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Building Fluency through Reader's Theater: Grades 5–6

This sample includes the following:

Teacher's Guide Cover (1 page)
Table of Contents (1 page)
What's Included in Each Lesson (7 pages)
Lesson Plan (6 pages)
Script (14 pages)



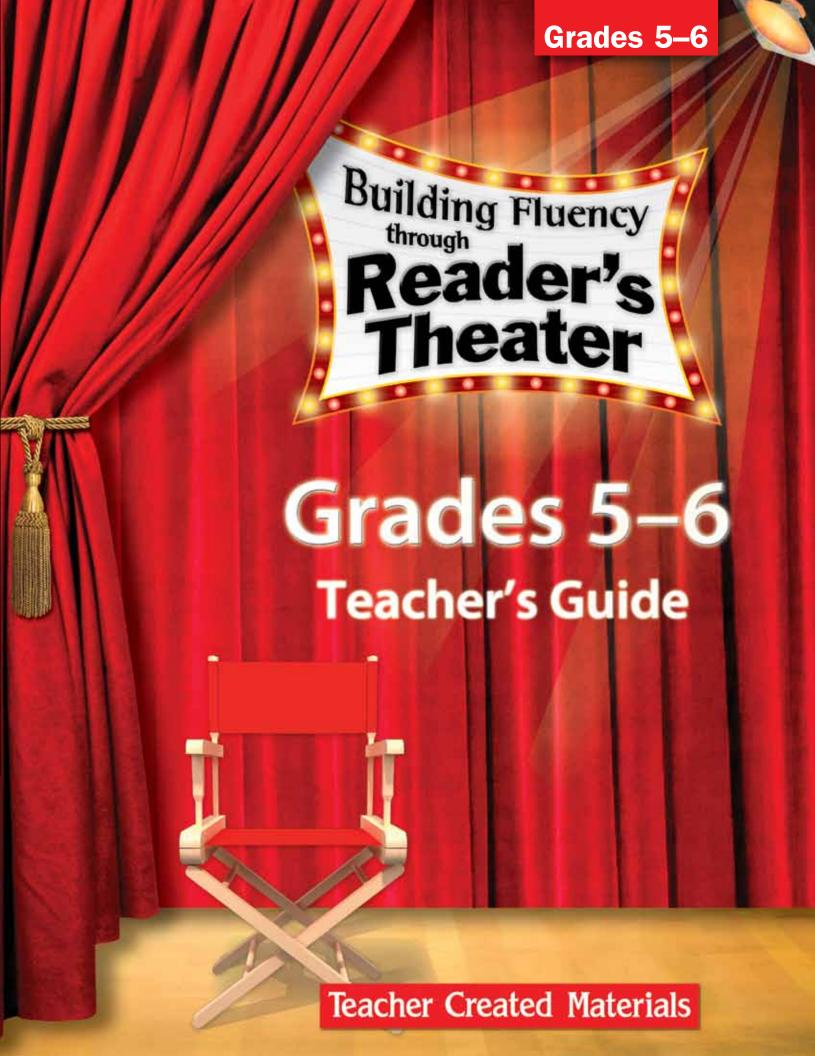


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What's Included in Each Lesson

Objectives

The objectives state the purpose of each lesson and communicate the desired outcome of the lesson related to fluency and the content area. The objectives are taken from the Mid-continent Research for Education and Learning (McREL) compilation of content standards for K–12 curriculum. As stated on the McREL website (http://www.mcrel.org), the purpose of the standards compilation is "to address the major issues surrounding content standards, provide a model for their identification, and apply this model in order to identify standards and benchmarks in the subject areas."

Summary

Within each lesson there is a summary section that describes the script and provides information you can share with students to prepare them for the reader's theater performance. To decide which scripts to complete with your students, read the summaries to determine how each fits in with your teaching plans. For your convenience, the summaries for the scripts are also provided below.

Lillian's Family Tree is the story of a family that is struggling to make ends meet during the Great Depression. Madison learns the importance of hard work and sacrifice as she confronts the effects of the Great Depression after her father loses his job. Through their resolute behavior and positive attitude, Grandpa and Grandma Jensen exemplify Madison's strong family heritage as she learns who she is and that she comes from a long line of outstanding ancestors.

Remember Who You Are is about a young girl named Allison who is struggling to discover who she is and the meaning of her life. Allison, along with her friends, Zoë and Bryce, have been challenged by their teacher to create a five-page autobiography. Allison learns to have faith in herself through the process of writing her autobiography. Allison's memoirs show that she has confidence and character, which she discovers with the help of her family and friends.

Independence Trunk is the story of a boy named Paul who visits his grandmother in the summer. While trying to solve the mystery of who fired the first shots of the Revolutionary War, Paul discovers a trunk that contains artifacts from the Revolution. Paul learns to be more independent and responsible during his search for the truth about the American Revolution.

From Independence to Oregon is the story of a family that travels the Oregon Trail and reenacts the efforts and experiences of the original emigrants who traveled the trail long ago. Members of the family learn about landmarks and other interesting facts that still mark the Oregon Trail. When disaster strikes, the family experiences the same real hardships that the emigrants faced. The family discovers how difficult this journey was for the emigrants and learns to appreciate the discoveries and sights along the Oregon Trail.

