
Biosecurity
Routes of Infection
Means of Transmission

1


Biosecurity
Routes of Infection
Means of Transmission
2
of 40 pages
You may already know a lot about how to prevent illness from spreading from person to person. But did you know that animals can pass diseases between each other too?
‹ BACK NEXT ›

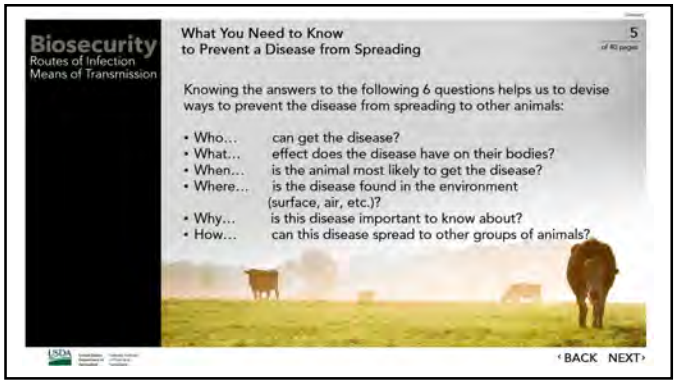
2


Biosecurity
Routes of Infection
Means of Transmission
3
of 40 pages
When animals get sick, we need to help them get better and make sure other animals don't get sick too. The first step in keeping animals healthy is knowing how animals get a disease and how it spreads from one animal to another.
‹ BACK NEXT ›

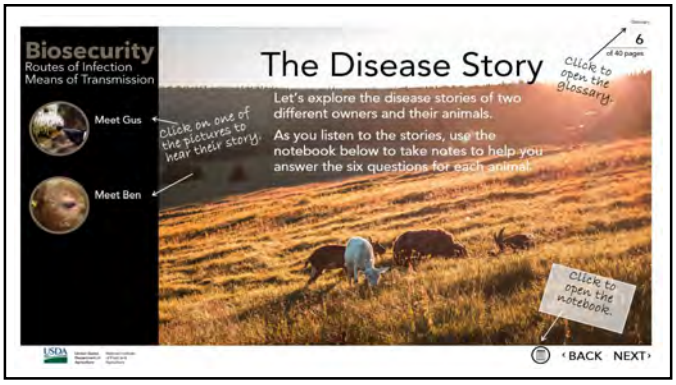
3


Biosecurity
Routes of Infection
Means of Transmission
Objectives
4
of 40 pages
In this lesson, we will introduce you to many animal diseases. Don't worry! You are not expected to know these diseases ahead of time nor are you expected to remember them at the end of the lesson. They are for examples only.
At the end of this lesson you should be able to:
• Identify five routes of infection
• Describe how diseases are transmitted
‹ BACK NEXT ›

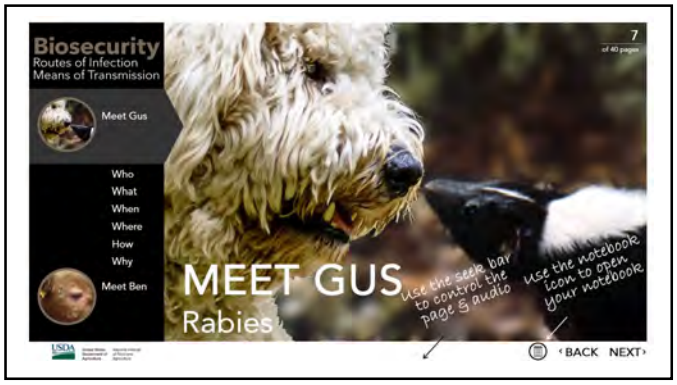
4


Biosecurity
Routes of Infection
Means of Transmission
What You Need to Know to Prevent a Disease from Spreading
5
of 40 pages
Knowing the answers to the following 6 questions helps us to devise ways to prevent the disease from spreading to other animals:
• Who… can get the disease?
• What… effect does the disease have on their bodies?
• When… is the animal most likely to get the disease?
• Where… is the disease found in the environment (surface, air, etc.)?
• Why… is this disease important to know about?
• How… can this disease spread to other groups of animals?
‹ BACK NEXT ›

