Informational Text Use in Preschool Classroom Read-Alouds

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Early childhood educators and reading teachers need to devote serious attention to the selection of informational as well as narrative genres for readalouds, while considering a full range of content area topics, particularly those established in local state standards.

s. Glenn (all names are pseudonyms), an experienced preschool teacher, just read aloud the text *Veterinarians* (Ready, 1997) and now observes three students in the dramatic play center, which is currently arranged as the "Superstars' Veterinarian Clinic." Damian reports that his stuffed dog's leg is hurt. Jamal and Audrey, dressed in lab coats, investigate the dog's symptoms with the stethoscope and thermometer. Ms. Glenn steps in and encourages the use of technical vocabulary from the read-aloud, "Jamal, I see you're taking his temperature with a—" Jamal replies, "thermometer." The "vets" determine the dog's leg is broken, wrap its leg in medical tape, and scratch out a prescription, just as described in the read-aloud.

Ms. Glenn is pleased that her efforts to integrate informational texts into language and literacy instruction appear to be expanding her students' content knowledge about an important state standard (i.e., Community Helpers), while also encouraging sophisticated language use during centers. Furthermore, she's thrilled that Damian has been paying more attention during related informational read-alouds, such as *How Kittens Grow* (Selsam, 1992), because he showed little interest in literacy experiences earlier in the year.

Ms. Glenn has recently devoted considerable effort to acquiring and coherently infusing informational texts into her curriculum. But it has been a more challenging process than she'd expected, because she's had to work hard to get access to age-appropriate informational texts. Additionally, she's had to spend more time preparing to read these genres aloud, because the text structures often require different discussion points than a typical narrative story line. She has also found that her students learn more from informational texts when she can explicitly match them to state standards and associated thematic activities. Although it requires effort, Ms. Glenn and her gradelevel team of preschool teachers have committed to infusing informational genres into their curriculum to ensure their students are exposed to a variety of genres early in their educational experience.

This snapshot of a preschool classroom illustrates the potential benefits of using informational texts to support students' early literacy and language development, and mentions some of the challenges early childhood (EC) teachers face in integrating this type of text into the preschool classroom. Indeed, many teachers of young students report limited familiarity with informational genres and are concerned about reading such texts in their classrooms, because they fear students will think they are boring (Donovan & Smolkin, 2001). Yet, EC teachers are encouraged to infuse more of these genres into their classrooms, based in part on research reports that have shown that students in the primary grades are seldom exposed to this particular genre (Duke, 2000).

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In EC classrooms, the picture seems similar, based on two recent studies. Yopp and Yopp (2006), for instance, analyzed 167 texts reported read aloud by preschool teachers and found that only 5% were informational. More recently, our research team studied the read-alouds of 13 teachers, resulting in 433 texts, and similarly found that only 5% were nonnarrative informational (Pentimonti, Zucker, & Justice, in press). These statistics seem troubling in light of current campaigns to increase students' interests as early as possible in topics commonly featured in informational texts, such as scientific and mathematical topics, so as to better prepare them to compete for the science, technology, engineering, and mathematics (STEM) careers of the 21st century (National Science Board, 2007).

In this research, we sought to replicate these recent findings and also to extend them by examining what kinds of informational texts are being read in EC classrooms. Replication is important because prior studies have involved only small numbers of educators and texts. Extension is important because a more complete understanding of the topics students are exposed to during informational texts' readalouds could potentially inform future research and instruction.

If informational genres are seldom used in EC classrooms, contributing to limited exposure to this genre by young students, we believe that this circumstance can and should be improved. In fact, it seems that the use of informational texts may be an excellent means for teachers to address states' early learning standards that emphasize young students' exposure to STEM concepts via authentic learning experiences. As a first step in these efforts, we sought to understand preschool teachers' use of informational texts within their classrooms more fully.

In this study, we used content analysis to present what is, to the best of our knowledge, the most comprehensive examination of genres read in preschool classrooms by examining over a thousand titles read aloud in 84 preschool classrooms in two states. We sought to learn more about what we expected would be a small proportion of informational texts that preschool students are exposed to, because we believed such a detailed analysis could help us understand what types of informational texts EC teachers are comfortable using and the extent to which informational read-alouds target local state standards.

Why Read Informational Genres Aloud?