Summary (cont.)

Anglezandria and the Golden Tri-Scarab is the story of how the Pharaoh Rhombuses of Angelzandria selects his successor. He wants the new pharaoh to be a person who has the same love for math that he does, so he sends the citizens of his city on a scavenger hunt for clues to find the Golden Tri-Scarab. The entire city has been designed using math and geometry. Each clue leads to another place in the city where a new clue is hidden. Two farmers, Acutus and Pentagonus, work together to solve the mystery of where the Golden Tri-Scarab is hidden. Their cooperation in this competition seems to be the magical combination that helps win.

How Puzzling! is the story of a group of students that learns about an interesting school that their friend attends. Everything at Wayland Junior High School where Sally goes is a little different and requires some heavy-duty problem solving skills. The students think this kind of school would be much more fun than their school, Dullsville. Ms. Franks, their teacher, overhears them complaining about their boring school and decides to show the students just how much fun Dullsville can be!

Little Things Matter is the story of a group of students who celebrate a friend's birthday by attending the local carnival. Unfortunately, their teacher has assigned a test on matter the following day. The children must study for the test while at the carnival, so they find creative ways to learn about matter using experiences on the rides and the food at the carnival.

Touchdown of the Wrong Kind is a story about two children who lived through a tornado. The children are too frightened to leave their home, so their mother sends for Mr. Whirltwist and other local weather experts to share their experiences with the children and discuss what to do in case of a another tornado.

Materials

All of the materials needed to carry out a lesson are listed in this section. This list will assist you in preparing for each lesson.

Introduce the Literature

Each script in this kit is based on a piece of children's literature. You are encouraged to read the book to your students or have your students read the book during language arts time. If the book is not available to you, this section provides a summary of the literature so you can share this with your students.

ELL Support

Reader's theater can be used effectively in English-as-a-second-language classrooms to enhance students' proficiency in the areas of reading, writing, listening, and speaking. Furthermore, the program can be adapted to scaffold and model language usage to meet students' needs at multiple ELL levels. Through this program's ELL support activities and other various components of the lesson plans, students will become actively engaged in authentic language development activities. As a result, students' motivation to utilize the English language will increase.

The drama component of reader's theater helps students feel less inhibited in both speaking and reading the English language, and thus fluency in both areas will increase. In *Stage by Stage: A Handbook for Using Drama in the Second Language Classroom* by Ann F. Burke and Julie C. O'Sullivan, the authors state that "Drama is simply a good way to get students' whole selves involved with language and it is fun" (p. xiii). The authors also emphasize that once students feel less inhibited, their fluency will increase, because within the context of reader's theater there is an inherent opportunity to do repeated readings and practice skills such as pronunciation in an authentic context.

McMaster (1998), in her review of research studies involving literacy and drama in the classroom, states the benefits of drama for emergent readers. Drama provides prior knowledge and rich literary experiences needed for future readers as well as a scaffold for literacy instruction. It helps students develop symbolic representation, new vocabulary, knowledge of word order, phrasing, and metacognition; and introduces them to various forms of discourse, all of which contribute to the construction of meaning from text.

Each script in this kit is accompanied by a musical piece as well as a corresponding poem. Both of these components have also been shown to facilitate students' language acquisition. Educator Tim Murphey (1992) analyzed the lyrics of pop songs and found several common language characteristics that would benefit language learners: the language is conversational; the lyrics are often sung at a slower rate than words, and there is a repetition of vocabulary and structures. Moriya (1988) found that music provided Asian learners a forum to practice pronunciation and learn the phonemic differences between Asian languages and English. Speakers of various languages can benefit from the language experience that the music selections will provide.

The poetry component to the program can be used in many creative ways to enhance students' language acquisition in reading, writing, listening, and speaking. Gasparro and Falletta (1994) assert that using poetry in an ELL classroom provides students with the opportunity to explore both the linguistic and conceptual facets of text without focusing on the mechanics of language. Choral reading of the poem builds fluency and provides practice in pronunciation. Some of the vocabulary words used in the script are reinforced through the poem, providing the opportunity to see the words used in multiple contexts.

ELL Support (cont.)

The accompanying poems can also serve as a model for students to write their own poems. Depending on students' ELL levels, a framework or template can be developed for each poem to structure the writing process and provide students another opportunity to use the vocabulary and word order they have learned from the script and the poem. Additionally, the poem can also serve as a medium for discussion of the themes and concepts presented in each script. Moreover, students and teachers can create action sequences to facilitate visualization and comprehension of the text. Gasparro and Falletta (1994) emphasize that dramatizing poetry enables the learner to become intellectually, emotionally, and physically engaged in the target language; therefore, language is internalized and remembered.

Students' listening comprehension will also develop as a result of using reader's theater. According to Brown (2001), some characteristics of speech make listening difficult, such as clustering, redundancy, reduced forms, performance variables, colloquial language, rate of delivery, stress, rhythm, intonation, and interaction. Brown proposes methods for helping second-language learners overcome these challenges. Reader's theater utilizes authentic language and contexts, it is intrinsically motivating, and it supports both bottom-up and top-down listening techniques. Illustrations in the scripts, along with the possible inclusion of realia and gestures, will assist students in understanding unfamiliar vocabulary and idiomatic phrases.