5


Biosecurity
Routes of Infection
Means of Transmission
The Disease Story
6
of 40 pages
Click to open the glossary.
Meet Gus
Meet Ben
Click on one of the pictures to hear their story.
Let's explore the disease stories of two different owners and their animals.
As you listen to the stories, use the notebook below to take notes to help you answer the six questions for each animal.
Click to open the notebook.
‹ BACK NEXT ›

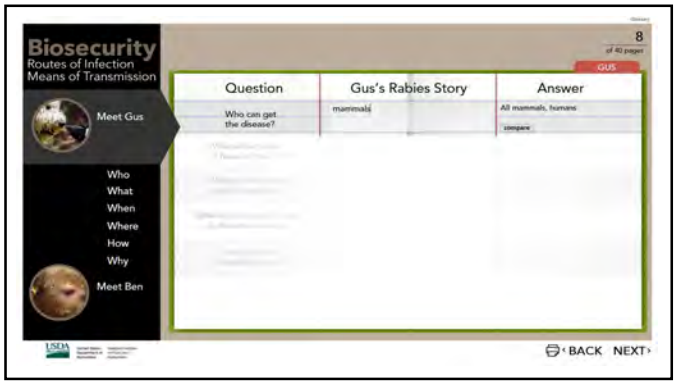
6


Biosecurity
Routes of Infection
Means of Transmission
Meet Gus
Who
What
When
Where
How
Why
Meet Ben
MEET GUS
Rabies
Use the seek bar to control the page & audio
Use the notebook icon to open your notebook
BACK
NEXT

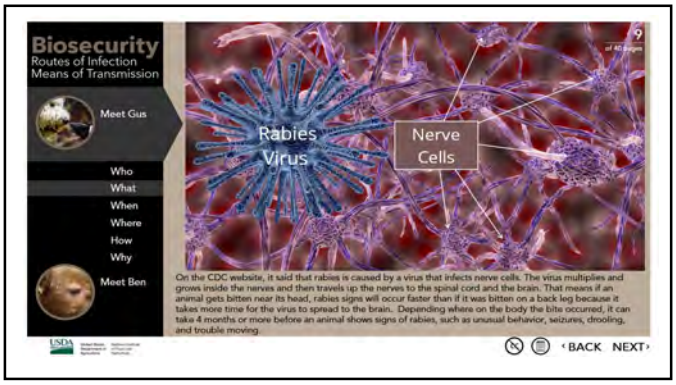
7


Biosecurity
Routes of Infection
Means of Transmission
Meet Gus
Who
What
When
Where
How
Why
Meet Ben
I let my dog "Gus" out of the house to run around and heard him yelp. I smelled something terrible and saw him being chased by a skunk. I called him back to me and we ran into the house. I was worried that the skunk was going to attack me too! Now we need to bathe Gus and tell my parents. Boy, does he stink!
My parents think the skunk had rabies, so I looked up rabies on the Center for Disease Control website...It said there are different strains of rabies virus found in different mammals in the USA, like bats, raccoons, foxes, skunks and coyotes. But all mammals can get rabies if bitten by an infected animal, including people!
BACK
NEXT

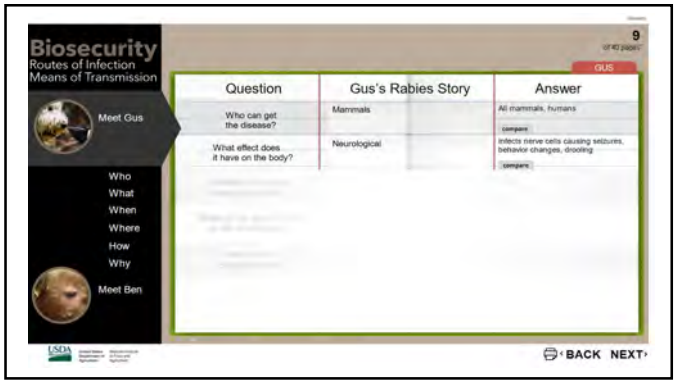
8


Biosecurity
Routes of Infection
Means of Transmission
Meet Gus
Who
What
When
Where
How
Why
Meet Ben
GUS
Question
Gus's Rabies Story
Answer
Who can get the disease?
mammals
All mammals, humans
compare
BACK
NEXT