Before analyzing the texts that EC teachers read aloud, we must first define informational genres and explain why we believe these texts provide unique benefits to students. Although reading to young students is a common and often routine aspect of EC classrooms, the dynamic interactions that occur during readalouds are not always self-evident. Van Kleeck (2003) suggested that three components create a read-aloud experience: (1) the text, which serves as the object of attention and a springboard for discussion, (2) the teacher's comments and efforts to engage students with the text, and (3) the students' responses to the teacher and text. Accumulated research has demonstrated that participating in read-alouds may have a positive influence on young students' literacy and language development (Mol, Bus, & de Jong, 2009), particularly for students who are at risk for academic difficulties (Karweit & Wasik, 1996). But emerging evidence suggests the text that is read aloud is critically important and warrants careful attention; therefore, the text itself was the focus of our study.

Exposure to Various Genres

Research has demonstrated that the quality and type of text chosen for read-alouds influences the dynamic interaction between teachers and students (e.g., Smolkin, McTigue, & Donovan, 2008; Zucker, Justice, & Piasta, 2009). Emergent literacy theorists have emphasized the importance of giving students experience with a variety of text genres during the preschool and primary grades (Teale, 2003; van Kleeck, 2003). For instance, Teale referred to the importance of providing young students with a "balanced diet" constituting different text types (e.g., narrative, information, word play; p. 127). Within this study, we examined young students' exposure to both narrative and informational genres, which Teale referred to as critical components of the early literacy diet.

We acknowledge that although theorists have conceptualized genre in various ways (e.g., Halliday, 1978), our genre definitions are focused on structural aspects of the text, which we believe is of great interest to teachers who are preparing to read various genres aloud. With our interest on informational genre, in particular, we use the term *informational genres* to refer to two distinct types of texts: expository texts and mixed texts. Expository texts are also known as nonfiction or nonnarrative informational texts. Mixed texts are hybrids that blur the lines between traditional genre categories, because they contain features typical of both narrative and expository genres (Donovan & Smolkin, 2002).

Unique Benefits of Informational Texts

Research on the unique learning opportunities that occur with informational genres has emphasized benefits in students' (a) language skills, (b) knowledge about informational text structures, (c) content area knowledge, and (d) reading interest and engagement with topic.

Inferential Language and Vocabulary. The most established line of research on informational texts has demonstrated that exposure to informational texts benefits students' vocabulary and inferential language skills. Because informational texts contain more varied and technical vocabulary than narratives, conversations surrounding informational texts may facilitate vocabulary acquisition (Reese & Harris, 1997). Informational texts provide opportunities for teachers and students to use abstract language in their conversations when making connections between concepts in texts (Donovan & Smolkin, 2002; Smolkin et al., 2008). Likewise, parents and children have more challenging, abstract conversations when reading informational books compared with narratives (Price, van Kleeck, & Huberty, 2009).

Knowledge of Informational Text Structure.

Experiences with informational texts seem to help students learn the traits unique to this genre. For example, Duke and Kays (1998) read expository texts to kindergarteners across four months and found that their pretend readings over time seemed to contain greater use of informational text language and purposes, including technical vocabulary. Early exposure to the structure of informational texts during the preschool years may also mitigate students' oft-reported difficulty with expository text during the elementary school years, which older students may find difficult to understand because of their unique language and text structure (e.g., Donovan & Smolkin, 2001). Given the predominance of informational texts in later schooling (e.g., textbooks) and everyday life (e.g., newspapers, instruction manuals), familiarity with this genre seems imperative.

Content Area Learning. Through informational read-alouds, students gain content area knowledge (Stone & Twardosz, 2001), which can thereby create prior knowledge from which new knowledge can be built (Hirsch, 2003). Of increasing interest in EC teaching is the use of informational text to support inquiry-based science curricula that simultaneously teach literacy and language skills (Conezio & French, 2002). Varelas and Pappas (2006) investigated the effects of informational text read-alouds during an integrated science-literacy unit and found that classroom discourse reflected increased use of scientific language. For example, students began to use the timeless present verb tense in their discussions surrounding these texts. In terms of young students' mathematical knowledge, evidence suggests that students learn concepts more quickly when well-written mathematical read-alouds are used alongside other engaging mathematical activities (Casey, Kersh, & Young, 2004).

