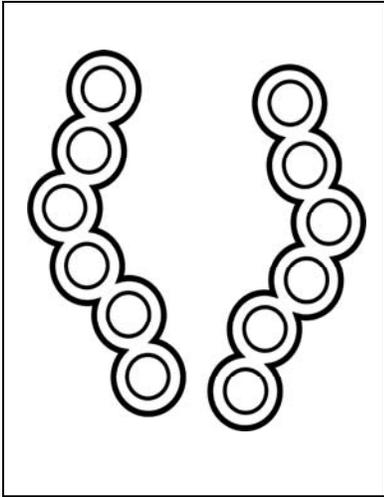
- During this time students will go in small groups to do the Fluorescent Handwashing Demonstration, Activity 3.
- The coloring sheets will be used later for the Bacteria and Viruses Game, Activity 4.

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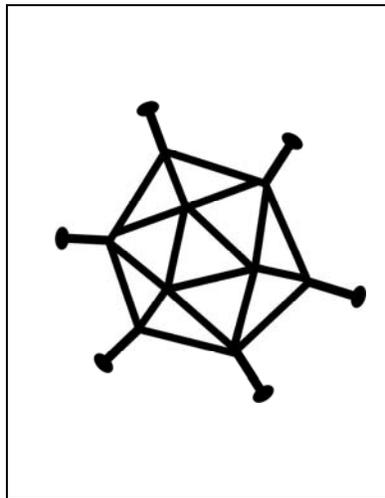
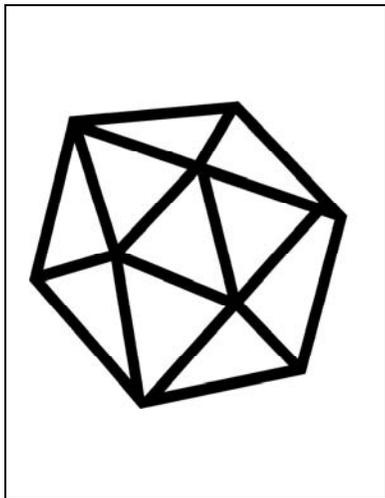
### **Instructions**

- Distribute coloring sheets randomly to the class, only one per student.
- Ask students to color their "bugs."
- Circulate among the students. Encourage them to decide whether they have a virus or bacterium. Show overhead #3, which illustrates pictures of viruses and bacteria.

# Coloring Sheets



Bacteria



Viruses



## Activity 3

### Fluorescent Handwashing Demonstration

Materials: Dark light, fluorescent handwashing lotion, washroom without windows, soap and paper towels

Preparation: Test the light in the student washroom beforehand to familiarize yourself with the equipment to make sure it will work for the students.

Time: 20 - 25 minutes

Note: Kits with lights and lotion may be available through public health or the school system or see GloGerm Company <http://www.glogerm.com>

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### Instructions

Note: Follow manufacturer's instructions for dark lights. Generally a smaller amount of lotion than recommended will be needed for the children as they have small hands.

- Ask students in groups of four or five to come to the student washroom. (This can be done during the preceding coloring activity.)
- With the washroom light off, shine the dark light on each student's hands. There should not be any fluorescence.
- Turn on the washroom lights and ask the students to spread some "pretend germs" on their hands. Apply a small (pea sized) drop of the fluorescent lotion on each student's hand. Ask the students to spread the "pretend germs" all over their hands.
- Turn off the washroom lights and shine the dark light on each student's hands. The "pretend germs" will light up.
- Turn on the washroom lights and ask the students to wash their hands. Sing the Twinkle Twinkle song.

- Turn off the washroom lights and shine the dark light on the students' hands again. Students will be able to see how well they washed. Repeat as needed until all "germs" are gone.

Discussion:

- Just because you can't see the germs doesn't mean they aren't there.
- It is important to wash well, especially around the nails and between the fingers to get all the germs off.



## Activity 4

### Bacteria and Viruses Game

Materials: Coloring sheets of bacteria and viruses from Activity 2, Buggy puppet (optional), overhead #3  
Time: 3 minutes

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### Instructions

When finished coloring, ask all the viruses to gather on one side of the room and the bacteria on the other side of the room. Compare shapes with overhead #3.

Teacher or "Bugsy" puppet asks viruses to look at their shapes and make sure that everyone in their group is a virus. Repeat for bacteria. Students regroup as needed.

