NOTE

The influence of exposure to phonological neighbours on preschoolers’ novel word production*

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ABSTRACT

We investigated the influence of exposure to phonologically similar words on four-year-olds’ acquisition of novel object words. In Experiment 1, hearing phonological neighbours before learning a new word did not influence children’s novel word productions. In Experiment 2, when children heard the phonological neighbours of a novel word after learning a new word, they correctly produced the target word more often than children who did not receive this exposure. These findings suggest that exposing children to similar sounding words after a novel word was introduced may have helped maintain a representation of that word in working memory, leading to enhanced word learning.

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INTRODUCTION
One of the most remarkable accomplishments of early childhood is the acquisition of a lexicon or vocabulary. It has been estimated that between 1;6 and 6;0 years of age, children acquire approximately five to six new words a day, a remarkable feat considering the challenges of the word-learning task (Carey, 1978, 1982; Anglin, 1993). Upon hearing a new word, children must first identify the word in the speech stream, then encode a phonological representation of the word, then identify the appropriate referent or meaning, and finally, generalize that word to other appropriate referents. To date, the majority of word learning research has focused on children’s acquisition of word meanings, with particular emphasis on the sources of information children rely on to link words with their referents (see Woodward & Markman, 1998; Bloom, 2000 for reviews and discussion). In recent years, however, an increasing amount of attention has been devoted to understanding the phonological aspects of word learning (e.g. Gathercole, Hitch, Service & Martin, 1997; Jusczyk, 1997; Aslin, Jusczyk & Pisoni, 1998; Church & Fisher, 1998; Hunt, Fisher & Church, 1998). In this article, we report two experiments that investigated the influence of exposure to phonologically similar words on preschoolers’ acquisition of novel object words.

As noted above, encoding a phonological representation of a novel word is one of the first steps in the acquisition of a novel word. Children must build a representation of a novel word in long-term memory and use this representation to identify subsequent instances of that novel word. Recently, researchers have proposed that children’s phonological short-term memory, and in particular the phonological loop component of working memory, plays a critical role in their ability to learn the phonological elements of new words (e.g. Gathercole, Willis, Emslie & Baddeley, 1991; Gathercole & Adams, 1993; Gathercole et al. 1997; Baddeley, Gathercole & Papagno, 1998). The phonological loop has been proposed as a component of working memory that is responsible for the encoding, maintenance and manipulation of speech-based information (Baddeley, 1986; Baddeley et al., 1998). According to Baddeley, Gathercole, and colleagues (Gathercole & Baddeley, 1990; Baddeley et al., 1998), the purpose of the phonological loop is to provide temporary storage of novel phonological forms, leading to the formation of more permanent representations in long-term phonological memory.

A growing body of empirical research supports the proposed role of the phonological loop in language learning (see Baddeley et al., 1998 for a review). Several studies have demonstrated a strong association between typically developing children’s ability to retain phonological information in working memory and their existing vocabulary knowledge (e.g. Gathercole, Willis & Baddeley, 1991; Gathercole, Willis, Emslie & Baddeley, 1991;
Gathercole & Adams, 1993; Adams & Gathercole, 1995; Gathercole, Service, Hitch, Adams & Martin, 1999). Other studies have found a link between children’s new word learning and their phonological memory skills (e.g. Gathercole & Baddeley, 1990). For example, Gathercole et al. (1997) found that five-year-old children’s ability to learn the phonological forms of novel words was positively correlated with their ability to maintain phonological material in working memory.

Given the proposed role of phonological working memory in children’s word learning, it follows that any manipulation that reduces the demands on working memory (e.g. priming a set of sounds) during a word learning task should lead to enhanced word learning. Recent studies have demonstrated that phonological priming improves children’s subsequent word identification and familiar word production (Church & Fisher, 1998; Hunt et al., 1998; Brooks & MacWhinney, 2000). To date, however, only one published study has examined the influence of pre-exposure to phonologically similar words (phonological neighbours) on children’s subsequent word-referent mappings (Merriman & Marazita, 1995). In a series of experiments, Merriman & Marazita first presented two-year-old children with stories containing repetitions of similar sounding words (including both initial phoneme primes and rhyme primes), followed by an indirect word-mapping task. In this task, children were presented with picture pairs of familiar and novel objects (e.g. a cake and a stethoscope) and were asked to map a novel word to one of the pictures. In Experiment 1, children mapped a novel noun (e.g. lat) onto an unfamiliar object more often when they had been pre-exposed to words that sounded similar (e.g. pat, sat, cat, rat) to that novel noun than when they had been pre-exposed to dissimilar sounding words. Merriman & Marazita concluded that processing a set of similar sounding words reduced the attentional resources needed to establish and maintain a representation of a novel word’s phonology in working memory, allowing children to expend these resources on other components of the indirect mapping task, such as retrieving the name of a familiar object from long-term memory. In Experiments 2 and 3, children mapped a novel noun that sounded similar to the name of the familiar choice object (e.g. ‘lat’ when the familiar object was a hat) onto an unfamiliar object more often when they had been pre-exposed to words that sounded similar to the name of the familiar choice object than when they had been pre-exposed to dissimilar sounding words. Merriman & Marazita concluded that exposure to words that are similar on one dimension (i.e. they all share the same rhyme) may have led the perceived difference on a different dimension (i.e. the initial phoneme) to be magnified.