In addition, the professional recording of the scripts on the Performance CD will provide another opportunity for students to enhance listening comprehension and reading ability. The voices on the CD are articulate and expressive, and they serve as models for accurate pronunciation and fluent reading. By listening to the CD, students will be able to practice visualizing text and speech. A Best Practice suggested by second-language teacher-training programs is for the students to hear an oral reading of the piece of literature prior to reading it aloud themselves. The CD can be used for this practice as well.

Reader's theater provides a medium for ELL students to interact with other students in the classroom and will facilitate the development of a strong community of language learners. The experience will increase students' motivation and diminish their inhibitions to learn the new language. The components of the program will provide the necessary support and scaffolding that teachers need to provide effective instruction to ELL students in the areas of reading, writing, listening, and speaking. The program will engage students and serve as a model for fluency, pronunciation, and overall language usage.

Involving All Students

Even though each script has only six roles, all students can be involved in each reader's theater performance. Students can be involved in a variety of ways. In this section of each lesson are suggestions for ways to include all students.

Reading the Script

This section of each lesson explains how to introduce the reader's theater script to your students and offers suggestions for introducing unfamiliar vocabulary and understanding the characters. As you read each script with the students, you may try to use the following performance tips.

Performance Tips

Reader's theater performance can be a frightening experience for some students. Assist them by reviewing the following suggestions.

- Relax! Breathe deeply and speak slowly to avoid a quivering or breathless voice.
- Stand with one foot in front of the other and with your weight balanced to avoid that feeling of shaking and trembling.
- Don't rush through your lines or speak too rapidly. Take your time and say each word distinctly.
- Some movement for emphasis or to give you a relaxed look is good, but don't move back and forth or develop nervous mannerisms. Avoid wringing hands, tugging at clothing, or twisting hair.
- A mistake is a normal part of any learning experience. If you make one, correct it and go on.

Getting to know your character will make your performance more believable. Use these questions to get in character as you rehearse.

- How old do you think the character is?
- What kind of voice do you think the character should have? Is the voice soft, loud, high pitched, or low pitched?
- How does the character stand or use his or her hands when speaking?
- Does the character seem happy, proud, or excitable?
- Do you think this character is serious or silly?
- Is the character kind?
- Do you think people would like this character?
- What can you do to communicate this character's personality to others?

Assigning Roles

Each script contains six character roles. Each of the roles is written for a different reading level. The chart below lists the reading levels for all the characters in the eight scripts.

Script Title	High 4 th Grade 4.5–5.0	Low 5th Grade 5.0–5.5	High 5th Grade 5.5–6.0
Lillian's Family Tree	Jesse	Mom	Grandpa
	Dad	Lillian	Grandma
Remember Who You Are	Bryce	Dad	Allison
	Mom	Mr. Strictland	Zoë
Independence Trunk	Dad	Danny	Paul Revere
	Grandma	Fred	Jackson
From Independence	Lucy	Mom	Jimmy
to Oregon	Aunt Jean	Dad	Uncle Mike
Anglezandria and the	Pointus	Pharaoh	Pentegonus
Golden Tri-Scarab	Scalena	Obtusum	Acutus
How Puzzling!	George	Roman	Amanda
	Angie	Ms. Mathus	Willie
Little Things Matter	Adam	Matt	Molly
	Sammy	Lucy	Gabby
Touchdown of the	Nina	Mr. Dobbs	Mr. Whirltwist
Wrong Kind	Mom	Sam	Mrs. Specter

Assigning Roles (cont.)

Reading Levels Correlation Chart

Grade Level Range	Guided Reading	Early Intervention	DRA
4.5–5.0	R–T	25–27	40–44
5.0–5.5	T–U	27–28	44
5.5–6.0	U–W	28–30	44–50

Meeting the Fluency Objective

Each lesson focuses on a specific fluency objective, such as reading with accuracy or reading with expression. This section provides procedures for teaching the fluency objective related to the featured script.

Content-Area Connection

Each reader's theater script focuses on a specific content area: language arts, social studies, mathematics, or science. This section of each lesson explains the content and provides suggestions for introducing this content to your students. The content in the scripts can be quite sophisticated and warrants specific instruction to help your students understand it.

Fine Arts Connection

Each script has a song and a poem to accompany it. Your students will perform these songs and poems at designated places within the reader's theater performances. Your kit includes a Performance CD containing all of the songs and poems related to the eight scripts. This section of each lesson offers suggestions for using this CD to learn the songs and poems.

Little Things Matter

Small Things Lesson Plan

Objectives

- Fluency: Students read passages fluently after practicing and monitoring fluency with repeated readings.
- Content Area: Students will learn interesting and important facts about the three states of matter.

Summary

Little Things Matter is the story of a group of students who celebrate a friend's birthday by attending the local carnival. Unfortunately, their teacher has assigned a test on matter the next day. The children must study for the test while at the carnival, so they find creative ways to learn about matter using experiences on the rides and the food at the carnival.

