

TEACHER GUIDE

Trash Talk!

TO: Teachers

FROM: City of Tucson Environmental Services
4004 S. Park Avenue • Tucson, AZ 85714
(520) 791-3171 • eshelp@tucsonaz.gov • www.tucsonaz.gov/esd
Environmental Education Exchange • www.outreach-scheduling.org

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We hope that your school year is off to a good start. In this edition of *Trash Talk!*, we look at ways your students can improve the environment by recycling and composting.

Inside this Teacher Guide, we have provided ideas to “reuse” the newsletter for daily instruction, journal writing prompts, and an extension activity.

On the back page, we provide information about this issue’s activities so that you can incorporate *Trash Talk!* into your daily curriculum. We’ve noted how these activities correlate to the Arizona Academic Standards for fourth and fifth grades. For your convenience, we have provided Teacher Keys below for the activities.

As always, we welcome your comments and suggestions. We hope you have a great school year!

Teacher Keys for Trash Talk! Activities

Fraction Action: 10 pounds of leaves; 6 pounds of fruit and vegetable scraps; 14 pounds of grass clippings

Scrambled Science: *Terms:* nutrients, decomposes, soil, scraps, worms, waste — 1. waste; 2. scraps; 3. decomposes; 4. worms; 5. soil, nutrients

Where in the World?: Austria

Counting the Votes: Buy reusable water bottles for everyone in the class: **20%, No**, it did not pass; Have an arts and crafts day using recycled materials: **92%, Yes**, it did pass; Take a trip to the local recycling plant: **60%, Yes**; Decorate a paper recycling bin for the classroom: **96%, Yes**; Create a waste-free lunch contest for the school: **36%, No**; Pick a waste-free lunch day for the class: **68%, Yes**. Bonus: **48%, No**

Beginnings & Endings: *Terms:* recycle, composting, richer, overwater, reduces, healthier — 1. recycle; 2. healthier; 3. reduces; 4. richer; 5. composting; 6. overwater



Reuse Ideas

Math

- What is the common denominator of $1/3$ and $1/5$?
- Solve these problems: $1/3 + 1/5 = \underline{\quad}$ $1/3 - 1/5 = \underline{\quad}$
- Circle a street address number or Post Office Box number, a phone number, and a ZIP code in the newsletter.
- After completing "Counting the Votes," put the percentages in order from least to greatest.
- If the material in the compost pile weighs 40 pounds and half of the material is leaves, how much do the leaves weigh?

English/Language Arts

- Add the prefix "un" to the word "healthy." How does the prefix change the meaning of the word?
- Underline a city or town name in the newsletter.
- Write the past tense of these verbs:
take decorate host buy throw
- Write these words in ABC (alphabetical) order:
scraps science scrambled school Scotland
- In "Counting the Votes," find a word that starts with N and is a synonym of *locale* or *area*.

Science

- Select the term that doesn't belong:
apple core leaves rocks grass clippings
- Will rocks break down in a compost bin? Why or why not?
- What types of material will break down in a compost bin? Why?
- A compost bin is an engineering solution. What problems did it solve?
- Complete this analogy: clippings : grass :: _____ : trees

Social Studies

- On the map in "Where in the World?" add a compass rose indicating the cardinal directions (north, south, east, and west).
- The second highest composting rate among European Union countries was 27% in the Netherlands. Find the Netherlands on the map and color it.
- What direction is the Netherlands from Austria?
- What continent is home to Austria and the Netherlands?
- Is that continent in the northern or southern hemisphere?



Journal Writing Prompts

Using the letters in the word "*decomposes*," make as many words as you can. You can use the letters more than once.

■

What is your favorite leftover food? Why?

■

Write a paragraph using these words: *neighborhood*, *paper*, and *recycling*.

■

Imagine that you are a worm who has just moved into a compost bin. Write a letter to a friend that describes your new home. Be creative!

■

In an election, could the votes total more than 100%? Explain why or why not?



Extension Activity: Which Is Which?

Make a copy of the master on the next page for each student or group of students.