In the current studies, we pursued the investigation of the influence of exposure to phonologically similar words on preschoolers’ acquisition of novel object words. Merriman & Marazita’s (1995) findings indicate that pre-exposure to phonologically similar words assisted children in disambiguating
the referent of a novel noun in an indirect mapping task. It is unclear, however, whether children would demonstrate similar priming effects when required to learn a novel label for a novel object and be subsequently asked to produce that label, a more demanding word mapping task. In Experiment 1, four-year-old children heard brief stories containing several repetitions of similar sounding words before learning a novel object label that either rhymed or did not rhyme with words presented in the story. After a brief delay, children were given an elicited production task. Following from Merriman & Marazita’s (1995) results, we predicted that processing a set of similar sounding words would reduce the attentional resources needed to establish and maintain a phonological representation of a novel word in phonological working memory, leading to enhanced word learning.

EXPERIMENT 1

METHOD

Participants

Thirty four-year-old children, ranging in age from 4;0 to 4;10 participated in the study. Children were recruited from local preschools and daycares. Fifteen children were randomly assigned to one of two word mapping conditions: Rhyming Pre-Exposure: mean age = 4;5, s.d. = 3 months; and Mismatch Pre-Exposure: mean age = 4;4, s.d. = 3 months. There were 8 males and 7 females in each condition.

Stimuli

Stimuli were four unfamiliar objects: a turkey baster, an apple corer, a clothesline pulley, and a honey dipper. To ensure that children in this age range did not have labels for these objects, we conducted a pre-test with a group of ten five-year-old children (6 males and 4 females, mean age = 5;2, s.d. = 9 months). We presented them with each object and asked them to label the object. At least eight of the ten children were unable to generate a label for each of the objects we included in this experiment.

We developed a set of four monosyllabic novel words. Each word was considered to have a large phonological neighbourhood and thus, rhymed with seven or more words that are familiar to four- and five-year-old children (the mean number of phonological neighbours was 8.2). See Table 1 for a list of the novel words and their phonological neighbours. To ensure that the phonological neighbours were indeed familiar to four- and five-year-old children, we used information from the MacArthur Communicative Development Inventory (MCDI) normative study (Fenson, Dale, Reznick, Bates, Thal & Pethick, 1994) to establish age of production of these words.
Novel words used in Experiments 1 and 2 and their phonological neighbours

| Novel words | Phonological neighbours                      |
|-------------|---------------------------------------------|
| bock        | block, chalk, clock, knock, rock, sock, talk, walk |
| yick        | kick, pick, lick, sick, stick, brick, chick  |
| tane        | plane, rain, train, brain, cane, crane, chain |
| pake        | break, cake, make, shake, take, wake, lake, rake, snake, steak |

All but 10 of the phonological neighbours (brain, cane, chain, crane, lake, rake, snake, steak, brick, chick) appeared on the MCDI and were produced by at least half of the normative sample by age 2;6. To examine whether the remaining 10 phonological neighbours were familiar to children in this age range, we presented these words to an independent group of ten four-year-old and five-year-old children (8 boys, 2 girls; mean age 4;11; range 4;8–5;4). In this task, we presented children with three pictures at a time, and asked them to point to the picture that was the referent of a given word (e.g. ‘Show me a __’). All of the referents of the labels were correctly identified by at least 7 of the 10 children. Therefore, the phonological neighbours used in the present study were those that are typically familiar to four- and five-year-old children.

Using the phonological neighbours of the novel words, we created a set of four stories, each with an accompanying drawing (see Appendix for the stories presented). The stories ranged in length from 40 to 42 words ($M = 40.5$) and contained 10 repetitions of the rhyming words. We also used a hand-puppet throughout the procedure to keep children interested in the task.