Materials

- Little Things Matter script booklets
- *Small Things Character Masks* (pages 98–103 or Teacher Resource CD); copied on cardstock
- copies of *Take-Home Script: Little Things Matter* (Teacher Resource CD)
- *PowerPoint*® slide show (Teacher Resource CD)
- Science textbooks and other reference materials related to the subject of matter
- overhead transparencies of the poem and song text
- Performance CD and CD player or computer with a CD drive and speakers

Introduce the Literature

Bring vinegar and baking soda to class. Ask a volunteer to pour the vinegar into the baking soda and instruct the class to observe what happens. Explain that they will read three books about matter and the different states of matter. Tell students that the three states of matter—solid, liquid, and gas—can be observed all around them, including the experiment they just observed. The first book they will read is *Matter* by Christopher Cooper. The second book is The Magic School Bus Gets Baked in a Cake by Linda Beech. The third book is *George* by E.L. Konigsburg. Read all three books with the class or choose just one to read. After reading the books, ask the class to identify the three states of matter in the vinegar and baking soda experiment. What other examples of the three states of matter did they learn about from the books? List those examples on the board. Ask the class to list other knowledge about matter that they learned from the books.



ELL Support

Since there are three different books that correspond with the script, it might be helpful to divide the books among the students, allowing different students with varying reading levels to read to the various groups. Allow the different groups to share what they learned from the group.

Involving All Students

Assign the main roles to six of the students and ask the other students to be the readers of the song and the poem. Allow them to practice reading the song and poem together as a group several times, while the other students practice reading their roles. Another suggestion is to divide the remaining students in half and assign the poem to one group and the song to the other.

Little Things Matter Small Things Lesson Plan

Reading the Script

- script, ask if any students have been to a carnival or amusement park. What types of rides were there? What foods did they eat at the carnival? Make a list of the foods and rides. After students have read the script, review the lists of rides and food once again, following the steps below. Ask the class to choose a food or a ride from the list and to explain how to use it to learn about the three states of matter. Students should draw their examples on poster board to share with the class.
- **2.** Provide each student with a copy of the script, give the script booklets to small groups, or print copies of the *Take-Home Script: Little Things Matter*. Explain that the class will read a script about a group of students that learn about matter the hard way—through trial and error while performing an experiment.
- 3. Due to the many scientific terms in the script, it is suggested to read half of the script the first day and the other half the following day. This will allow time to discuss and review terms related to the study of matter. Also, discuss and define the scientific words presented in the script, such as *matter*, *liquid*, *solid*, *gas*, *state*, *chemical change*, and *atom*. Allow students to give the definitions and examples for these words, along with the other words in the glossary. List the examples on chart paper for students to refer to as they read the script.
- **4.** List the six characters from the script on the board. Ask the class to identify the way in which each of the characters' names corresponds with some form of matter. Ask students to draw a picture of the characters on poster board, showing how each character's name relates to the different areas of matter.
- 5. Assign students their parts in the script and allow them to read the parts silently to familiarize themselves with the parts before the practice readings and the actual performance. Explain that they should do repeated readings to improve their fluency while reading the script.



ELL Support

The use of technical terms in this script may confuse English

language learners. To assist them in understanding these words and terms, review unfamiliar words and phrases in the story. Use science textbooks to show pictures and examples of these scientific terms.

Little Things Matter Small Things Lesson Plan



Assigning Roles

Assign roles to students based on reading proficiency. When students practice fluency, it is important that they read materials at or below their reading level so they can focus on accuracy, expression, and reading rate. If a student reads

text that is too difficult, attention is focused on sounding out words and comprehension rather than fluency.

Approximate reading levels for the roles in this script are:

❖ Adam: high 4th grade Matt: low 5th grade Molly: high 5th grade
 ❖ Sammy: high 4th grade Lucy: low 5th grade Gabby: high 5th grade

Meeting the Fluency Objective

- 1. The fluency objective for this script focuses on the use of repeated readings to increase reading fluency. Explain that when a script contains so many difficult words and phrases, it is important to practice reading the lines over and over again to ensure smooth reading.
- **2.** Divide the class into groups of six. Assign each student in the group a speaking part. If a group has less than six students, select one or more students to read two speaking parts.
- **3.** Have each group read through the script to determine where to place emphasis on certain words or to add expression. If using copies of the script, tell students to write reminder notes about proper expression on their copies of the script.
- **4.** To improve their fluency and expression, remind students to slow down as they read and to read unknown words several times so that they do not stumble over them during the performance.
- **5.** Allow the students to do several repeated readings in the small groups for practice. The class might also practice reading along with the *PowerPoint*® script on the Performance CD or reading along with the professional recording of the script.
- **6.** When students have practiced repeated readings of the script, song, and poem, allow them to perform the script for another class.



Little Things Matter **Small Things Lesson Plan**



Content-Area Connection— Science

The content-area focus of this script is to teach students interesting and important facts about matter,

including the three states of matter. The following activity may be done prior to reading the script.

- 1. Invite students to share the information in the script that they found to be the most interesting about matter. What did they learn about the three states of matter? Complete a K-W-L chart, instructing students to write down the facts they knew about matter before reading the script, what they would like to know about matter, and what they learned about matter after reading the script.
- 2. Discuss the K-W-L chart, and then have students go on a classroom scavenger hunt for the three states of matter. Before the hunt, review the song with the students, discussing how matter is found everywhere. Divide the class into three groups. One group will be the solid group, one the liquid, and one the gas. Ask them to think of anything inside or outside the classroom that would contain the state

Allow the gas group to use textbooks to list types of gases that are found in the environment.

