Unit 1: Introduction to Infectious Diseases

Instructional Activities for Ages 2-6

PKIDs’ Infectious Disease Workshop

Made possible by grants from the Northwest Health Foundation, the Children’s Vaccine Program at PATH and PKIDs.
PKIDs’ Infectious Disease Workshop

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Acknowledgements

Producing this workshop has been a dream of ours since PKIDs’ inception in 1996. It has been more than two years since we began work on this project, and many people helped us reach our goal. It’s not done, because it is by nature a living document that will evolve as science makes strides in the research of infectious diseases, but it’s a great beginning.

There are people who’ve helped us whose names are not on this printed list. That omission is not deliberate, but rather from our own clumsiness in losing important pieces of paper, and we apologize.

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The authors specifically disclaim any responsibility for any liability, loss, or risk, personal or otherwise, which is incurred as a consequence, directly or indirectly, of the use and application of any of the contents of this workshop.
Introduction

PKIDs (Parents of Kids with Infectious Diseases) is a national nonprofit agency whose mission is to educate the public about infectious diseases, the methods of prevention and transmission, and the latest advances in medicine; to eliminate the social stigma borne by the infected; and to assist the families of the children living with hepatitis, HIV/AIDS, or other chronic, viral infectious diseases with emotional, financial and informational support.

Remaining true to our mission, we have designed the Infectious Disease Workshop (IDW), an educational tool for people of all ages and with all levels of understanding about infectious diseases. In this workshop, you will learn about bacteria and viruses, how to prevent infections, and how to eliminate the social stigma that too often accompanies diseases such as HIV or hepatitis C.

We hope that both instructors and participants come away from this workshop feeling comfortable with their new level of education on infectious diseases.

The IDW is designed to “train-the-trainer,” providing instructors not only with background materials but also with age-appropriate activities for the participants. Instructors do not need to be professional educators to use these materials. They were designed with both educators and laypersons in mind.

The IDW is comprised of a master Instructor’s Background Text, which is divided into six units: Introduction to Infectious Diseases, Disease Prevention, Sports and Infectious Disease, Stigma and Infectious Disease, Civil Rights and Infectious Disease, and Bioterrorism and Infectious Disease.

For each unit, instructors will find fun and helpful activities for participants in five age groups: 2 to 6 years of age, 6 to 9 years of age, 9 to 12 years of age, 13 to 18 years of age and adults.

We welcome any questions, comments, or feedback you may have about the IDW or any other issue relating to infectious diseases in children.

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Dear Parents,

Our class will soon be studying infectious diseases. We will learn about what germs are and ways we can keep from spreading germs. We will also learn that people who have infectious diseases don’t have to be treated differently or singled out just because they have a disease.

The workshop we will use has been created by PKIDs (Parents of Kids with Infectious Diseases), a national nonprofit organization dedicated to supporting families touched by infectious diseases.

Your child may have questions about germs or may come home with new ideas about preventing the spread of germs. Here are a few ways you can stay informed:

**View PKIDs’ website.** PKIDs’ website can be found at www.pkids.org. You may also request information by calling PKIDs at 1-877-55-PKIDS.

**View the instructor’s background text for the Infectious Disease Workshop (IDW).** The primary purpose of this text is to provide teachers with background information on infectious diseases. It is a good text for anyone seeking general information on infectious diseases. The text provides information about specific diseases, methods of disease prevention, and civil rights for those affected by infectious disease. Visit www.pkids.org for a link to the IDW background texts in PDF format.

**View descriptions of the activities we will be doing in class.** Visit www.pkids.org for a link to the activities and handouts in PDF format.

The world becomes smaller every day and germs from near and far continue to threaten our health. It is extremely important to educate our young people, equipping them with prevention methods to protect their health and stop the spread of disease.

As always, please feel free to contact me with any questions!

Sincerely,
GRUNGY GERM STORY

LEVEL
Ages 2-6

OBJECTIVE
• Students will describe where germs are found.
• Students will describe ways to kill germs or prevent their transmission.

