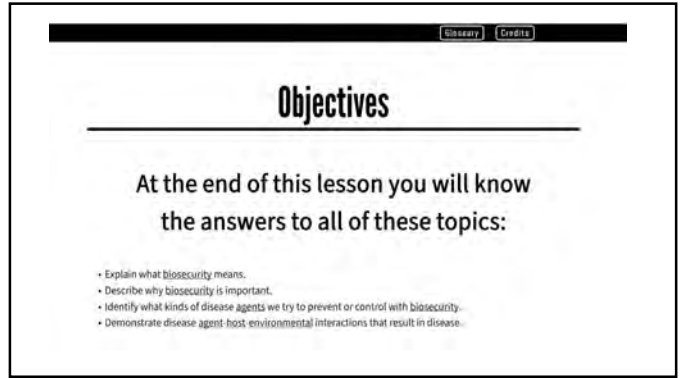


1



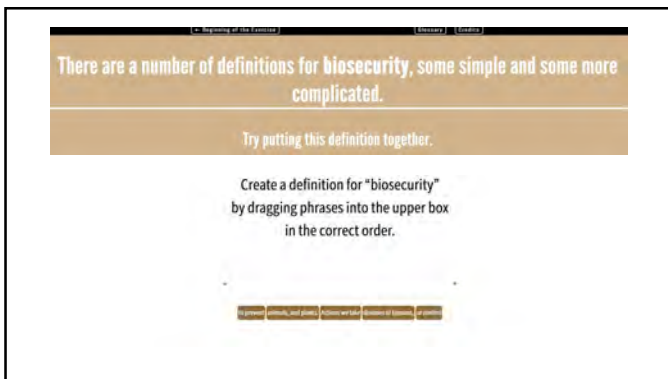
2



3



4



5



6

Drag and drop the pop-up text boxes into the correct column for our definition of biosecurity. (Click on underlined words for more information.)

That's Right!

Actions we take to prevent or control aberrant zoonoses of humans and animals.

BACK NEXT

7

Drag and drop the pop-up text boxes into the correct column for our definition of biosecurity. (Click on underlined words for more information.)

Way to Go!

Actually, most of these actions are good for biosecurity for all infectious diseases.

Actions we take to prevent or control zoonoses of humans and animals.

BACK NEXT

8

← Beginning of the Exercise [Directory] [Credits]

Actually, most of these actions are good for biosecurity for all infectious diseases.

Actions we take to prevent or control zoonoses of humans and animals.

Great!

Notice that actions you have already done to keep yourself healthy also work to keep animals healthy.

9

← Beginning of the Exercise [Directory] [Credits]

Why should we care?

Listen to each person's story to find out.

10

← Beginning of the Exercise [Directory] [Credits]

Wait for the story to finish.

Hide Transcript

BACK NEXT

11

← Beginning of the Exercise [Directory] [Credits]

Wait for the story to finish.

Hide Transcript

BACK NEXT

12

← Beginning of the Exercise [Summary] [Credits]

Wait for the story to finish.

BACK NEXT

13

← Beginning of the Exercise [Summary] [Credits]

Wait for the story to finish.

BACK NEXT

14

← Beginning of the Exercise [Summary] [Credits]

Wait for the story to finish.

BACK NEXT

15

← Beginning of the Exercise [Summary] [Credits]

Wait for the story to finish.

BACK NEXT

16

← Beginning of the Exercise [Summary] [Credits]

Wait for the story to finish.

BACK NEXT

17

← Beginning of the Exercise [Summary] [Credits]

Why should we care?

You've listened to all the stories.

Now you know why we should care about **biosecurity!**

- Prevent animal illness and suffering
- Prevent economic loss
- Keep food prices low for consumers
- Keep good public opinion
- Keep trade open

18

Let's think about diseases

Put your cursor on the words below to see what they mean. Then drag the word to complete the correct sentence.

Some diseases are caused by a disease **agent** and can pass from person to person or animal to animal. These are called **infectious** diseases.

Other conditions can be caused by poor nutrition, injury, cancer, genetics, etc.; these are **non-infectious** causes.

Diseases that can pass from animals to humans or humans to animals are called **zoonotic** diseases.

Infectious agents get inside the **host** (person, animal, or plant) and multiply or produce toxins causing disease.

19

Let's think about diseases

Put your cursor on the words below to see what they mean. Then drag the word to complete the correct sentence.

Some diseases are caused by a disease **agent** and can pass from person to person or animal to animal. These are called **infectious** diseases.

Other conditions can be caused by poor nutrition, injury, cancer, genetics, etc.; these are **non-infectious** causes.

Diseases that can pass from animals to humans or humans to animals are called **zoonotic** diseases.

Infectious agents get inside the **host** (person, animal, or plant) and multiply or produce toxins, causing disease.

