

Introduction to unit: *“Waste Not, Want Not” featuring the powers of anaerobic digestion!*

Concept covered in activity: Introduced to the problem of foul gas in pets.

Grade level: 5th

State Standards	National Standards
Colorado Science 2.2A Develop and communicate an evidence-based scientific explanation regarding how humans address basic survival needs	NS.5-8.1 Science as Inquiry – students should develop abilities necessary to do scientific inquiry, understandings about scientific inquiry

Learning objectives: Students will be able to...

- Describe a similar problem to “Walter’s” in their science notebook.
- Work in groups to create ideas to solve the problem

Materials

- “Rough Weather Ahead for Walter the Farting Dog” by Kotwinkle, Murray, and Coleman.
- Science notebook – composition notebook.

Instructional planning

- Read the book to the students. Ask the students to think about any similar situations they have come across in their lives or at home. Student will then think of ways to solve the problem. Allow all options from the students they need their imagination for this unit.

Procedure/activity

	Student Activity	Teacher Activity
Engage	Listen to the teacher read the book “Rough Weather Ahead for Walter the Farting Dog”	Read “Rough Weather Ahead for Walter the Farting Dog”
Explore	Students talk in large group discussion about their experiences with this type of problem regarding animals.	Lead a discussion with the class. Ask questions such as, “How many of you have pets?” “Do any of your pets eat a special diet?” “What is that diet for?” “Do your pets have a similar problem to Walter?”
Explain	Students separate into groups of 3-4 to brainstorm ways to solve Walter’s problem	Separate students into groups, and monitor their conversations. Make sure students are on track. Redirect if necessary.
Elaborate	Students meet back together in a large group discussion to gather their ideas on a board and talk about what would work, and what would	Gather students back together for a large group discussion. Have the students record all ideas in their science notebooks that

	not.	their peers have come up with, and then talk about what would/would not work and why.
Evaluate	Students pick the top three options they think will work and write them down in their science notebooks with an explanation of why they think it will work.	Instruct students to write in their science notebooks their top three options for solving Walter's problem, and how they think it will work.

Assessment	Formative	Summative
Formal	Writing in science notebooks	
Informal	Questions in class and group discussions	Class ideas on how to solve Walter's problem

Anticipated misconceptions/alternative conceptions

- Some students might not have a pet that has a digestive issue.
- Stinky farts are not affected by what you eat.

Accommodations/modifications of activity for any special needs students

- Students are given extra time to write down their ideas.
- If students are hard of hearing, they are placed up close to the teacher when the teacher is reading the book.
- Provide a science notebook (composition notebook) for students who do not have resources at home.