Procedure

Children were tested individually during regular school hours in a quiet room in their preschools and daycares, with each experimental session lasting approximately seven to ten minutes. Children sat at a table across from the experimenter and were introduced to the experimenter and the hand puppet.

Each trial began with a brief story about a picture that either contained words that rhymed with a novel word (Rhyming Pre-Exposure condition) or words that did not rhyme with the novel word (Mismatch Pre-Exposure condition). After hearing the story, children were taught a new label for a novel object. The experimenter taught the child the new label by holding up one of the objects and labelling it seven times with a novel word, using natural sentence frames (e.g. ‘This is a tane. Yes, this is a tane.’). She then handed the object to the child and asked him or her to repeat the novel label.
twice. After five seconds had elapsed, the experimenter gave the child an elicited production task. She held up the novel object and asked the child to name it (e.g. ‘Remember when I showed you this? Can you tell Monkey the name of this?’). Once the child had produced an object label, the experimenter said ‘Okay’ and proceeded to the next trial. This procedure was repeated for the three remaining trials. The order of presentation was randomized for each child. The entire procedure was audio-taped for coding and reliability purposes.

RESULTS AND DISCUSSION

Children’s correct productions of the novel words were calculated across the four trials and are presented in Figure 1. In the first set of analyses, we used one-sample t-tests to compare the number of correct productions to zero in each of the two conditions to assess whether the children’s performance was meaningful. Children correctly mapped the label onto the target referent at a level significantly greater than zero in both the Rhyming Pre-exposure group ($M = 2.60$, s.d. = 0.91, $t (14) = 6.06$, $p < 0.01$) and in the Mismatch Pre-exposure group ($M = 2.53$, s.d. = 0.74, $t (14) = 2.78$, $p < 0.01$). Unexpectedly, children in the Rhyming Pre-exposure group and children in the Mismatch Pre-exposure group did not differ significantly in the number of correctly produced word referents, $t (28) = 0.22$, $p > 0.50$.

In the second set of analyses, we examined children’s performance on their first trials. Researchers have argued that children’s performance on the first
trial on language and cognitive tasks is the most sensitive and pure measure of their responses (e.g. Evey & Merriman, 1998). That is, children may have a fragile commitment to a rule or strategy and performance on future trials may be mostly influenced by other factors (e.g. the experimenter’s ambiguous acceptance of their answer on the first trial). In the present study, performance on subsequent trials may have been influenced by interference from rhymes in previous stories. A chi-square analysis indicated the children’s performance on their first trial did not vary significantly as a function of word learning condition, $\chi^2 (N = 30, df = 1) = 0.60, p > 0.40$. Eleven children in the Rhyming Pre-exposure group and 9 children in the Mismatch Pre-exposure group correctly produced the novel label on their first trials, suggesting the phonological priming did not influence correct word productions even on the first trial.

In the third set of analyses, we examined children’s productions for evidence of partial word learning. First, using the audiotapes, we coded the number of times children produced a response which had the same rhyme as the correct word but had a different initial consonant. Note that this category included responses that had initial consonant substitutions (e.g. pane instead of tane) as well as responses that were repetitions of one of the rhyming words presented in the stories (e.g. cane instead of tane). A random selection of 20% of the sessions was coded a second time, by a coder blind to the hypotheses of the experiment. We then calculated Cohen’s kappa for each session as an index of interobserver agreement (Cohen, 1960). Kappas ranged from 0.60 to 1.00 with a mean of 0.93 (S.D. = 0.16). Any disagreements were discussed and resolved in favour of the original coder. We found that children in the Rhyming Pre-Exposure condition ($M = 0.73$, s.d. = 0.59) were not more likely to produce responses that rhymed with the correct word than children in the Mismatch Pre-exposure condition ($M = 0.73$, s.d. = 0.79), $t (28) = 0.0, p > 0.99$. We then created a new variable (the total number of correct rhyme responses) by adding the number of initial consonant error responses (i.e. children produced a response that had rhymed with the target word but had a different initial consonant, such as pock instead of bock) to the number of correct responses for each child.\footnote{In other studies using elicited production tasks, researchers have considered responses with either omitted or replaced target phonemes as accurate responses (e.g. Church & Fisher, 1998).}

consistent with the analyses reported above, children in the Rhyming Pre-Exposure condition ($M = 3.33$, s.d. = 0.82) and children in the Mismatch Exposure condition ($M = 3.13$, s.d. = 0.74) did not differ significantly in the number of correct rhyme responses produced, $t (28) = 0.70, p > 0.50$.