MATERIALS
Grungy Germ story (included).

PREP
None

INSTRUCTIONAL COMPONENTS
• Read the Grungy Germ story.
• Discuss how Grungy Germ and his friends can be found everywhere (see Assessment section).

ASSESSMENT
Questions:
1. Was Grungy Germ a good guy or a bad guy? Why?
2. Can we see Grungy Germ?
3. If we can’t see Grungy Germ, does that mean he’s not there?
4. Where were Grungy Germ’s favorite hiding places?
5. What did the children do to keep Grungy Germ from getting on or in them?
6. What should we do to keep Grungy Germ from getting on us?
Grungy Germ Meets The Germ Busters' Patrol
Once upon a time, there lived a germ named Grungy Germ.

Now, a germ like Grungy Germ is not an animal.

It is not a plant.

It is something so small you can’t even see it! But even though you can’t see it, it can still get inside your body and make you sick.
Because you can’t see him, you never know where Grungy Germ might be!

Germs like Grungy Germ can stick to your hands.

Germs like Grungy Germ can stick to dirty food and countertops.

Germs like Grungy Germ can stick to noses and mouths and boo-boos.
Germs like Grungy Germ can travel through the air. They also travel from place to place when germy things touch other people or objects.
One day, Grungy Germ went looking for a place to hide. “I will find some children,” he said. “Once I find them, I will live inside them and make them SICK.”

Grungy Germ went to a house, since houses are good places to find children.
In the house he found the kitchen. There were children in the kitchen!

“Hooray!” said Grungy Germ. “There are many places for me to hide in the kitchen! I will live inside these children and make them sick.”
Grungy Germ saw that the children did not put away the milk and cheese.

“I love to hide in warm food that should be cold!” he said.
Grungy Germ found unwashed fruit and vegetables.

“I love to hide on dirty fruit and vegetables!” he said.
Grungy Germ also found that the children had left dirty shoes and bags on the countertop, where food is made.

“I REALLY love dirty countertops!” he said.
And worst of all, Grungy Germ saw that the children were about to eat and…

...they had *NOT WASHED THEIR HANDS*.

“Out of all the places I can hide,” he said, “dirty hands are by far my favorite!”
Grungy Germ knew that if he could just hide on the children’s dirty hands, he could get inside their bodies, without them even knowing it!

He knew that once he was there, he could make the children sick.

But just as Grungy Germ was about to hide on their dirty hands and get inside the children’s bodies…
…the children began washing their hands!
With SOAP! And WARM WATER!

“Oh nooooo!” screamed Grungy Germ.
“They must be officers in the Germ Busters’ Patrol!

Not only are they washing their hands with soap and warm water, but they are washing their hands too long!

And they are washing every part of their hands!

Aaaauuuggghhhhh!

And that was the end of Grungy Germ.
The children did not get sick from Grungy Germ. The children kept Grungy Germ away by washing their hands... before they ate,

after using the toilet,

after playing outside,
... and after sneezing or coughing or blowing their noses.

So always remember to wash YOUR hands, and you can keep Grungy Germ away from you, too!
GERMS: WHERE CAN THEY BE FOUND?

LEVEL
Ages 2-6

OBJECTIVE
Students will identify places where germs can be found.

MATERIALS
1. Clip pictures of possible germ locations from magazines etc., (prevention suggestions):
   - Dirt/ground (wash hands after playing outside)
   - Blood (don’t touch)
   - Wounds (put on gloves then bandage wound)
   - Forks, spoons, drinking cups (saliva or blood in saliva—don’t share)
   - Toothbrushes (saliva or blood in saliva—don’t share)
   - Hairbrushes (lice—don’t share)
   - Half-eaten food (saliva or blood in saliva—don’t share)
   - Sneezing, coughing (releases germs into air, cover mouth and nose to cough or sneeze)
   - Wiping nose, rubbing eyes (then touching other people and objects spreads germs, wash hands after touching nose or eyes)
   - Tissues (don’t touch other people’s tissues, throw yours away after using)
   - Toilet (germs from body waste, wash hands after urination or defecation)
2. Tape or tacks.
3. Wall, bulletin board, or chalkboard to put pictures on.