9


Biosecurity
Routes of Infection
Means of Transmission
Meet Gus
Who
What
When
Where
How
Why
Meet Ben
Rabies Virus
Nerve Cells
On the CDC website, it said that rabies is caused by a virus that infects nerve cells. The virus multiplies and grows inside the nerves and then travels up the nerves to the spinal cord and the brain. That means if an animal gets bitten near its head, rabies signs will occur faster than if it was bitten on a back leg because it takes more time for the virus to spread to the brain. Depending where on the body the bite occurred, it can take 4 months or more before an animal shows signs of rabies, such as unusual behavior, seizures, drooling, and trouble moving.
BACK
NEXT

10


Biosecurity
Routes of Infection
Means of Transmission
Meet Gus
Who
What
When
Where
How
Why
Meet Ben
GUS
Question
Gus's Rabies Story
Answer
Who can get the disease?
Mammals
All mammals, humans
compare
What effect does it have on the body?
Neurological
infects nerve cells causing seizures, behavior changes, drooling
compare
BACK
NEXT

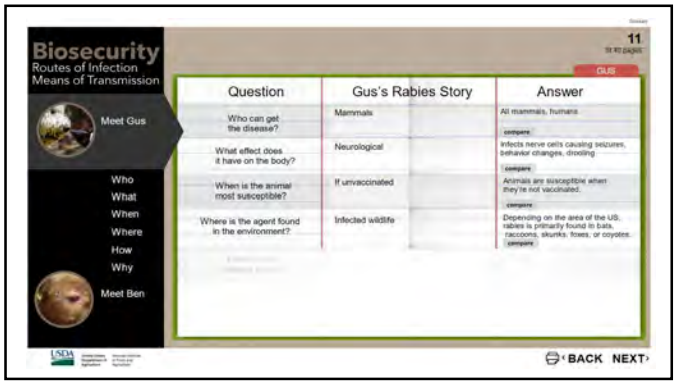
11


Biosecurity
Routes of Infection
Means of Transmission
Meet Gus
Who
What
When
Where
How
Why
Meet Ben
Well, bad news: My parents called animal control and they killed the skunk and had it tested for rabies and it was positive! The crazy skunk must have been bitten by an infected mammal to develop what the CDC website called "the furious form of rabies". And now the skunk exposed my dog to the disease.
Rabies is deadly and there is no cure for animals. The only thing you can do is prevent animals from getting rabies by having them vaccinated. I sure hope Gus' rabies vaccination is up to date! We're calling the veterinarian to make sure.
BACK
NEXT

