

Fecal Matters!

Background Information (for Facilitators only)

Feces (or fecal matter) are an animal's solid waste. Feces comprise mainly bits of food that were not digested. Fecal matter is usually brown in color. Animals, including humans, have microscopic-sized organisms (**microbes**) that live naturally in their digestive tracts. Each animal's intestinal microbes are unique. Microbes that occur naturally in an animal's intestines can be beneficial, including aiding in digestion, immunity, and responses to stress. Microbes are commonly expelled from an animal's digestive tract through feces.

In addition to naturally-occurring microbes, fecal matter can contain of other microbes that can cause illness in humans or other animals. Microbes that can cause illness are called **pathogens (germs)**, and illnesses transmitted to humans are called **zoonotic diseases**. A common way for zoonotic diseases to be spread from animals to humans is through **fecal-oral transmission** (contaminated feces from an animal to the mouth of a human). Every year, many people get sick from zoonotic diseases transmitted through the fecal-oral route. Some outbreaks of fecal-oral diseases have been traced to public venues such as petting zoos, livestock fairs, and animal exhibits – areas where members of the public interact with animals and their environments.

Humans can reduce the risk of contracting a zoonotic illness from animal feces by taking several precautions. First and foremost, handwashing is critical. Whenever we work with or handle animals directly, it is critical that we wash our hands thoroughly, and more than once if necessary. Additionally, tools (e.g., manure forks, muck buckets), food and water troughs, straw bedding, wood fences, etc. can be assumed to harbor fecal pathogens. Furthermore, when shoes, gloves, and clothes come in contact with animal feces they may also become contaminated by disease-causing germs.

Learning Objectives

At the end of this activity, participating youth will:

- Understand that **germs** can cause illness.
- Be able to explain **fecal-oral transmission** of germs.
- Describe why **handwashing** is important to help prevent illnesses.

Experiential Learning Cycle

This activity is designed around the three-step learning cycle: Experience, Reflection, and Application. To help youth achieve maximum learning and transfer of knowledge and skills, it is important to complete all three steps of the learning cycle.

****The Activity Starts Here:***

Opening Questions

- **Ask youth who have completed Module I the following questions:**
 - Explain what you know about **microbes**, tiny living things that can be found anywhere.
 - Tell me what you know about where farm animals live.
 - Explain why you think it's important to keep your home clean.
 - Explain why you think it's important to keep a farm animal's home clean.
- **For youth who have not completed Module I, ask the following questions:**
 - Tell me what you know about where farm animals live.
 - Explain why you think it's important to keep your home clean.
 - Explain why you think it's important to keep a farm animal's home clean.

Experience: Watch the video

Reflection I:

- Tell me what you liked about the video.
- Describe your favorite character, and why.
- Tell me one thing you learned from the video.
- As a group, let's try to retell the story from the video from the beginning and decide upon the most important points/information the characters were trying to share with you.

Experience (Repeat): Watch the video a second time

Reflection II:

- After watching the video again, tell me something more, if anything, you learned.
- Identify any words that were unfamiliar to you. What were those words?
- As a group, let's try to retell the story from the video again. We'll start from the beginning and decide upon the most important points/information the characters were trying to share with you.

Terms/Concepts Introduction/Discovery (Facilitated discussion with the youth)

During Reflection periods I and II of the activity, it is important that the facilitator listens carefully for understanding (or misunderstanding) of concepts and terms put forth through the video. The goal is for youth to develop a correct understanding of concepts and terms using their own words. If concepts and terms are not discovered by the youth after Reflection I and II, the facilitator should first ask open-ended questions to prod understanding; subsequently, concepts and terms can be introduced. Misunderstandings should also be corrected.

Important terms and concepts from the *Fecal Matters* activity:

- **Feces** or **Fecal matter**: An animal's solid waste (poo).
- **Fecal-oral transmission**: How germs can be transmitted from feces of one animal to the mouth of another animal (including humans).
- **Germ**: Microscopic-sized organisms that can cause a disease; can be found in fecal matter.
- **Microbe**: Microscopic-sized organisms; many are beneficial; can be found in fecal matter.
- **Paddock**: An enclosure where farm animals are kept.

Application

The application phase of this curriculum activity could be a farm or fair visit. This would occur ideally after all video-based experiences have been completed. Facilitators can ask youth open-ended prompts that link video content to the farm or fair visit. Examples of prompts include:

- Describe any places you observed on the farm or at the fair where germs could be transmitted through an animal's poo (e.g., feces on the animal, the ground, a shovel, or a fence board).
- Explain why you think it's important to wash your hands after working with or around animals.
- Explain any places you observed on the farm or at the fair where you think someone working with or around animals could wash their hands.