PREP
- Find pictures of possible germ locations. (see ideas above)
- This might be a good activity to do after doing the activities on what germs are and how we wash our hands.

INSTRUCTIONAL COMPONENTS
1. Tell students you will be discussing places where germs can be found and how we can keep those germs from getting inside our bodies.
2. For each picture:
   - Talk about why germs can be found there.
   - Ask students what we can do to keep those germs from getting in our bodies (remember Grungy Germ).

ASSESSMENT
Are students able to recall basic methods of disease prevention?
HOW GERMS SPREAD
Part 1

LEVEL
Ages 2-6

OBJECTIVE
• Students will recall where germs are found.
• Students will inadvertently demonstrate how germs spread.
• Students will recognize how germs spread.

MATERIALS
• Glitter or nutmeg.
• Petroleum jelly.
• Spoon, tongue blade, or other instrument for dispensing petroleum jelly.
• Small pieces of paper towel to put petroleum jelly on (1 per student).

PREP
• Place a dab of petroleum jelly on each of the small pieces of paper towel.
• Do this activity prior to doing other general classroom activities.

INSTRUCTIONAL COMPONENTS
1. Help students recall where germs (like Grungy Germ) can be found.
2. Hold up the glitter and explain that the glitter will be like “pretend germs.”
3. Have each child smear a little bit of petroleum jelly on their hands (just a thin coating to help the glitter stick).
4. Sprinkle some “pretend germs” on each child’s hands and have them rub it on.
5. Explain that after awhile, everyone will look to see how many things the “pretend germs” have stuck to. (You may want to keep the children in one section of the room, to prevent petroleum jelly from taking over your classroom.)
6. Do other activities, then revisit this activity.
7. Have every child look for a place in the room that has “pretend germs” on it.

ASSESSMENT
1. Have students raise their hands when they have found “pretend germs.”
2. Ask students how the “pretend germs” got there.
3. Ask students to recall what happens when germs get inside our bodies.
4. Ask students to recall ways to keep germs off our hands.
5. Have students wash glitter goop off hands.
HOW GERMS SPREAD  
Part 2

LEVEL  
Ages 2-6

OBJECTIVE  
• Students will recall where germs are found.  
• Students will inadvertently demonstrate how germs spread.  
• Students will recognize how germs spread.

MATERIALS  
• Spray bottle with water in it.  
• Talcum powder.  
• Doll.  

NOTE:  When using talcum powder in the demonstration, use only a small amount.  Face away from the children.  Inhaling talcum powder may cause irritation, particularly in children with asthma.  A doll can be used to show that airborne germs can be inhaled.

PREP  
None

INSTRUCTIONAL COMPONENTS  
1. Help students recall where germs can be found.  
2. Hold up the spray bottle and explain that the water inside is like a sneeze or a cough.  
3. Spray some water above the students.  Ask students to raise their hands if they felt water.  Try this from a few different angles.  
4. Explain that germs can be found in sneezes and coughs and that one way they can spread from one person to another is through little droplets, just like the water.  
5. Sprinkle some talcum powder on your hand and blow it into the air away from the students.  
6. Ask students to observe how long the talcum powder hangs in the air and how long it takes to settle.  
7. Explain that some germs are very, very small — like the powder — and can travel in the air farther and longer.  We can become sick if we inhale them.  Use a doll to show that a person can inhale germs from the air.

ASSESSMENT  
1. Have the students recall the glitter exercise.  
2. Ask them what 3 ways germs can travel between people (by touch, by droplet, or by air).  
3. Ask students to recall what happens when germs get inside our bodies.  
4. Ask students to think of ways to keep germs off our hands (handwashing) and out of the air (cover mouths when coughing or sneezing, use tissues and/or hands).
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