12

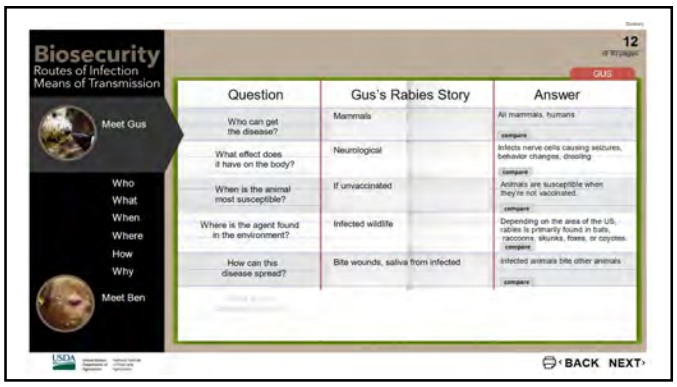
13

14

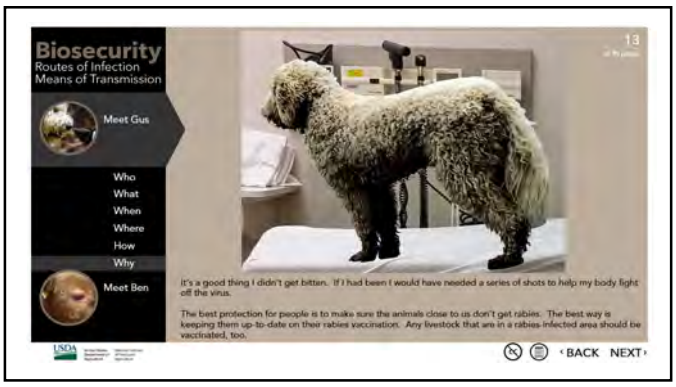


15

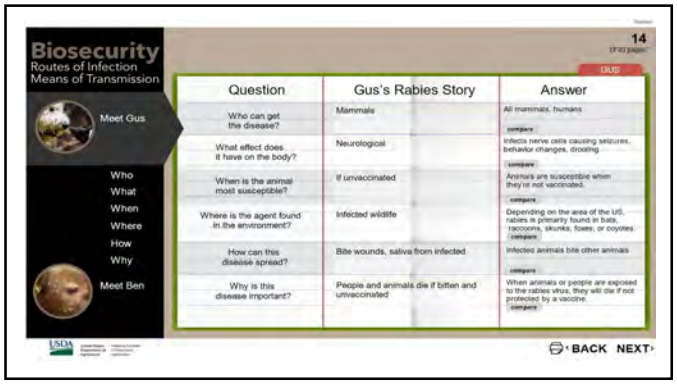
16



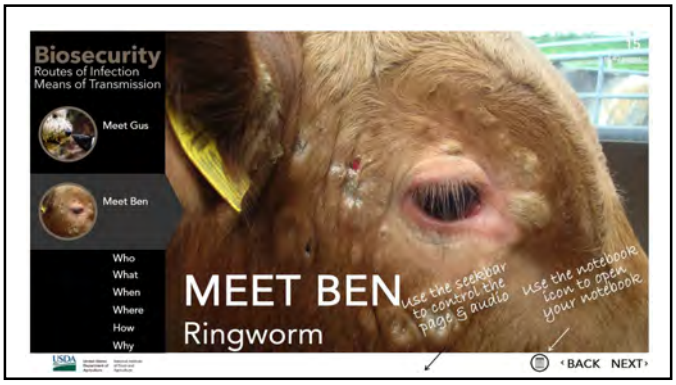
17



18

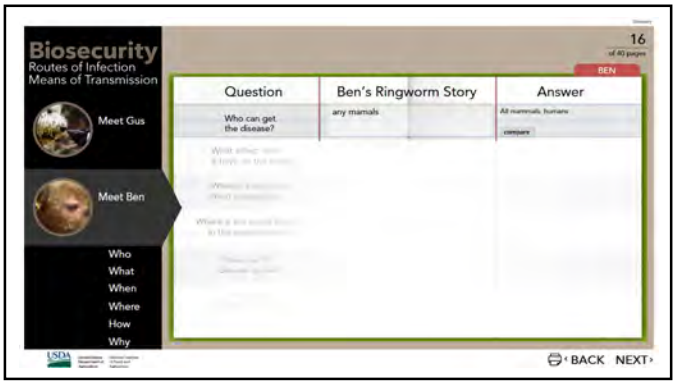


19



20

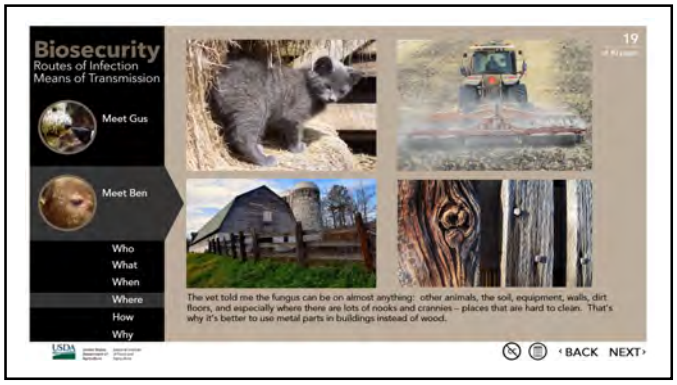
21



22

23

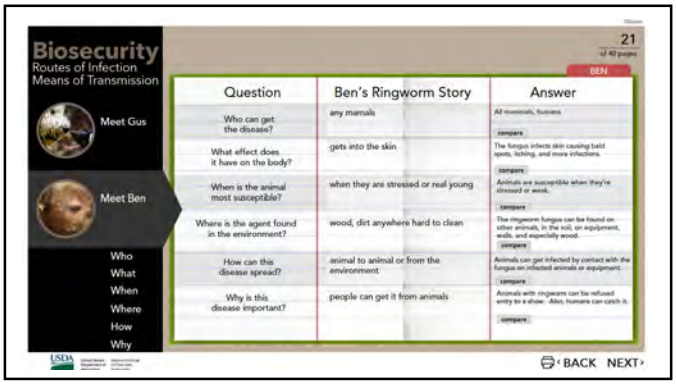
24



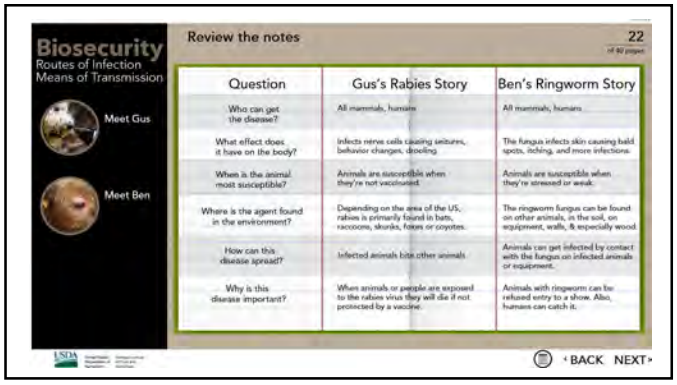
25

26

27

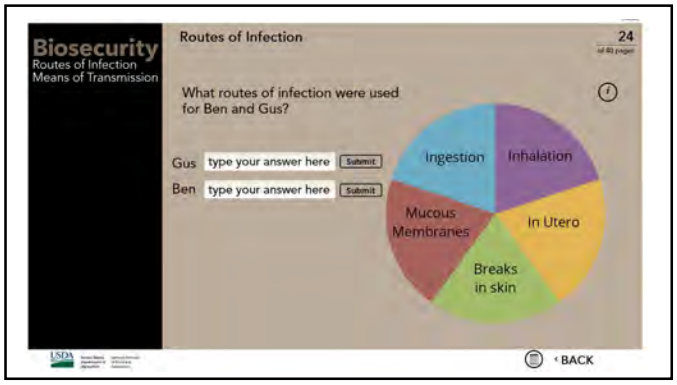


28