Good job!
Now read the sentences altogether out loud. Get it? Got it? Good!!

20

For biosecurity, we are most concerned with infectious agents.

With the use of a microscope you, can see that they are all around us.

Draw lines connecting each word to a picture. Roll over the images and words to learn more.

21

For biosecurity, we are most concerned with infectious agents.

With the use of a microscope you, can see that they are all around us.

Draw lines connecting each word to a picture. Roll over the images and words to learn more.

Excellent!

22

Agents and diseases

Roll over all the images to learn more.

But when and how does this agent...
...cause this disease?

Now read all over both images before you can go to the next slide.

23

Agents and diseases

Roll over all the images to learn more.

But when and how does this agent...
...cause this disease?

Now read all over both images before you can go to the next slide.

24


← Beginning of the Exercise [Glossary] [Credits]

Diseases are like accidents...

They both involve three factors.

Listen to the narration as you watch the slideshow.

For diseases to occur, three factors need to be present:



Pause the Slideshow

Hide Transcript

25

← Beginning of the Exercise [Glossary] [Credits]

Listen to the narration as you watch the slideshow.

Mary had two little lambs



Pause the Slideshow

Hide Transcript

26

← Beginning of the Exercise [Glossary] [Credits]

Listen to the narration as you watch the slideshow.

Agent Factors of virus



Resume the Slideshow

Hide Transcript

© 2010 Pearson Education, Inc. All rights reserved. This content may not be copied, scanned, or duplicated, in whole or in part. WCN 02-200-203

27

← Beginning of the Exercise [Glossary] [Credits]

Listen to the narration as you watch the slideshow.

Host Factors Show lambs



Resume the Slideshow

Hide Transcript

© 2010 Pearson Education, Inc. All rights reserved. This content may not be copied, scanned, or duplicated, in whole or in part. WCN 02-200-203

28

← Beginning of the Exercise [Glossary] [Credits]

Listen to the narration as you watch the slideshow.

Environmental Factors Fairgrounds



Resume the Slideshow

Hide Transcript

© 2010 Pearson Education, Inc. All rights reserved. This content may not be copied, scanned, or duplicated, in whole or in part. WCN 02-200-203

29

← Beginning of the Exercise [Glossary] [Credits]

Diseases are like accidents...

They both involve three factors.



30

← Beginning of the Exercise | Overview | Credits

What could be done to prevent soremouth?

Think about each factor and type in a few things you could do regarding the agent, host, and environment that would reduce the chance of Mary's lambs getting soremouth.

Agent	Host	Environment
<p>What changes could you make?</p> <p>1. Use clean water for drinking and washing.</p> <p>2. Use clean water for drinking and washing.</p> <p>3. Use clean water for drinking and washing.</p>	<p>What changes could you make?</p> <p>1. Use clean water for drinking and washing.</p> <p>2. Use clean water for drinking and washing.</p> <p>3. Use clean water for drinking and washing.</p>	<p>What changes could you make?</p> <p>1. Use clean water for drinking and washing.</p> <p>2. Use clean water for drinking and washing.</p> <p>3. Use clean water for drinking and washing.</p>

31

← Beginning of the Exercise | Overview | Credits

What could be done to prevent soremouth?

Agent	Host	Environment
<p>What changes could you make?</p> <p>1. Use clean water for drinking and washing.</p> <p>2. Use clean water for drinking and washing.</p> <p>3. Use clean water for drinking and washing.</p>	<p>What changes could you make?</p> <p>1. Use clean water for drinking and washing.</p> <p>2. Use clean water for drinking and washing.</p> <p>3. Use clean water for drinking and washing.</p>	<p>What changes could you make?</p> <p>1. Use clean water for drinking and washing.</p> <p>2. Use clean water for drinking and washing.</p> <p>3. Use clean water for drinking and washing.</p>

Great!
Did you think of any changes we didn't have on our list?

32

← Beginning of the Exercise | Overview | Credits

Diseases are also accidents.

Put the right agent, host, and environment in the boxes next to the arrows to see the disease.

Although most diseases contribute to the risk, for this exercise we are looking for specific combinations. Here is why:

Agent	Host	Environment
<p>1. Use clean water for drinking and washing.</p> <p>2. Use clean water for drinking and washing.</p> <p>3. Use clean water for drinking and washing.</p>	<p>1. Use clean water for drinking and washing.</p> <p>2. Use clean water for drinking and washing.</p> <p>3. Use clean water for drinking and washing.</p>	<p>1. Use clean water for drinking and washing.</p> <p>2. Use clean water for drinking and washing.</p> <p>3. Use clean water for drinking and washing.</p>