Teacher asks bacteria: "What kind of bug are you?"

Bacteria: "Bacteria"

Teacher: "Do you need drugs?"

Bacteria: "Yes."

Teacher: "What did you say? Do bacteria need drugs?"

Bacteria: "YES."

Teacher: "Please speak up. Do bacteria need drugs?"

Bacteria: "YES!!!"

Teacher or "Bugsy" asks viruses: "What kind of bug are you?"

Viruses: "Viruses"

Teacher: "Do you need drugs?"

Viruses: "No."

Teacher: "I can't hear you. Do viruses need drugs?"

Viruses: "NO."

Teacher: "I still can't hear you. Do viruses need drugs?"

Viruses: "NO!!!"



Teacher asks all students: "Do all bugs need drugs?"

Students: "NO!!!"



## Activity 5

### Skit

Materials: Buggy puppet or dress-up clothes, dress-up clothes for Doctor, Nurse and Patient  
Time: 5 minutes

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### Skit

*Setting:*

Doctor's office

*Characters:*

Bugsy  
Sick patient  
Doctor  
Nurse

### Scene One

*Bugsy and patient sitting in doctor's waiting room*

Bugsy: "Hi, my name is Bugsy. What's yours?"

Patient: "Hi, I'm John." *(use real name)*

Bugsy: "Whoo! You don't look so well."

Patient: "Ohh!! You're right. I'm sick."

Bugsy: "What's wrong John?"

Patient: "My throat is sooo sore and my nose keeps running like crazy. I really hope the doctor can do something to help me. Maybe (s)he'll give me some antibiotics and I'll get rid of this cold right away."

Bugsy: "Did you know, John, that bacteria and viruses are very different?"

Patient: "Oh, bacteria and viruses are not the same?"

Bugsy: "No, they are very different and antibiotics work against bacteria but not against viruses. Cold and flu are caused by viruses and antibiotics don't help."

Patient: "Gee, I thought antibiotics would really help. I got some the last time I had a cold."

Bugsy: "Well John, antibiotics don't work against cold and the flu and on top of that they can cause some problems."

Patient: "What kind of problems are your talking about, Bugsy?"

Bugsy: "When you take antibiotics for viral infections like colds and flu, the other bacteria in your body can become resistant to antibiotics."

Patient: "What does resistance mean?"

Bugsy: "It means that bacteria get used to antibiotics and the antibiotics don't work any more."

Patient: "Gee Bugsy, I didn't know it was that bad to take antibiotics for a cold or the flu. I thought they might help."

Bugsy: "It really causes problems. When you really need antibiotics for an infection caused by bacteria, like pneumonia, the antibiotics won't work anymore."

Patient: "How can I help?"

Bugsy: "When you go in to see the doctor about your cold, you should ask if your Bug Needs Drugs?"



## Scene Two

*Nurse and patient in examination room in doctor's office*

Nurse: "Hi John, I'm Nurse Jones. You don't look like you're feeling too well."

Patient: "No, I really have quite a cold."

Nurse: "Let me take your temperature."

Nurse: "Your temperature is up just a bit. Make yourself comfortable and the doctor will see you in a few minutes."

*Doctor comes in.*

Doctor: "Hi John, how are you feeling today?"

Patient: "Not very well. I have a really sore throat and my nose is clogged up."

Doctor: "Let's take a look. Say ahhh." (*Looks at throat.*) "Let's look in your ears."

Doctor: "John, I think you have caught a bug."

Patient: "Do my Bugs Need Drugs?"

Doctor: "Not this time. You have a nasty cold. Colds are caused by viruses. You need lots of rest and lots to drink and your body will fight off the virus on its own."

Patient: "So, antibiotics won't help?"

Doctor: "No, sorry, antibiotics won't help. They can cause problems if we use them for colds and the flu."

Patient: "You mean like resistant bacteria?"

Doctor: "John, I'm impressed. How did you know about resistant bacteria?"

Patient: "My friend Buggy told me all about it."

Doctor: "That's great. I'm really glad that Buggy's here to help me out."

Doctor: "There are some other medicines to make you feel better even if I can't give you antibiotics. You can go to the drug store and ask the pharmacist to help you out."

Patient: "Thanks Doctor Smith. I'm beginning to feel a bit better already."