3. Once the students have completed their lists, ask them to share with the class the things that contain the three states of matter. Then, ask them if they learned anything new in the scavenger hunt that can be placed on the K-W-L chart.

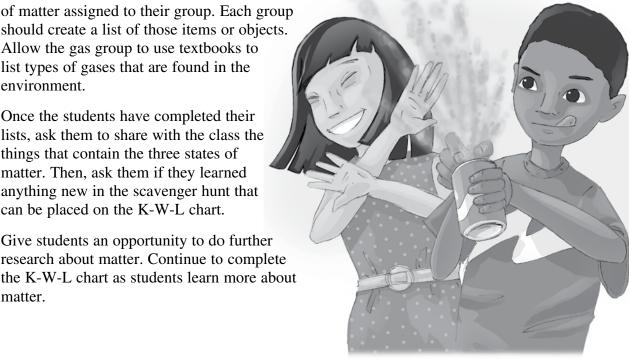
4. Give students an opportunity to do further research about matter. Continue to complete the K-W-L chart as students learn more about matter.



ELL Support

Allow the ELL students to work in a group that was assigned to either a solid

or liquid for the scavenger hunt. This will allow them an opportunity to find objects or items in the classroom that fulfill the assignment, rather than having to do research about gases in the environment.



Fine Arts Connection

- 1. The *Little Things Matter* script contains a song and a poem that relate to the reader's theater, but are not limited to use only with the Small Things script.
- 2. Ask students to do repeated readings of the poem, especially those students who will be performing the poem. Ask the students to create simple costumes or masks to wear during the performance of the poem that are based on ideas found in the poem. For example, one student might create ice skates that he could hold while reading that particular line of the poem, while another student might create a curly wig to don when the line about curly hair is read. The costumes or props should reflect the meaning of the lines in the poem.
- 3. Listen to the professional recording of the song, divide the class into small groups, and ask them to create an original song or poem to accompany the reader's theater script. Suggestions include singing about "Mickey Matter" or "Ally the Atom." Students should share the knowledge they learned about matter in their song.
- **4.** After students create a song or poem, ask them to design colorful science posters about matter that will accompany the songs. Students can design colorful diagrams to display information about matter. Display posters as they perform.



Performance CD

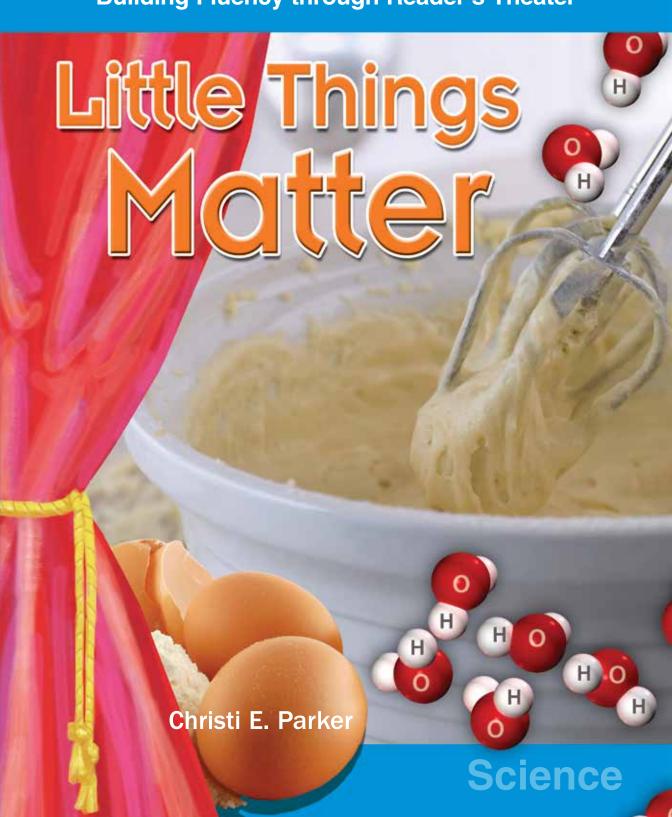
Description	Track
Script reading, pages 4–12	Volume 3, Track 01
Poem: "The Matter with Matter"	Volume 3, Track 02
Script reading (cont.), pages 12–17	Volume 3, Track 03
Song: "Matter is Everywhere"	Volume 3, Track 04
Script reading (cont.), pages 18–21	Volume 3, Track 05



Teacher Resource CD

Description	File Name
Small Things Character Masks	masks_Matter.pdf
Take-Home Script: Little Things Matter	THS_Matter.pdf
PowerPoint®: Little Things Matter	PP_Matter.ppt
Song Transparency: "Matter is Everywhere"	song_Matter.pdf
Poem Transparency: "The Matter with Matter"	poem_Matter.pdf