33

← Beginning of the Exercise | Overview | Credits

Agents	Hosts	Environments
<p>1. Use clean water for drinking and washing.</p> <p>2. Use clean water for drinking and washing.</p> <p>3. Use clean water for drinking and washing.</p>	<p>1. Use clean water for drinking and washing.</p> <p>2. Use clean water for drinking and washing.</p> <p>3. Use clean water for drinking and washing.</p>	<p>1. Use clean water for drinking and washing.</p> <p>2. Use clean water for drinking and washing.</p> <p>3. Use clean water for drinking and washing.</p>

34

← Beginning of the Exercise | Overview | Credits

Agents	Hosts	Environments
<p>1. Use clean water for drinking and washing.</p> <p>2. Use clean water for drinking and washing.</p> <p>3. Use clean water for drinking and washing.</p>	<p>1. Use clean water for drinking and washing.</p> <p>2. Use clean water for drinking and washing.</p> <p>3. Use clean water for drinking and washing.</p>	<p>1. Use clean water for drinking and washing.</p> <p>2. Use clean water for drinking and washing.</p> <p>3. Use clean water for drinking and washing.</p>

35

← Beginning of the Exercise | Overview | Credits

Agents	Hosts	Environments
<p>1. Use clean water for drinking and washing.</p> <p>2. Use clean water for drinking and washing.</p> <p>3. Use clean water for drinking and washing.</p>	<p>1. Use clean water for drinking and washing.</p> <p>2. Use clean water for drinking and washing.</p> <p>3. Use clean water for drinking and washing.</p>	<p>1. Use clean water for drinking and washing.</p> <p>2. Use clean water for drinking and washing.</p> <p>3. Use clean water for drinking and washing.</p>

36



37



38

← Beginning of the Exercise | History | Details

Diseases are also accidents.

Great Job on the Activity!

View Slide 1 of 2

BACK NEXT

39

← Beginning of the Exercise | History | Details

Diseases are also accidents.

The severity of the disease depends on interactions between the host, agent, and environment.

View Slide 2 of 2

BACK NEXT

40

← Beginning of the Exercise | History | Details

Diseases are also accidents.

Diseases are accidents that we can try to prevent.

View Slide 3 of 3

BACK NEXT

41

← Beginning of the Exercise | History | Details

Diseases are also accidents.

When we try to prevent agents from making animals or humans sick, we call it **BIOSECURITY**.

Go ahead to the next activity! BACK NEXT

42

Let's review!

Complete the crossword puzzle using key terms from today's lesson.



Word Bank
Biosafety
Antibiotic resistance
Antimicrobial
Vaccine
Antibody
Antigen
Antitoxin
Antivenom
Antivenereal
Antivenereal
Antivenereal
Antivenereal

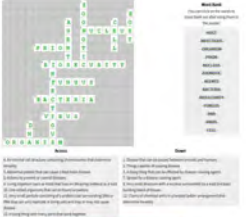
Clues:
Across
1. A chemical or biological substance that kills or inhibits the growth of microorganisms.
2. A chemical or biological substance that kills or inhibits the growth of microorganisms.
3. A chemical or biological substance that kills or inhibits the growth of microorganisms.
4. A chemical or biological substance that kills or inhibits the growth of microorganisms.
5. A chemical or biological substance that kills or inhibits the growth of microorganisms.
6. A chemical or biological substance that kills or inhibits the growth of microorganisms.
7. A chemical or biological substance that kills or inhibits the growth of microorganisms.
8. A chemical or biological substance that kills or inhibits the growth of microorganisms.
9. A chemical or biological substance that kills or inhibits the growth of microorganisms.
10. A chemical or biological substance that kills or inhibits the growth of microorganisms.

Down
1. A chemical or biological substance that kills or inhibits the growth of microorganisms.
2. A chemical or biological substance that kills or inhibits the growth of microorganisms.
3. A chemical or biological substance that kills or inhibits the growth of microorganisms.
4. A chemical or biological substance that kills or inhibits the growth of microorganisms.
5. A chemical or biological substance that kills or inhibits the growth of microorganisms.
6. A chemical or biological substance that kills or inhibits the growth of microorganisms.
7. A chemical or biological substance that kills or inhibits the growth of microorganisms.
8. A chemical or biological substance that kills or inhibits the growth of microorganisms.
9. A chemical or biological substance that kills or inhibits the growth of microorganisms.
10. A chemical or biological substance that kills or inhibits the growth of microorganisms.

Reset Puzzle Check My Answers

43

Let's review!



