







Discovery Learning Basics

Learners:

- Control their learning
- Analyze and interpret information rather than memorizing
- Integrate and connect old knowledge in the construction of new
- Problem-solve through active learning, probing, and taking risks
- Have opportunities to learn through failure

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What is Biosecurity and Why Should We Care?

Activity 1-2
Activity 4

5

Discovery Learning Guidelines

Chunk content into manageable amounts



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Discovery Learning Guidelines

Make the learner think and make choices

The screenshot shows a digital interface for a biosecurity activity. It features a title 'Ask Yourself These Questions' and a sub-header 'What questions should you ask yourself when trying to find ways disease agents could spread?'. Below this, there are four columns of questions: 'Animal to Animal', 'Human to Animal', 'Equipment, vehicles, and facilities', and 'Contaminated feed and water'. Each column contains a question and a corresponding image. At the bottom, there are navigation buttons for 'BACK' and 'NEXT'.

Discovery Learning Guidelines

Provide activities for exploration and discovery, not testing

The screenshot shows a 3D virtual environment of a farm. The title is 'Bred Heifer Barn, Old Barn, Barnyard'. The interface includes a 'Barnyard' area with various structures and animals. There are 'Exploration points left' and a 'Question' button. Navigation buttons for 'BACK' and 'NEXT' are at the bottom.

Discovery Learning Guidelines

Encourage guessing

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

The screenshot shows a matching exercise. On the left, there are four images: a pink worm, a cluster of yellow spores, a blue moldy surface, and a purple virus particle. On the right, there are four words: 'Bacteria', 'Parasites', 'Fungi', and 'Viruses'. A green arrow points from the pink worm image to the word 'Parasites'. Another green arrow points from the purple virus particle image to the word 'Viruses'. A 'Correct!' message is displayed in a green box.

Discovery Learning Guidelines

Give immediate feedback

Biosecurity Risk: Breed Heifer Barn, Old Barn, Barnyard 14

You got 2 out of 4 possible correct sources. You had 2 out of 3 out of 6 correct.

Heifer barn, old barn, and barnyard:

- Chronically sick animals
- Run-down building
- Poor ventilation
- Vehicle in barn
- Contaminated facilities

The following items actually reduce the risk of disease transmission:

- Flocked traps
- Hand sanitizing station
- Bleach cones
- Restricted access sign

Select REVIEW to review your selection.

REVIEW REVIEW BACK NEXT

Biosecurity
Finding Sources of Disease Transmission Risk

2 of 12 pages

Your Role: Biosecurity Investigator
Your Mission: Find potential sources of disease transmission risk

There has been an animal disease outbreak in a neighboring state. It seems to be contagious; various types of farm animals are sick and some are dying. It's costing farmers a lot of money due to the loss of sales and the expense of caring for sick animals. This has the agricultural community worried about their animals and businesses.

To learn more about biosecurity, you have volunteered to visit a local dairy and look for ways a contagious disease could enter the farm. You will prepare a report listing the potential sources of disease transmission and why each one is a risk.

USDA **BACK NEXT**

Biosecurity
Finding Sources of Disease Transmission Risk

Welcome to the Olson Farm

It's time to explore the farm and locate the sources of disease transmission risk. There are four areas to explore. Your goal is to locate 24 points of risk. Click next to begin your exploration.

12 of 12 pages

USDA **Questions BACK NEXT**

Biosecurity
Finding Sources of
Oxycocin Transmission Risk

Great! You learned something from exploring this area. **28**

0 of 18 sources found

Select Next to move to Area D.

Questions BACK NEXT

Area D 28-32

Complete the Activity with your Group

Activity 1 Activity 2 Activity 3 Activity 4

Activity 5 Activity 6 Activity 7 Activity 8

14

Share Out

What was the type and purpose of your activity?

What old knowledge did you need to complete the activity?

What new knowledge did you acquire?

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How Can You Use Discovery Learning?



In small groups,
discuss ideas



Share Out

Epilogue

Bioresecurity Strategies
Resources Library

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Epilogue: Six Months Later



We started off by having a meeting with everyone who works with our animals, including my brother. We explored concerns and discussed my understanding about our sheep trying to go and why. We have this report I gave to most of our cooperators. We had everyone go through the first two modules, the you did, and then we showed them your report and recommendations. How we have weekly get together to discuss how things are going. If everyone's followed the biosecurity rules that work we have a pizza party!

BACK NEXT

Epilogue

Bioresecurity Strategies
Resources Library

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Epilogue: Six Months Later

Item	Cost	Impact
Have disposable vehicles for food and manure.	\$1	★★★★
Prevent contact with neighboring animals or their discharges through water, air, or direct fence-to-fence contact.	\$5	★★★★
Install modern barn ventilation systems.	\$50	★★★★
Expand and replace a lot of manure (spare, pasture and manure) stock.	\$5	★★★★
Have an effective on-farm composting system for manure and other waste.	\$2	★★★★
Provide better facilities for C&D (shower, hand, vehicle wash)	\$50	★★★★
Use AI for breeding.	\$	★★★★
Improve our manure management facilities.	\$5	★★★★
Replace old, empty facilities for animal housing (like old barn for equipment storage).	\$50	★★★★

We've also started a biosecurity savings account. Every month we put money into it. Here's a plan of the strategies we're going to put in place over the next 3-5 years. Which 5 strategies would you recommend we start with?

SUBMIT