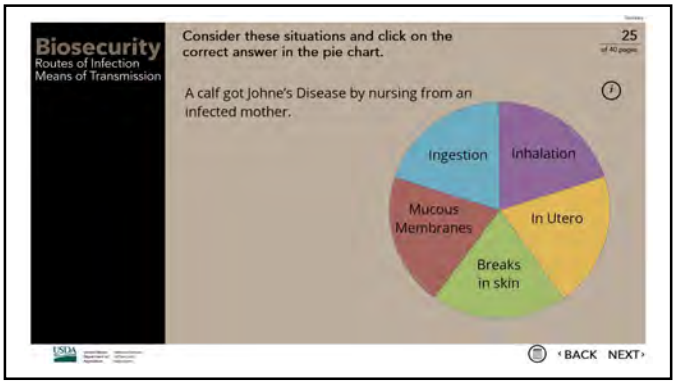


29

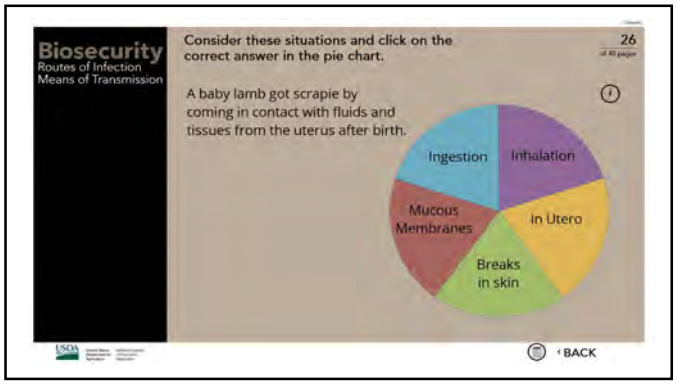
30



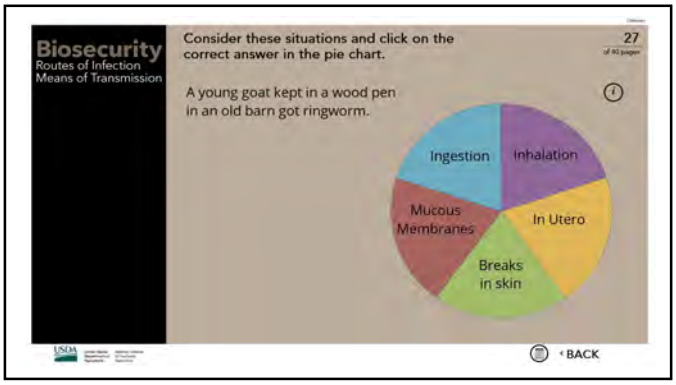
31



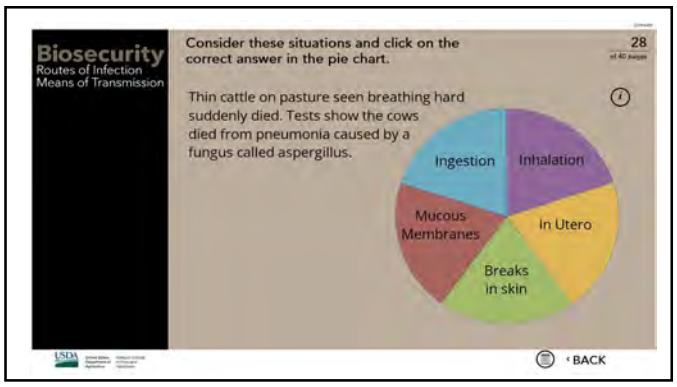
32



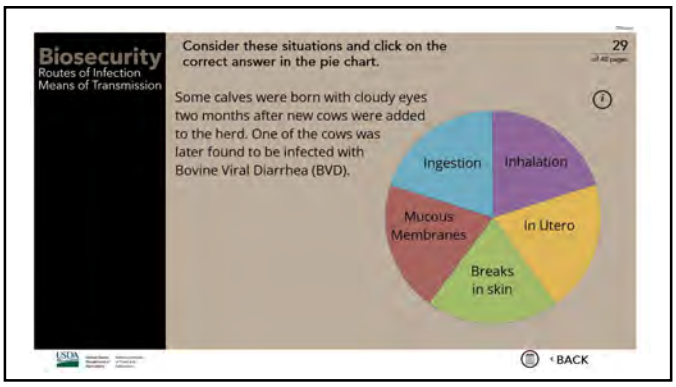
33



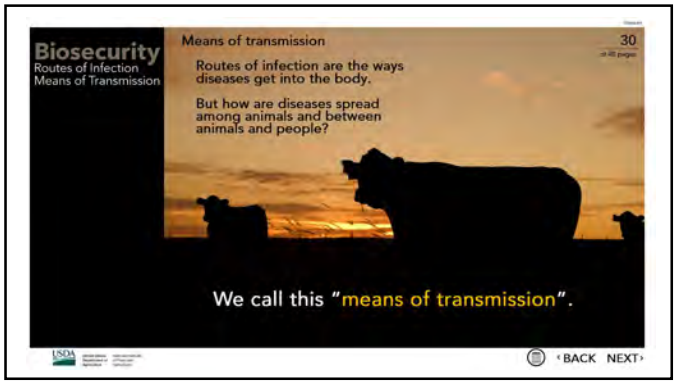
34



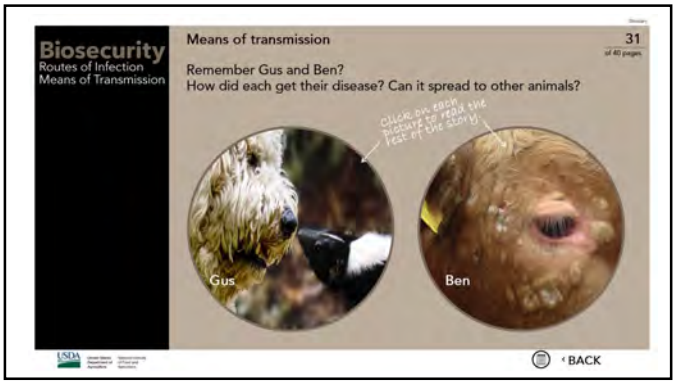
35



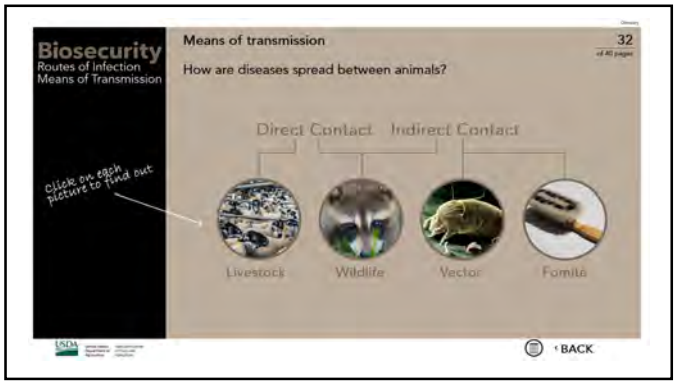
36



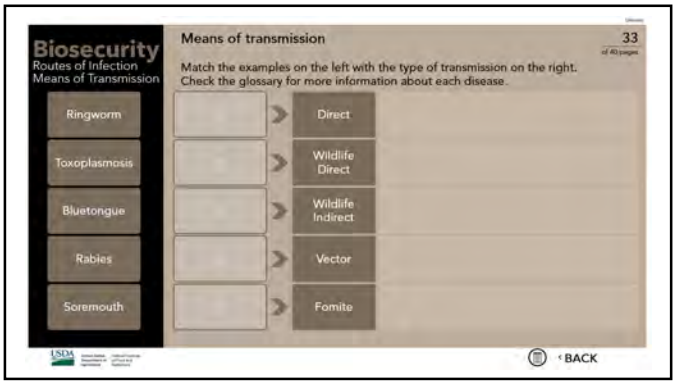
37



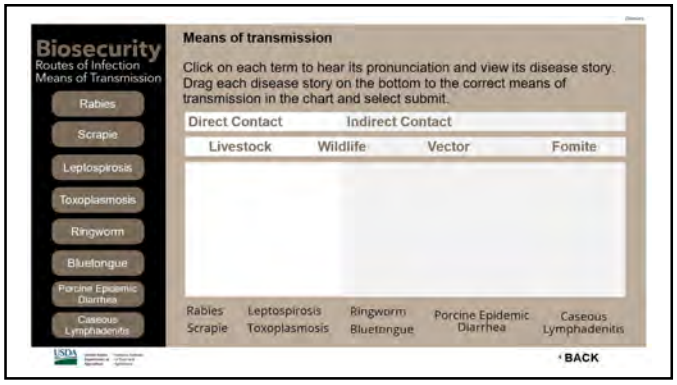
38