Word Bank
Biosafety
Antibiotic resistance
Antimicrobial
Vaccine
Antibody
Antigen
Antitoxin
Antivenom
Antivenereal
Antivenereal
Antivenereal
Antivenereal

Clues:
Across
1. A chemical or biological substance that kills or inhibits the growth of microorganisms.
2. A chemical or biological substance that kills or inhibits the growth of microorganisms.
3. A chemical or biological substance that kills or inhibits the growth of microorganisms.
4. A chemical or biological substance that kills or inhibits the growth of microorganisms.
5. A chemical or biological substance that kills or inhibits the growth of microorganisms.
6. A chemical or biological substance that kills or inhibits the growth of microorganisms.
7. A chemical or biological substance that kills or inhibits the growth of microorganisms.
8. A chemical or biological substance that kills or inhibits the growth of microorganisms.
9. A chemical or biological substance that kills or inhibits the growth of microorganisms.
10. A chemical or biological substance that kills or inhibits the growth of microorganisms.

Down
1. A chemical or biological substance that kills or inhibits the growth of microorganisms.
2. A chemical or biological substance that kills or inhibits the growth of microorganisms.
3. A chemical or biological substance that kills or inhibits the growth of microorganisms.
4. A chemical or biological substance that kills or inhibits the growth of microorganisms.
5. A chemical or biological substance that kills or inhibits the growth of microorganisms.
6. A chemical or biological substance that kills or inhibits the growth of microorganisms.
7. A chemical or biological substance that kills or inhibits the growth of microorganisms.
8. A chemical or biological substance that kills or inhibits the growth of microorganisms.
9. A chemical or biological substance that kills or inhibits the growth of microorganisms.
10. A chemical or biological substance that kills or inhibits the growth of microorganisms.

Reset Puzzle Check My Answers

Awesome!

44

Type your answers in the boxes and click "submit" to compare your answers to those from the lesson.

	Your answers:	Compare your answers:
What is biosafety anyway?	Please type in your answer here and press the submit button to the right.	Submit
So reasons why we should care	Please type in your answer here and press the submit button to the right.	Submit
What kinds of disease agents do we try to prevent or control with biosafety?	Please type in your answer here and press the submit button to the right.	Submit

45

Type your answers in the boxes and click "submit" to compare your answers to those from the lesson.

	Your answers:	Compare your answers:
What is biosafety anyway?		"Actions not take to prevent or control discovery of animals and humans."
So reasons why we should care		<ul style="list-style-type: none">Prevent animal illness and suffering.Prevent zoonotic diseases.Prevent economic loss.Keep good public opinion.Keep food prices low for consumers.Keep interstate and international trade open.
What kinds of disease agents do we try to prevent or control with biosafety?		Pathogenic organisms caused by bacteria, fungi, parasites, prions, and viruses.

View the Review Sheet!

Great Job!
You answered all three guiding questions!

46

1.4 Biosafety of the Lesson



What is Biosafety and Why Should We Care?

So reasons why we should care

What kinds of disease agents do we try to prevent or control with biosafety?

You're all done! This was the last activity!!!

47

PROTECTING HERD HEALTH



Biosafety
What Is "Animal Biosafety" and Why Should We Care?

Certificate of Completion

type your name here

Signature: _____ Type class here: _____

LYNN JENSEN, DVM, MS, or guardian name here

Date: _____

This certificate is issued with only being completed by the National College of Veterinary Technicians (NCVT) and is only valid if signed and dated 2020/05/31/2020

48

Credits

<p>Content</p> <p>Susan Kerr, DVM, PhD, FAS Washington State University Extension</p> <p>Jeanne M. Rankin, DVM, FADP Montana State University Extension</p> <p>Julia M. Smith, DVM, PhD University of Minnesota</p> <p>Jeanette McDonald, DVM, PhD TLCProjects, LLC</p>	<p>Production</p> <p>Concept: Jeanette McDonald, DVM, PhD</p> <p>Initial Design: CK Borrelli</p> <p>Web Development: Serge Wilshire</p> <p>Narration</p> <p>Jeanne M Rankin Blair Wolkoff Dart Gersten Susan Kerr Keri Oklerke</p>
--	---

49

Credits

<p>Photo Credits</p> <p>Photo: NAD/Rick.com Salmonella: NAD/Rick.com Herdsmen/Jan: M. Babin/CCO Influenza A H5N1: C. Galloway/CCO Bovine prion/gammon: J. Gering/CCO Cryptosporidium parvum/bovine: Northrup Veterinary School/Rick.com Contagious abortion/Canine lymphoblastosis: S. Schaefer/UGF/PHD Acid fast bacteria: KF Collins/UM Madison Ringworm: Northrup Veterinary School/Rick.com Tetanus/toxin: Humana Society Pneumonia/epidemic disease: S. Hery/istock.com Scrapie: USDA Three Black and White Cows: Photo by Matthew Jansen from Pexels</p> <p>References</p> <p>ORF.gov www.merckmanuals.com www.aphis.usda.gov</p>	 <p>This material is based upon work that is supported by the National Institute of Food and Agriculture, U.S. Department of Agriculture, under award number 2018-09019-21271.</p> <p>Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the view of the U.S. Department of Agriculture.</p>
---	--

50