Reading Interest and Engagement With Topic. Experiences with informational texts seem to promote students' reading interest and engagement (Duke, 2000). Case study research has shown that some students who struggle with narrative texts find success and enjoyment in reading informational texts (Casteel & Isom, 1994). Informational texts may be especially relevant in promoting the reading attitudes, habits, and achievement of boys, given their reported preference for informational text (Chapman, Filipenko, McTavish, & Shapiro, 2007) and factual topics, such as animals and transportation (Worthy, Moorman, & Turner, 1999).

It is important to find texts that engage boys in reading because they tend to have less positive reading attitudes over the long term (McKenna, Kear, & Ellsworth, 1995). Yet, fostering interest in scientific topics is also important for young girls, given that girls' achievement and interest in science declines during the school years (Shakeshaft, 1995). Informational genres are useful because all students demonstrate greater achievement and engagement when instructional approaches emphasize reading to answer questions about their worlds (Guthrie et al., 1996).

How Our Study Examined EC Teachers' Use of Informational Texts

Given the potential benefits of informational genres and the importance of exposing even young students to these types of texts, specific goals of our study were to (a) analyze the types of texts read in EC classrooms to generate a thorough understanding of the types of informational texts EC educators use and (b) further probe these informational texts to increase our understanding of the content area topics they addressed and the extent to which these matched local state standards. This study was conducted using written reading logs from 84 teachers participating in a larger, 30-week book-reading study called Project Sit Together and Read (STAR); 13 of these teachers are described in Pentimonti et al. (in press). For detailed study procedures, see Justice, Kaderavek, Fan, Sofka, & Hunt (2009).

Classrooms were located in Ohio and Virginia. All classrooms served at-risk students, primarily children reared in poverty, and were funded by Head Start (n = 33), other state programs (n = 38), or privately funded programs (n = 13). All teachers were female, the majority of whom were Caucasian (n = 54) or African American (n = 23). Thirteen teachers had a high school diploma, 23 a two-year degree, 31 a bachelor's degree, and 17 a master's degree. On average, teachers had seven (SD = 15) years of teaching experience and 11 (SD = 9) years in preschool.

The larger study collected demographic information on approximately six randomly selected (n = 537) students per classroom. Most students (86%) were 4 years old. In terms of ethnicity, the majority were Caucasian (43.5%) or African American (37.8%). The gender split in the classrooms was almost even (51.4% female).

General Procedures

As part of Project STAR, teachers received a new trade book each week for 30 consecutive weeks during the academic year to read with their pupils in whole-class read-alouds. These researcher-provided texts were primarily of the narrative genre. Teachers were informed that they could conduct additional reading sessions using any other texts they selected from any source available to them (e.g., classroom library, school library, public library, other curricula, grant-funded, students' personal collections). Therefore, steps were taken to ensure that teachers' additional text choices were independent.

Additionally, teachers agreed to keep a written reading log of all whole-class read-aloud sessions. Specifically, for each day of the week, teachers wrote verbatim the title of texts they read aloud. Since additional read-alouds (i.e., above and beyond readalouds with the researcher-provided texts) are the focus of this study, we considered teachers' independent read-aloud choices and eliminated teachers' readings of researcher-provided texts.

The 84 teachers reported reading 11,150 titles across the 30 weeks. To determine types of texts that teachers read, we randomly selected and analyzed 10% (n = 1,115) of these titles. This was an effort to be cognizant of resources while capturing a representative sample of teacher-selected titles across the year.

All texts were first coded for four genre categories: narrative, expository, mixed, and other. We distinguished between informational genres and noninformational genres, based on Donovan and Smolkin's (2002) classifications (see Table 1 for our genre definitions).