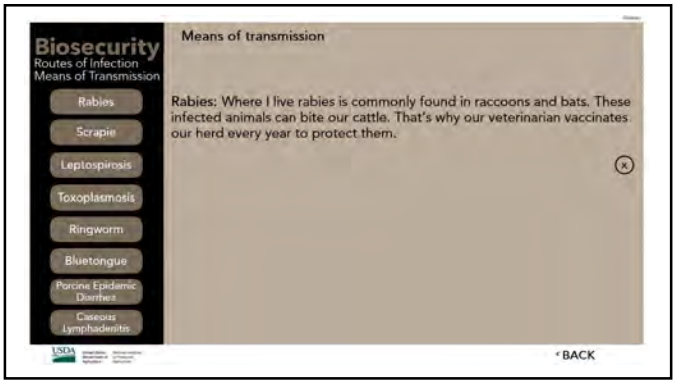
39



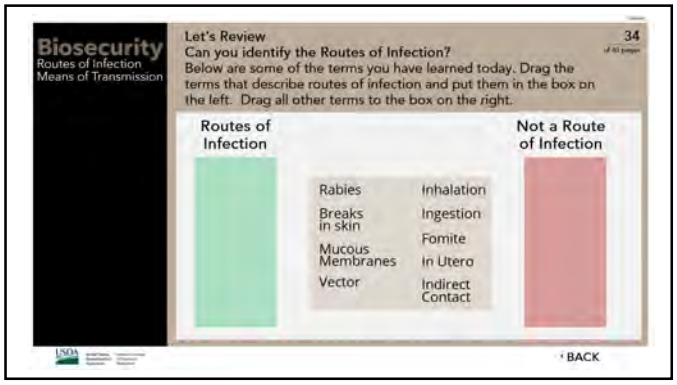
40



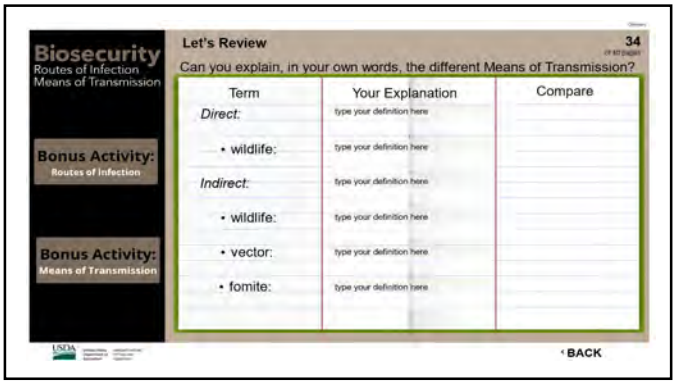
41



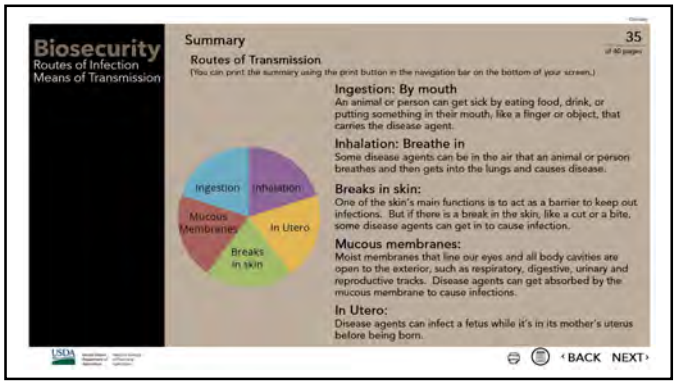
42



43



44

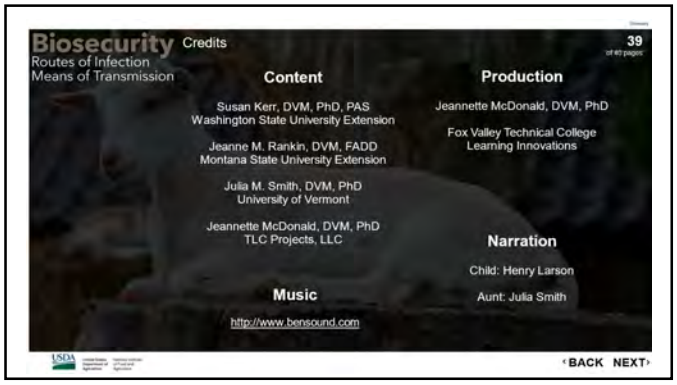


45

46

47

48


Biosecurity
Routes of Infection
Means of Transmission
Credits
39
of 40 pages
Content
Susan Kerr, DVM, PhD, PAS
Washington State University Extension
Jeanne M. Rankin, DVM, FADD
Montana State University Extension