Building Fluency through Reader's Theater



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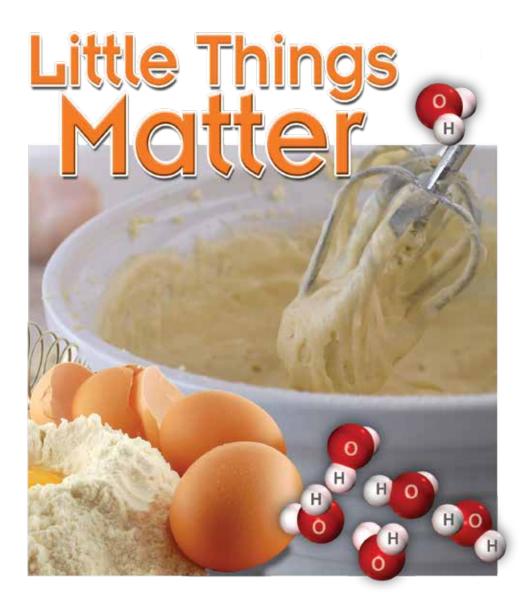
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Christi E. Parker, M.A.Ed.

Tips for Rehearsing Reader's Theater

By Aaron Shepard

- Make sure your script doesn't hide your face. If there is anyone in the audience you can't see, your script is too high.
- While you speak, try to look up often. Don't just look at your script. When you do look at the script, move just your eyes and keep your head up.
- Talk slowly. Speak each syllable clearly.
- Talk loudly! You have to be heard by every person in the room.
- Talk with feeling. Your voice has to tell the story.
- Stand or sit up straight. Keep your hands and feet still if they're doing nothing useful.
- If you're moving around, face the audience as much as you can. When rehearing, always think about where the audience will be.
- Characters, remember to be your character even when you're not speaking.
- Narrators, make sure you give the characters enough time for their actions.

Tips for Performing Reader's Theater

By Aaron Shepard

- If the audience laughs, stop speaking until they can hear you again.
- If someone talks in the audience, don't pay attention.
- If someone walks into the room, don't look at them.
- If you make a mistake, pretend it was right.
- If you drop something, try to leave it where it is until the audience is looking somewhere else.
- If a reader forgets to read his or her part, see if you can read the part instead, make something up, or just skip over it. Don't whisper to the reader!
- If a reader falls down during the performance, pretend it didn't happen.

Little Things Matter

Characters

Lucy

Gabby

Molly

Matt

Sammy

Adam

Setting

This reader's theater takes place at school, Lucy's house, and the carnival.

Act I

Lucy:

Happy birthday, Molly! I can't wait to go to the carnival tonight to celebrate your birthday.

Molly:

I hope my mom lets me go. I can't believe we have to take a science test tomorrow. There's no way I'll have time to study for a science test on matter and celebrate my birthday in the same night. Sammy:

I'm worried, too. I need to get an "A" on this test. The only thing I know about matter is that it's the amount of material

found in an object.

Gabby:

All I know is that everything in the

universe is made up of matter. Beyond

that—I'm clueless!

Molly:

I vaguely remember our teacher talking about the three states of matter. She said

that everything from the farthest star to the biggest truck to the smallest speck of dust is made of matter. But I'm sure I

need to know much more to pass the test.

Matt:

Well, let's all go home to study now. Then

we'll meet at the carnival at 6:00 tonight.

Molly:

I hope my mom will let me go, since it's

my birthday. I'll call you later.

Lucy:

I wasn't sure she'd ever leave! Do you

think we still have time to make Molly a birthday cake, study for the test, and go to

the carnival?

Gabby: Birthdays only come around once a

year, so we have no choice. We have to celebrate Molly's birthday somehow.

Lucy: Well, let's all go to my house then. Maybe

we can study for the test while we make

Molly a cake.

Matt: That's a good idea, Lucy. Let's go!

Act 2

Lucy: The first thing we need to do is get all

the ingredients for the cake. Everything

should be in the cupboard.

Sammy: Adam and I have the ingredients. Okay

now, let's see. I think we need to put the baking soda and other dry ingredients into

a bowl.

Adam: I'll pour in the vinegar.

Matt: Wait, Adam! Vinegar isn't one of the

ingredients in cake. The recipe doesn't

say to add vinegar.

Adam: Oops! I'm sorry.

Lucy: Look at all of the bubbles! They're filling

all the way to the top of the bowl.

Adam: Did I ruin Molly's cake?

Gabby: Actually, it may be a good thing that

Adam added vinegar to the cake

ingredients. It gives us a good reason to

study for our science test.

Matt: What do you mean?

Gabby: Our teacher said that there are three

states of matter—solid, liquid, and gas.
Adam has just created a gas from mixing

together a solid and a liquid.

Lucy: That's right. The vinegar reacted with

the baking soda. This caused a chemical reaction, which changed the vinegar and

baking soda into a gas.

Matt: Then, the gas is released into the air. The

notes I took in class say that gas particles

aren't close to each other at all.