Then, informational texts (i.e., only expository and mixed texts identified during coding for genre) were further coded for 10 informational content areas (see Table 2). The 10 content areas represent common factual topics about the natural or social world. We identified content areas from three different sources: (1) preschool science and social studies standards from Ohio and Virginia (Ohio Department of Education, 2006; Virginia Department of Education, 2007), (2) our previous text analyses (Pentimonti et al., in press), and (3) common themes

Table 1	
Text Coding	of Genres

Genre	Definition
Narrative	Entertains or conveys an experience
Expository	Provides verifiable information about the natural or social world
Mixed	Includes elements of both narrative and informational texts

Table 2 Text Coding of Categories

Category	Definition
Community helpers	Covers the kinds of work people do and the variety of tools people use in their jobs
Geography	Addresses the physical relationship between and among people and places
History	Includes topics that help students develop an awareness of change over time
Human body	Helps students develop an awareness of how their bodies function
Living creatures	Includes information about various kinds of animals, insects, and dinosaurs
Mathematical concepts	Covers concepts such as shapes, patterns, counting, sorting, and positional words
Natural environment	Covers topics that discuss the earth and its natural materials
Plants	Discusses different types of plants and their life cycles
Traditions and cultures	Explores different cultures through explanation of family customs and traditions
Transportation	Familiarizes students with different modes of transportation

in well-known EC resources websites (e.g., The Perpetual Preschool, n.d.).

Table 3 shows these 10 content areas, according to the level of emphasis placed on the topic in these state standards, to provide a general sense of topics we would expect to see more versus less heavily targeted in teachers' read-aloud selections. If

Table 3 Number of State Standards by Category

Content area	Ohio standards	Virginia standards
Mathematical concepts	33	19
Natural environment	11	9
Geography	6	8
History	6	7
Plants	8	4
Living creatures	8	4
Community helpers	2	4
Traditions and cultures	2	2
Human body	1	1
Transportation	0	0

informational texts did not fit one of these 10 content areas, it was coded as other.

Coding Procedures

The coding of texts for genre—and content area, for the subset of informational texts—was based on an examination of information about each text available on websites such as Amazon and Google; we established the reliability of this type of more efficient Internet coding in our earlier work (Pentimonti et al., in press). If texts could not be located through Internet searches, we obtained paper copies from local libraries. The reliability of the coding system was confirmed through double coding a random selection of 10% (n = 117) of the titles. Inter-rater reliability indicated 95% for genre codes and 91% for category codes, suggesting a high level of agreement.

What Do Our Findings Tell Us About EC Teachers' Use of Informational Texts?

To determine what genres of texts EC teachers read aloud, we coded 733 titles, representing 66% of the titles randomly selected from the teachers' logs. Similar to other studies involving teacher read-aloud reports, the research team was unable to locate specific information about 34% of the listed texts.

As shown in Figure 1, of the coded texts, the majority were narrative genre (82%, n = 600). Mixed was the second-most frequently read genre (13%, n = 96). Teachers seldom reported reading expository texts, with only 29 (4%) expository titles across all reading logs. Only three (0.4%) texts were categorized as other. A chi-square analysis revealed significant differences in genre categories, χ^2 (1, n = 733) = 1831.86, p < .001. Zucker and colleagues (2009) analyzed videotaped read-alouds among this same sample of teachers and estimated the average duration of readalouds was 8 minutes 38 seconds (*SD* = 5 min 7 sec; range = 3 min 55 sec to 21 min 42 sec).

Therefore, assuming the 11,150 read-alouds reported in teachers' reading logs were of similar length, we estimate that informational read-alouds (i.e., 17% of total) only occurred for approximately 55 seconds per day for each teacher during this 30-week period. Unfortunately, this finding suggests that progress has not been made in increasing the amount of time devoted to informational texts since Duke's (2000) study, which found only 3.6 minutes per day spent on informational texts.

Next, we completed an in-depth investigation of content areas addressed in expository and mixed genres. Table 4 shows content areas targeted in these 125 informational texts. The most frequently observed category was living creatures, with 29 texts (23.2%) in this category; an example was Whales Passing (Bunting, 2003). The next most frequently observed category was tradition and cultures, with 22 texts (17.6%), an example of which was *Everybody* Cooks Rice (Dooley, 1991). Less frequently occurring content areas included 18 texts (14.4%) classified within the plants category and 15 texts (12%) classified within the mathematical concepts category. Sample titles included Red Leaf, Yellow Leaf (Ehlert, 1991) for plants and Feast for 10 (Falwell, 1993) for mathematical concepts.