Julia M. Smith, DVM, PhD
University of Vermont
Jeannette McDonald, DVM, PhD
TLC Projects, LLC
Production
Jeannette McDonald, DVM, PhD
Fox Valley Technical College
Learning Innovations
Narration
Child: Henry Larson
Aunt: Julia Smith
Music
http://www.bensound.com
‹BACK NEXT›

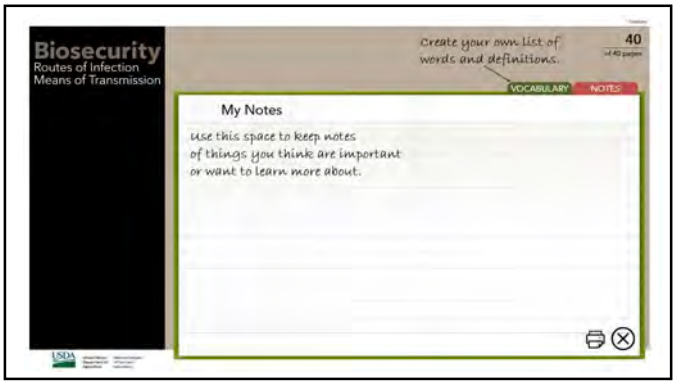
49


Biosecurity
Routes of Infection
Means of Transmission
40
of 40 pages
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 2015-69004-23273.
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.
‹BACK REPLAY

50


Biosecurity
Routes of Infection
Means of Transmission
40
of 40 pages
VOCABULARY
NOTES
My Term
My Definition
type your term here
type your definition here

51


Biosecurity
Routes of Infection
Means of Transmission
Create your own list of
words and definitions.
40
of 40 pages
VOCABULARY
NOTES
My Notes
use this space to keep notes
of things you think are important
or want to learn more about.

52