

Dr. Rosie Helps the Animals
The effect of Aloe liquid on skin phenomenon
Open Inquiry Lesson
 Teacher Lesson Plan

Lesson Summary

This is a 2-day lesson based on the book: *Dr. Rosie Helps the Animals*. The first day consists of reading and processing the story with a focus on the various remedies Rosie uses. The second day is a guided inquiry lesson based on a fundamental scientific concept alluded to in the story *Dr. Rosie Helps the Animals*. It employs the phenomenon-based learning approach and gives students a foundational understanding of the particle motion theory.

Phenomenon-based learning is included in the Next Generation Science Standards (NGSS)



Phenomenon-based learning using *Dr. Rosie Helps the Animals*

Day 1: Read and Process

Day 2: The effect of aloe liquid on skin phenomenon-based open inquiry science lesson

Day 1: Read and Process

Grade Levels: K-2

Topic: *Dr. Rosie Helps the Animals* (Read and process)

Materials

- *Dr. Rosie Helps the Animals* Book or
- [Reading by Rozillia](#)
- Remedies Phenomena Pupil Page- aloe

Cultural and Linguistic Sustaining Practices

Note: The *Dr. Rosie* story provides several examples of natural remedies. This provides an authentic opportunity for students to share remedies they have learned about or experienced from their culture. From: [Cultural and Linguistic Practices](#)

- Connect the content of the book to your students' cultural and linguistic backgrounds.
- Ask students to make connections to the remedies in the story by relating them to their own cultural experiences
- Ask relevant and inclusive questions that connect to all students from various backgrounds

Lesson Objectives/Learning Goals:

- ★ Students will be introduced to veterinary medicine as a STEM profession through an engaging informational fiction story
- ★ Students will be able to identify the remedies Rosie used for each affliction.
- ★ Students will be able to compare and contrast Rosie's remedies with their own experiences.

Time	Activity	Teacher Actions	Student Actions
_____ minutes	Introduction to the <i>Dr. Rosie</i> story	<p>Questions: <i>Have you ever been sick? What helped you get better?</i></p> <p>Today, you're going to meet a young person who helps animals get better! Listen to find out who <i>Dr. Rosie</i> meets and how she helps each animal.</p>	Reply to the questions

_____ minutes	Story Reading and Scaffolded note-taking	Give each student a copy of Remedies Phenomena Pupil Page. As you read the story, pause with each remedy. Ask kids if they have had that affliction and what remedies have they used at home. Ask students to match the affliction and remedy on the pupil page.	Listen to the story and match the animal with the remedy
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and resume on day #2

Day 2: The effect of aloe phenomenon-based open inquiry science lesson		
Grades levels K-2	Topic: Effect of Aloe Phenomenon	Materials: <ul style="list-style-type: none"> Effect of Aloe on Skin pupil page
NGSS Standards (Science Practices) K-2		
<ul style="list-style-type: none"> Asking questions and defining problems- How does aloe affect skin? Developing and Using Models- TBD Planning and carrying out investigations- TBD Analyzing and Interpreting Data-TBD 		<ul style="list-style-type: none"> Constructing Explanations and Designing Solutions- TBD Engaging Argument from Evidence- TBD Obtaining, Evaluating, and Communicating Information- TBD

Lesson Objectives/Learning Goals

- Students will utilize a variety of science practices to design an experiment to investigate the effect of Aloe vera on skin

To the teacher: Content that is both general and specific to this guided inquiry is provided below.

Science Content Background for this Lesson

Aloe-Some History and Uses

Aloe vera is a perennial succulent plant that mostly grows in dry regions of Asia, Europe, Africa, and America. Worldwide, it is thought to be the oldest medicinal plant with references to its use dating back to 1500 BC. The gel-like liquid in the leaves of Aloe vera has long been

recognized for its anti-inflammatory, antioxidant, antimicrobial, antiseptic, emollient, and wound-healing properties.

Aloe vera has been widely used in veterinary medicine throughout history and is becoming even more common with the rise of antibiotic-resistant bacteria. Due to its historical significance in veterinary medicine, the Royal College of Veterinary Surgeons chose to include Aloe vera in its coat of arms in 1844.

Here is a sample of the many scientific articles written about the uses of Aloe vera in veterinary medicine

<https://pubmed.ncbi.nlm.nih.gov/36671245/>

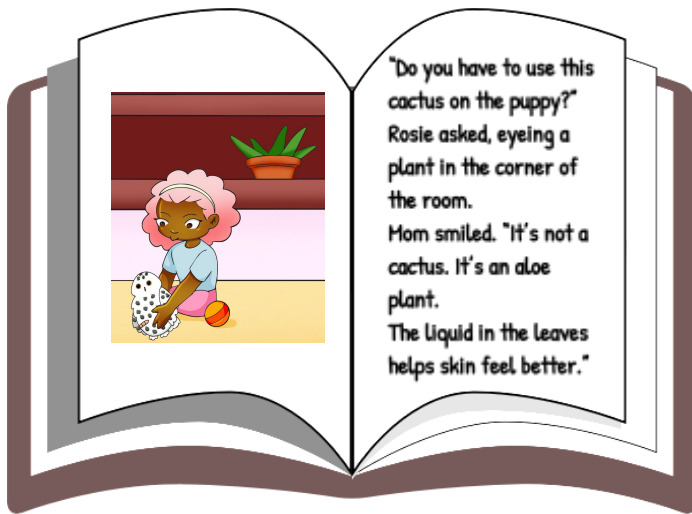
<https://biomedres.us/fulltexts/BJSTR.MS.ID.001287.php>

<https://www.frontiersin.org/articles/10.3389/fvets.2022.1060738/full>




Making Connections: How does this relate to the statement that Aloe liquid helps skin feel better?

Excerpt from Dr. Rosie Helps the Animals



Vocabulary

- **Cactus-** a general term for a kind of plant that usually grows in the desert. Cacti usually have spiky leaves.
- **Liquid-** is a substance that flows like water.



Rosie's mom said that the liquid in the leaves of an aloe plant helps skin feel better. This is an open-ended inquiry lesson to test the effect of aloe on skin.

Before Starting—here are some possible questions to ask students:

1. Rosie's mom said the liquid in the aloe plant leaves helps skin feel better. Sometimes, skin can feel better even if the skin is not hurting or itching, such as when lotion is put on it. How could you figure out if aloe liquid, like lotion, can help skin feel better even if the skin is not hurting or itching?

The Experiment

1. Distribute the Effect of Aloe Liquid on Skin pupil page.
2. Work with your lab partner to come up with an experiment to see if aloe liquid helps skin feel better (even if it is not hurting or itching). Write your ideas on the part of the pupil page that says Experiment.



Safety Concerns: In general, safety concerns are specific to the experimental design that groups come up with.