This content area analysis revealed that some dominant categories align with prevailing topics emphasized in the teachers' state standards, but other important content areas were infrequently targeted with read-alouds. An example where the prevalence of read-alouds aligned with standards was the plants category, which is a predominant topic, occurring in 12 local state standards, and was also predominant in teachers' reported read-alouds. In contrast, we did not

Figure 1 Percentage of Texts Coded by Genre



Table 4				
Categories	of	125	Informational	Texts

Categories	Number of informational texts	Informational text percentages
Living creatures	29	23.2%
Traditions and cultures	22	17.6%
Plants	18	14.4%
Mathematical concepts	15	12.0%
Natural environment	11	8.8%
Community helpers	9	7.2%
Human body	9	7.2%
History	6	4.8%
Other	3	2.4%
Transportation	2	1.6%
Geography	1	0.8%

find alignment between prevalence in state standards and the proportion of reported read-alouds for other content areas. For example, although geography and history are predominant topics in state standards, these two content areas were rarely incorporated into teachers' read-alouds. This is unfortunate, because both geography and history encompass abstract topics that could be enhanced for students with the use of age-appropriate picture texts.

What Can We Conclude About the Role of Informational Texts in EC Classrooms?

This study confirmed that narrative texts dominate preschool read-alouds and documented that EC teachers rarely use informational genres in preschool classrooms (Duke, 2000; Yopp & Yopp, 2006). These findings highlight the need to infuse classrooms with a more balanced read-aloud regimen, given the potential benefits of informational texts for students' learning (Duke & Kays, 1998; Pappas, 2006; Reese & Harris, 1997).

An interesting finding of this study is that when teachers do read informational genres, they tend to use mixed genres (13%) more often than strictly expository texts (4%). Mixed genres deliver expository information within a narrative genre. An example is Planting a Rainbow (Ehlert, 1992), in which the story of a mother and child planting a garden is accompanied with information about plant life cycles. The use of mixed genre in preschool classrooms requires more investigation, since results have been inconsistent across studies. Our study resulted in a relatively high frequency of mixed genre read-alouds (13%), which was similar to the findings of Dickinson, De Temple, Hirschler, and Smith (1992) that 12% of readalouds to 4-year-olds were mixed genre. In contrast, Yopp and Yopp (2006) found in their study that none of the 167 texts reported by preschool teachers could be categorized as mixed genre.

In considering why teachers might have selected more mixed genres, we suspect that it may have been similar to reports from elementary teachers that mixed genres can be easier to read aloud (Donovan & Smolkin, 2001). Or perhaps it is because teachers thought mixed texts would be more interesting to students. Indeed, when students select texts they prefer, they often choose narrative texts, but are more likely to select texts with informational content if a mixed genre structure is used (Robinson, Larsen, Haupt, & Mohlman, 1997). However, recent concerns have been raised regarding the accuracy of mixed texts; therefore, teachers are encouraged to help their students understand what is factual and what has been fictionalized when reading mixed texts aloud (Gill, 2009).

Our content analysis revealed that the informational topics targeted failed to reflect the full range of content areas represented in EC education standards. For content areas such as geography, history, mathematics, and natural environment, which predominate in state standards, we suggest that learning can be enhanced by incorporating informational read-alouds that explicitly link to educational standards. Teachers should, of course, continue using inquiry-based and hands-on activities along with informational read-alouds to create a complete curriculum that coherently addresses content areas (e.g., Conezio & French, 2002).

Implications for EC and Reading Teachers

Findings from our study suggest that EC educators and reading teachers need to devote serious attention to their selection of informational as well as narrative genres for read-alouds. Furthermore, it is important to select texts that target a full range of content area topics, particularly those established in local state standards. As Ms. Glenn experienced, this is a tall order, given the present educational climate in which educators are encouraged to improve various aspects of their classrooms' instructional quality. Nonetheless, integrating informational genres into instruction is likely to provide unique benefits to students' language, literacy, content knowledge, and interest in reading. Educators can take several steps to begin integrating informational genres into daily read-alouds, such as the following:

• Locate a selection of age-appropriate informational texts. Infusing EC classrooms with highquality informational texts not only provides teachers with opportunities to reinvigorate teaching of relevant state standards but also represents an important step in advancing recent calls to dramatically improve student achievement in math and science by targeting our youngest learners. Teachers often report that local libraries contain a wide collection of informational picture books, but you may need to actively seek out expository and mixed genres.