Gabby: I guess you could say they're claustrophobic. Gabby: Yeah, I don't think she would appreciate the sour taste of vinegar in it. Adam: They like to be free and move around as much as possible. Gas doesn't have a definite Then, we can go to the carnival. Matt: shape or volume. That's why you can't really trap gas into a container like a bowl. Act 3 Sammy: Do you remember that experiment our **Molly:** There you are! I was afraid you wouldn't teacher did for us in science class? The gas show up to the carnival. escaped, even when she put a lid on the bowl. We wouldn't miss your birthday. We even Lucy: If the gas is strong enough, it could blow the Lucy: made a cake for you. lid off the container. Molly: You baked me a cake? When did you find Adam: Let's try it! time to study for the science test? Sammy: No, not today. We need to make the cake. Gabby: Thanks to Adam, we did a little of both. You should have seen us. It was hilarious! We're really learning a lot about matter, Lucy: aren't we? Adam: I accidently mixed vinegar with baking soda. The solid and liquid reacted to form a gas. Adam: And having fun, too! Matt: Adam showed us the three states of matter in one mistake. Sammy: Let's start over on Molly's cake.

Molly: I guess he did—solid, liquid, and gas.

Gabby: We were so excited about creating a gas, we

forgot about the other states of matter. I need to review solids and liquids to pass the

test.

Sammy: Molly, which carnival ride do you want to go

on first?

Molly: Let's ride the "Mad Man Mixer."

Adam: Good idea. That's the best ride at

the carnival.

Act 4

Lucy: This ride is great! I love moving around

in circles with my body stuck to the wall. It's so awesome when the floor drops out!

Molly: If you think about it, I'm kind of like a

liquid. I'm stuck in my container! Ahhh!

This ride is so fast!

Lucy: Yes, I guess we are like a liquid. We cannot

move around much, but we can move within

a confined area.

Matt: What you're saying is that molecules in a

liquid can move around, but they still stay

in contact with each other.

Gabby: We're just like the molecules in a liquid.

We can move around more than the molecules in a solid, but not as much as

the molecules in a gas.

Adam: Exactly! A liquid has definite volume,

but it doesn't have a definite shape. It takes the shape of its container. If you pour it out, it loses that shape and

spills everywhere.

Sammy: I'm so dizzy. When I get off this ride, I

think I'm going to spill everywhere, too.

Poem: The Matter with Matter

Matt: What ride do we want to go on next?

Molly: Let's ride the bumper cars.

Adam: What are we waiting for? Let's go!

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Sammy: Whoa! Look at that ride over there—the

Atomator. It looks like a big atom. Can you see the people in the center part of the ride?

That must be the nucleus.

Lucy: I remember our teacher told us that matter

is made of molecules, and molecules are made of atoms. The nucleus is the center of

an atom.

Gabby: That's right! We could say that the girls on

the ride are the neutrons and the boys are the protons—both found in the nucleus of an

atom.

Matt: Protons are really small and carry a positive

electric charge.

Molly: Neutrons carry uncharged parts.

Sammy: The other part of the ride that's circling the

nucleus must be the electrons. Electrons are

the parts of an atom that carry a negative

electric charge.

Adam: Okay, let me see if I've got this straight.

First, you have an atom. Inside an atom are electrons that whirl around the center of the atom, or the nucleus. Inside the nucleus of

an atom are protons and neutrons.

Sammy: Right on, Adam! But that's enough

science for now. Everybody needs to

pick a bumper car.

Lucy: I want a fast car. The red one looks fast.

Gabby: I don't think the color makes them fast,

Lucy.

Matt: Here we go!

Sammy: My car is stuck in the corner. I can't get

out!

Gabby: You look like a solid, Sam. You and the

other cars jammed in that corner cannot

move around.

Sammy: That's true. My car has a definite shape and

volume, just like a solid. And like a solid

molecule, I'm barely moving at all.

Adam: Check out Lucy!

Molly: Lucy, you are out of control. You're

running everywhere and into everything.

Lucy: This is so cool! I'm just like gas molecules

that are bouncing off everything.

Gabby: Lucy, have you ever driven bumper

cars before, or are you always this bad

of a driver?

Lucy: Bumper cars are meant to be driven

like this. Look at Matt! His car is

hardly moving.

Molly: He's better off than Sam, though. At least

Matt isn't stuck in one spot.

Gabby: No, but he's confined to a small area.

Matt: Help me get out of here!

Molly: Only if you tell us what state of matter

you resemble.

Matt: I'm like a liquid. I can move but not much.

Adam: Okay, let's help Matt and Sam out of

this mess.

Lucy: That ride made me really thirsty.

Gabby: Let's get snow cones.

Molly: Now that sounds like a great birthday treat.

Act 5

Sammy: Adam, you have snow cone all over

your face.

Adam: I can never eat it all before the ice melts.

Gabby: Speaking of ice, maybe we should review

how matter changes from one state

to another.

Molly: Our snow cones are a great example.

When we first get a snow cone, it's a solid—it has its own definite shape

and volume.

Matt: But when the ice melts, it changes to a

liquid. The snow cone still has volume but

it loses its shape.

Gabby: I think it all depends on temperature.

Think about it. Water is a liquid. When it

freezes, then it turns into ice—a solid.

Lucy: I guess the molecules get cold and snuggle

close together to make a solid.

Gabby: When a liquid heats up, the molecules

spread out and form steam—a gas.

Adam: So if I drop my snow cone onto the

ground, then the ice—a solid—will melt into water—a liquid. Then, the water will

evaporate into a gas.

Sammy: Thanks, Adam! You're really helping

me remember things I need to know for

the test.