Finally, we examined the number of times children produced a response that had the same vowel sound as the target word, as another measure of
There is evidence that the phonological loop is better at retaining vowel information than consonant information (e.g. Gathercole, Frankish, Pickering & Peaker, 1999) and thus, this measure could be highly sensitive to children’s partial word learning. Note that we included any response in which children reproduced the vowel in the target word, including those responses where the child correctly produced the entire word. A comparison of the number of correct vowel responses across groups indicated that children in the Rhyming Pre-Exposure condition ($M = 3.00$, s.d. = 0.76) did not produce more correct vowel responses than children in the Mismatch Pre-exposure condition ($M = 2.87$, s.d. = 0.92), $t(28) = 0.43$, $p > 0.67$.

Contrary to our hypothesis, children in the Rhyming Pre-exposure group did not produce more correct labels for the novel objects than children in the Mismatch Pre-exposure condition. These results suggest that processing a set of similar sounding words before learning a novel word did not influence 4-year-olds’ subsequent learning of that novel word, as indexed by an elicited production task. Our findings are inconsistent with those of Merriman & Marazita (1995) who found that phonological pre-exposure can facilitate novel word disambiguation. This suggests that the effects of phonological pre-exposure may not extend to productive word learning tasks, an issue discussed further in the General Discussion.

In Experiment 2, we extended our examination of the influence of exposure to phonologically similar words on word learning in a previously unexplored direction. More specifically, we examined whether exposure to a set of similar sounding words after learning a novel label would influence word learning. We presented 4-year-old children with brief stories containing several repetitions of similar sounding words after learning a novel object label that either rhymed or did not rhyme with words presented in the story. We reasoned that presenting the set of similar sounding words after learning the novel word may help children maintain a phonological representation of the novel word in phonological working memory, leading to improved word learning.

**EXPERIMENT 2**

**METHODOLOGY**

**Participants**

Participants were thirty-four-year-old children, ranging in age from 4;1 to 5;0, and were recruited through local preschools and daycares. Fifteen children were randomly assigned to one of two word learning conditions: Rhyming Post-Exposure: mean age = 4;6, s.d. = 4 months; and Mismatch Post-Exposure: mean age = 4;6, s.d. = 3 months. There were 8 males and 7 females in each condition.
Stimuli
Identical to Experiment 1.

Procedure
Children were tested individually during regular school hours in a quiet room in their preschools and daycares, and each experimental session lasted approximately seven to ten minutes. As in Experiment 1, children were given a word learning task in one of two conditions. The procedure for each trial was identical to that of Experiment 1 with two exceptions: first, on each trial, the experimenter first taught children the novel label for one object and then presented them with either a story that contained words that rhymed with the novel word (Rhyming Post-Exposure condition), or words that did not rhyme with the novel word (Mismatched Post-Exposure condition). Recall that in Experiment 1, the experimenter first presented the appropriate story and then taught children the novel label. Second, the experimenter gave children the elicited production task immediately after the story (approximately 10 seconds after learning the novel word).

RESULTS AND DISCUSSION
Children’s correct productions of the novel words were calculated across the four trials and are presented in Figure 1. As in Experiment 1, we first compared the number of correct productions in each group to zero, using one-sample t-tests. Children in both the Rhyming Post-Exposure condition ($M = 1.20$, s.d. = 0.78) and Mismatch Post-Exposure condition ($M = 0.53$, s.d. = 0.74) correctly produced the labels at levels significantly different from zero ($t (14) = 7.98$, $p < .001$ and $t (14) = 3.88$, $p < .001$, respectively). We then compared the number of correct productions across the two groups. As predicted, children in the Rhyming Post-Exposure condition correctly produced the novel words significantly more often than children in the Mismatch Post-Exposure condition, $t (28) = 2.41$, $p < .05$.

In the next analysis, we examined children’s performance on their first word learning trial. A chi-square analysis indicated that children’s performance on their first trial did vary significantly as a function of word learning group, $\chi^2 (N = 30, df = 1) = 10.80$, $p < .001$. Consistent with the analyses reported above, the majority of children in the Rhyming Post-Exposure group (n = 12) correctly produced the novel label on their first trials whereas few children in the Mismatch Post-Exposure group (n = 3) correctly named the novel object.