Answer key: 1. Producer; 2. Consumer; 3. Decomposer; 4. Producer;
5. Decomposer; 6. Consumer; 7. Decomposer; 8. Consumer; 9. Producer;
10. Consumer; 11. Consumer; 12. Decomposer; 13. Producer; 14. Consumer

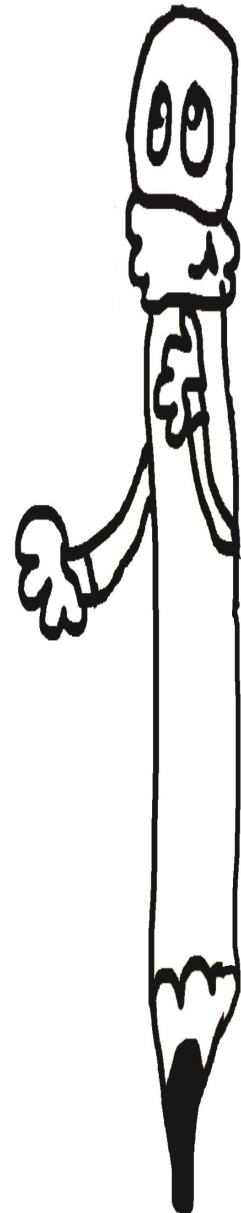
Which Is Which?

Name: _____

Directions: Living things are classified into producers, consumers, and decomposers. Producers use the air, sun, soil, and water to make their own energy. Consumers gain energy by eating other living things. Decomposers gain energy by breaking down dead and decaying plants and animals.

Use your knowledge of producers, consumers, and decomposers to match each living thing with its correct category. The first one has been done for you!

-
- | | | |
|-----|-----------|----------|
| 1. | Marigold | Producer |
| 2. | Tiger | _____ |
| 3. | Bacteria | _____ |
| 4. | Pokeweed | _____ |
| 5. | Mushroom | _____ |
| 6. | Duck | _____ |
| 7. | Millipede | _____ |
| 8. | Fish | _____ |
| 9. | Carrot | _____ |
| 10. | Cat | _____ |
| 11. | Spider | _____ |
| 12. | Earthworm | _____ |
| 13. | Pine Tree | _____ |
| 14. | Human | _____ |



Skills and Standards

Activity	Subject Areas	Skills Addressed
Beginnings & Endings	<i>English/Language Arts</i>	Applying knowledge of word structure elements (prefixes and suffixes), known words, and word patterns; Using spelling patterns for adding affixes; Reading words in context using knowledge of roots and related prefixes and suffixes (morphology) to determine meaning <i>Grade 4: 4.RF.3a; 4.L.4a; 4.L.4b</i> <i>Grade 5: 5.RF.3a; 5.L.4a; 5.L.4b</i>
Fraction Action	<i>Math</i>	Understanding, interpreting, and comparing fractions; Solving real-world problems involving addition and subtraction of fractions referring to the same whole number <i>Grade 4: 4.NF.2; 4.NF.3a; 4.NF.3d</i> <i>Grade 5: 5.NF.1; 5.NF.2; 5.NF.3; 5.NF.4a</i>
Scrambled Science	<i>Science</i>	Understanding natural materials and how they sustain the lives of plants and animals; Developing solutions to reduce the impact of humans on the natural environment and the natural environment on humans; Exploring ways that communities protect Earth's resources and the environment; Classifying organisms as producers, consumers, and decomposers <i>Grade 4: Strand 3/Concept 1/PO 2; Strand 4/Concept 3/PO 1, 4</i> <i>Grade 5: Strand 3/Concept 1/PO 2, 3</i>
Where in the World?	<i>Social Studies</i>	Using labels and symbols to locate and identify physical and political features on a map; Comparing relative locations on a map <i>Grade 4: Strand 4/Concept 1/PO 1, 2</i> <i>Grade 5: Strand 4/Concept 1/PO 3, 4</i>
Counting the Votes	<i>Social Studies</i>	Explaining the importance of being a responsible citizen (civic virtues); Understanding the role of citizens in making decisions and rules within a community, such as voting in elections and voicing opinions in a positive way <i>Grade 4: Strand 3/Concept 4/PO 1, 2, 3</i> <i>Grade 5: Strand 3/Concept 4/PO 1, 2, 3</i>
	<i>Math</i>	Comparing whole numbers; Comparing fractions with the same denominator; Understanding, interpreting, and modeling percents as part of a hundred; Dividing with whole numbers; Solving real-world problems <i>Grade 4: 4.OA.A3; 4.NBT.A.2; 4.NBT.A.6; 4.NF.A.2; 4.NF.C.5; 4.NF.C.6</i> <i>Grade 5: 5.NBT.A.3b; 5.NBT.B.6; 5.NBT.B.7; 5.NF.B.3</i>
Outside Pages Text	<i>English/Language Arts</i>	Reading and comprehending nonfiction, informational text; Applying context clues to determine meaning of unknown words; Determining meaning of content-specific words and phrases in nonfiction text <i>Grade 4: 4.RI.2; 4.RI.4; 4.RI.7; 4.L.4; 4.L.6</i> <i>Grade 5: 5.RI.2; 5.RI.4; 5.L.4; 5.L.6</i>