- Prepare for your informational-read aloud with a focus on key discussion points. To feel confident as you read informational genres aloud, you must intentionally and strategically plan important stop points to discuss. This preparation includes identifying technical vocabulary that you will elaborate on during informational read-alouds, as well as recognizing areas where abstract concepts need to be addressed to ensure student understanding.
- Determine which local educational standards you can target with read-alouds. We believe the informational content area codes used in this study can serve as a guide for ensuring that a variety of topics are included in regular readalouds. See Table 5 for a categorized list of suggested texts and series that are appropriate for use with young students. Additionally, for a complete list of our study's informational text titles coded by category, as well as a list of resources to help teachers locate quality informational texts, visit the Preschool Language and Literacy Research Lab website at preschoollab.osu.edu.
- Plan how you will incorporate appropriate extension activities after informational readalouds to develop coherent units of study. Informational texts can be innovatively incorporated into learning centers within EC classrooms. Students can link learning from informational read-alouds to content area and center time activities. See Table 6 for Ms. Glenn's sample lesson plans for her upcoming weather unit, in which she uses informational texts as introductions to the content area activities she has planned.

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Table 5 Suggested Informational Texts (Books and Series) Across Content Areas

Category	Texts
Living creatures	How Kittens Grow (Selsam, 1992) Whales Passing (Bunting, 2003)
Traditions and cultures	Children Around the World (Montanari, 2008) Everybody Cooks Rice (Dooley, 1991)
Plants	Planting a Rainbow (Ehlert, 1992) Tell Me, Tree: All About Trees for Kids (Gibbons, 2002)
Mathematical concepts	Feast for 10 (Falwell, 1993) Shapes, Shapes, Shapes (Hoban, 1986)
Natural environment	Recycle!: A Handbook for Kids (Gibbons, 1996) Volcano! (Prager, 2004)
Community helpers	How It Happens at the Post Office (Frederick, 2002) Veterinarians (Ready, 1997)
Human body	My Five Senses (Aliki, 1991) You Are What You Eat (Gordon, 2002)
History	A Picture Book of George Washington (Adler, 1990) Ox-Cart Man (Hall, 1983)
Transportation	School Bus (Crews, 1984) Trains (Gibbons, 1987)
Geography	l Read Signs (Hoban, 1987) Mapping Penny's World (Leedy, 2003)
Miscellaneous series	Emergent Science Readers (Scholastic) Let's-Read-and-Find-Out Science, Stage 1 (HarperCollins) Look Once, Look Again! Science (Creative Teaching) National Geographic Kids (National Geographic Society) Pebble Books (Capstone) Rookie Read-About Science (Children's Press) Scholastic First Discovery (Scholastic) Science Kids (Macmillan) See More Readers, Level 1 (SeaStar) Welcome Books (Children's Press)

Note. Please see the Literature Cited section for reference information on the individual books.

Table 6Sample Lesson Plans Using Informational Texts With a Weather Theme

Content area	Introductory informational book	Activity
Reading	Watching the Weather (Eckart, 2004)	Discuss book features unique to informational texts, such as table of contents, bolded words, and index. Visit the text's suggested link, www.sky diary.com/kids/, and discuss new vocabulary words in the text and on the website.
Writing	How Do You Know It's Winter? (Fowler, 1991)	Introduce students to the fact that informational texts often include labeled pictures and point them out throughout the text. Place the text at the writing center and encourage students to make their own informational texts with labeled pictures.
Science	Weather (Harris, 2006)	Review the pages of the text that discuss tornadoes with the students. Then, fill a large plastic bottle with water and add three drops of dishwashing liquid, some food coloring, and glitter. Screw the cap on tightly and swirl the bottle around in circles. Put it down quickly and watch the swirling water act like the spinning wind of a tornado.
Math	<i>Sun</i> (Tomecek, 2001)	Discuss the relationship between the sun and weather with the students. Next, graph the weather by making a chart with sections for sunny, cloudy, and rainy days for a week. At the end of the week, count how many days have been sunny, cloudy, or rainy.
Art	Nature's Fireworks: A Book About Lightning (Sherman, 2004)	After reading about lightning in this text, make a stormy day collage. On a dark blue piece of construction paper, have students choose the following items to include in their collages: cotton balls for clouds, silver tinsel for lightning, gray paper cut out for rain drops, and foil circles for puddles.

Note. Please see the Literature Cited section for reference information on these books.

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