Gabby: If we're all finished with our snow cones,

let's give Molly her birthday presents.

Molly: You baked me a cake, came with me to

the carnival, and you bought me presents?

You guys are really good friends.

Lucy: This gift is from Gabby and me.

Molly: An ice cream maker! Now I can make ice

cream for breakfast, lunch, and dinner.

How did you know I wanted one of these?

Adam: Everybody knows that ice cream is your

favorite food.

Lucy: You always talk about how you wish you

could eat it all the time. So, we thought—

what could be better?

Sammy: Look at the directions on the box. The ice

cream starts out as a liquid.

Gabby: Then, the salt and ice react to make it cold

and the liquid turns into a solid.

Matt: That's another example of matter.

Adam: Wow, matter is everywhere!

Song: Matter is Everywhere

Matt: Open this gift, Molly. It's from Sammy,

Adam, and me.

Molly: It's a bubblegum machine.

Matt: Look inside. We stuffed it with gumballs.

Sammy: The gumballs look like molecules,

don't they?

Gabby: Exactly. Look how tightly the gumballs

are packed. They can't move anywhere,

just like the molecules in a solid.

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Do you think we'll have science on our Sammy:

brains for the rest of our lives—always

searching for examples everywhere we go?

Adam: I hope we will—at least until we take the

test tomorrow.

Act 6

Lucy: Hey, I think I'm going to get a soda.

Will you get a soda for me, too? Adam:

Molly: So, what would happen if we shook up

the can?

Matt: I don't know if I'm brave enough to

find out.

Wouldn't it explode? Gabby:

Yes, and we've already had one gaseous Lucy:

explosion today.

Adam: Let's find out!

All: Bloosh! Gabby: Adam, you're covered with soda!

Adam: So, what happens when you shake a

can of soda?

All: It explodes!

Lucy: Yes, but why did it explode? Isn't soda a

liquid just like water?

Molly: Soda has carbon dioxide in it, right?

Matt: That's right, it does. And carbon dioxide

is a gas.

Sammy: So, when Adam shook up the can, he

woke up the gas inside.

Gabby: The gas expanded and exploded out of

the can.

Well, it was an entertaining experiment— Molly:

to say the least!

Matt: Adam, you always make us laugh.

I guess it's time to go home. Adam: And soda! Lucy: **Molly:** Yes, I promised my mom I wouldn't get Sammy: Well, let's go to class. We don't want to home too late. Thanks for a wonderful be late for the science test. birthday. I'll see you all at school tomorrow. Matt: I bet our teacher will be shocked when we all get "As" on the test! Act 7 Lucy: Maybe she will blow her top— Adam: Is everyone ready for the science test today? **Molly:** Like a gas. **Molly:** I know I am. Adam: Or maybe she'll be stunned into a frozen state— **Matt:** We found some great examples of matter last night at the carnival. Like a solid. Sammy: Lucy: That's right. All I have to do to remember Gabby: Or better yet, maybe our teacher will the three states of matter is think about be so shocked; she'll be confined to her bumper cars, classroom "container" -Gabby: Snow cones, Like a liquid. Lucy: Sammy: Ice cream, **Molly:** Okay then, let's go ace this test!

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Molly:

Bubblegum,



The Matter with Matter

The matter with matter that matters to me
Is the form in which the matter happens to be.
Is it watery liquid found in a pond?
Or is it a solid that I can skate on?
Or is it a vapor like mist in the air
That frizzes and messes the curls in my hair?

And hey! Can such a change happen to me? First, I'm a solid, just as you see, And then I melt and start to ooze Until I'm a puddle afloat in my shoes. Then, slowly I rise, a gas in the air Wondering how I ever got there!

So, I guess the real matter that matters to me Is the form of the matter I happen to be!



Matter is Everywhere

You don't always see it, but it's everywhere. You don't always smell it, but it's in the air. You don't always feel it, but you know it's there. Matter, matter, matter, it's everywhere. Matter, matter, matter, it's everywhere.

The universe is made of matter, Everything and that's a fact, From a tiny speck of dust to your grandpa's Cadillac.

The concept is easy, and it's in our grasp. Think solid, liquid, and then there's gas.

You don't always see it, but it's everywhere. You don't always smell it, but it's in the air. You don't always feel it, but you know it's there. Matter, matter, matter, it's everywhere. Matter, matter, matter, it's everywhere.

Glossary

- **atom**—the smallest particle of an element that has the properties of the element and can exist either alone or in combination
- **carbon dioxide**—a heavy colorless gas that dissolves in water to form carbonic acid; used in the carbonation of beverages
- **chemical change**—the change from one substance to a completely new one, caused by a chemical reaction
- **claustrophobic**—fear of being in closed or narrow spaces
- **electrons**—particles that have a negative electrical charge; found just outside the nucleus of an atom
- evaporate—to pass off or cause to pass off into vapor from a liquid state
- matter—the amount of material in any object
- **molecule**—the smallest particle of a substance having all the characteristics of the substance
- **neutron**—particles that are uncharged, or neutral, found in the nucleus of an atom
- **nucleus**—the center of an atom
- proton particles that have a positive electrical charge in the nucleus of an atom
- **volume**—the amount of space that matter occupies





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