## **Final Scene**

*Back in the waiting room.*

Patient: "You're a very smart guy, Buggy. I'm really glad that you were here to teach me that Not all Bugs Need Drugs!"

**The End**



## Those Bugs Don't Need Drugs!

Bacteria and viruses  
Are not the same  
They're different my friends  
And not just the name!

Bacteria are germs  
That make you feel sick  
Antibiotics will treat them  
You'll feel better quick.

Viruses are smart  
(Antibiotics won't do)  
They'll give you a cold  
They'll give you the flu.

Colds are not good  
Make you cough and all that,  
But colds they are viral  
And that is just that!

Antibiotics are good drugs  
Treat some bugs like that!  
But not for a virus  
You just **cannot** do that!!!!

We have a problem  
We're in such a fix  
Those cold bugs and drugs  
They just do not mix!!!!

We have a problem  
It's so plain to see  
We have a problem  
So listen to me!!!!

Resistance will follow  
As sure as can be  
Resistance will follow  
Before I count three!!!!

Resistance will follow  
As sure as can be  
Resistance will follow  
You'll spread it to me!!!!

Resistance will follow  
With bad bugs and such  
Resistance will follow  
Using antibiotics too much.

Resistance will follow  
With bad bugs and such  
Resistance will follow  
We'll regret it so much!!!!

Antibiotics won't help you  
For colds and flu  
Antibiotics won't help you  
So what can you do?

Drink fluids and sleep lots  
A good lot of rest  
Drink fluids and sleep lots  
You'll soon feel the best.

So, listen to Bugsy  
A smart guy at that  
Just listen to Bugsy  
One very cool cat!

Be careful my friend  
With a cold or the flu  
Antibiotics my friend  
They're just not for you!

Be careful my friend  
With those virus type bugs  
Be careful my friend  
Those Bugs Don't Need Drugs!!!!

# Do Bugs Need Drugs?

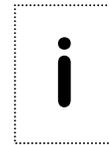


You know about lady bugs, beetles and bees,  
There are other bugs, very much smaller than these,  
Called bacteria, viruses, microbes and germs,  
As microscope viewing so clearly confirms.



They do not have wings.  
They do not have legs.  
They do not have stingers.  
They do not lay eggs.  
You can not see them, but still they are there,  
Much tinier yet than the dust in the air.

How small, can be difficult to understand,  
If sand was piled up high in your hand,  
Then that many germs, too tiny to spy,  
Could dance on the dot on the small letter i.



The bugs come from bathrooms and sick rooms and such.  
They are passed on by hand to the things that you touch,  
Like door handles, desk tops and key boards and phones.  
The bugs make you sick, right down to your bones.



They cause fever and tummy aches, earaches and flu,  
Sniffles and coughing and sore tonsils, too.  
Doctors have syrups and pills full of drugs,  
For some of the nastier sick-causing bugs.

But not all of the bugs can be stopped by a pill,  
Viruses say: "I will spread where I will!  
I will keep on infecting whomever I please.  
No one can stop me with measures like these!"



And too many drugs soon can lose their effect.  
On diseases against which they ought to protect.  
The bacteria bugs that survive say with glee:  
"Now I am immune...you can not stop me!"

Do bugs need drugs? You need to know,  
More often than not, the answer is no!  
Washing your hands with plain soap and water,  
Are best to protect every young son or daughter.



A boy left the bathroom, not using the sink,  
And stopped at the fountain for water to drink.  
Some of the germs on his hands stayed behind,  
On the tap for other young drinkers to find.

He left some more bugs on a phone in the hall,  
And more on a video game in the mall.  
And everywhere people touched things that he had,  
They got fevers and aches and were feeling quite bad.



A girl went to visit a friend with the flu,  
Then went on to visit one more friend or two,  
Without washing her hands, and her friends all got ill.  
And they took to their beds with a snuffle and chill.

But another young child touched a bathroom stall door,  
And picked up the bugs, like many before.  
The child lathered and rinsed for the length of a song,  
And no one got sick 'cause the bugs were all gone.

Listen to Buggy...to NOT snuffle and cough,  
Just wash your hands,  
And tell germs to bug off!



**Alberta**  
HEALTH AND WELLNESS



## **Wash, Wash, Wash Your Hands**

Wash, wash, wash your hands,  
Many times a day,  
Soap and water scrub and rub,  
Wash those germs away.

To the tune of *Row, row, row your boat*  
Can be done as a round