We then investigated the types of errors children were making for evidence of partial word learning. As in Experiment 1, a random selection of 20% of the sessions was coded a second time, by a coder blind to the hypotheses of
the experiment. Interobserver agreement was acceptable with kappas ranging from 0.56 to 1.00 with a mean of 0.93 (s.d. = 0.18). We found that children in the Rhyming Post-Exposure condition ($M = 1.07, s.d. = 1.22$) were not more likely than children in the Mismatch Post-Exposure condition ($M = 0.73, s.d. = 0.88$) to produce a response that rhymed with the target word but had a different initial consonant, $t (28) = 0.86, p > 0.40$. As in Experiment 1, we then created a new variable by calculating the total number of correct rhyme responses by adding the number of initial consonant error responses (i.e. children produced a response that had the same rhyme as the target word but with different initial consonant) to the number of correct responses for each child. Consistent with the analyses reported above, children in the Rhyming Post-exposure condition ($M = 2.27, s.d. = 1.10$) produced significantly more correct rhyme responses than children in the Mismatch Post-exposure condition ($M = 1.00, s.d. = 1.0), t (28) = 3.36, p < 0.05$).

Finally, we examined the number of times children produced a response that had the same vowel sound as the target word. We found that children in the Rhyming Post-Exposure condition ($M = 2.20, s.d. = 1.08$) produced significantly more correct vowel responses than children in the Mismatch Post-exposure condition ($M = 0.80, s.d. = 0.86), t (28) = 3.92, p < 0.001$).

As predicted, children in the Rhyming Post-exposure group produced significantly more correct labels for the novel objects and exhibited more partial word learning than children in the Mismatch Post-exposure condition. These results suggest that processing a set of similar sounding words after learning a novel word facilitated four-year-olds’ production of novel words, an issue we discuss in further detail below.

**General Discussion**

In the present experiments, we investigated the influence of exposure to the phonological neighbours of a target novel object label on preschoolers’ novel word production. Children heard brief stories containing repetitions of similar-sounding words either before or after learning a novel object label that either rhymed or did not rhyme with words presented in the story. We then tested children’s novel word acquisition using an elicited production task.

The results of Experiment 1 indicate that when children heard the phonological neighbours of a novel word **before** being taught the new word, they were not more likely to correctly produce the novel word than children who heard rhyming words that were not related to the novel word. Thus, in a word learning task requiring children to first encode the novel label for the novel object and then recall that label after a brief delay, children did not show a phonological priming effect. The results of Experiment 2 indicate that when children heard the phonological neighbours of a novel word **after** being taught the new word, they correctly produced the target word more
often than children who heard unrelated words. These findings suggest that exposing children to similar sounding words after a novel word was presented helped maintain the phonological traces of the new word in working memory, perhaps leading to more durable long-term representations of the new words.

Our finding that processing the phonological neighbours of a novel word after learning that word facilitated four-year-olds' production of novel words is consistent with a growing body of literature implicating the phonological loop in word learning (see Baddeley et al., 1998 for a review). When children heard the novel word, they had to maintain a representation of that word in phonological working memory in order to name the object in the elicited production task. Given that the temporal capacity of the phonological store is very brief (approximately two seconds; Baddeley et al., 1998), hearing the phonological neighbours of a novel word may have helped children maintain the representation of the novel word by activating the representations of the neighbours in long-term memory. These phonological neighbours, which were all familiar words, may have refreshed the representation of the novel word in the phonological loop, which then facilitated their subsequent production of that word. That is, the activated lexical phonological representations of the neighbours may have been used to ‘fill in’ the representation of the novel word in the phonological loop, leading to enhanced recall. The notion that information from long-term memory contributed to the accuracy of recall of novel words is consistent with other recent research indicating that long-term knowledge about language influences immediate memory for both novel sound patterns and familiar words (e.g. Gathercole et al., 1997). An implication of these findings is that new words with many phonological neighbours should be learned more quickly than new words with few neighbours. Although no studies to date have tested this question with word learning paradigms, Metsala (1997) found that school-age children were better able to recognize low-frequency words with large neighbourhoods than low-frequency words with small neighbourhoods in a gated recognition task.

The absence of a phonological priming effect in Experiment 1 is inconsistent with the results of Merriman & Marazita’s (1995) study. As described earlier, they found that phonological pre-exposure improved two-year-olds’ disambiguation of the referent of a novel noun. There are a

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[2] Although we argue that this effect is due to facilitation by the phonological neighbours in the Rhyming Post-Exposure group, it could also be due to an absence of interference. That is, the performance of the children in the Mismatch Post-Exposure group may have been depressed due to interference from hearing a set of rhyming words that were unrelated to the novel word they had just learned. Future studies with conditions in which children learn a novel word and are then given an elicited production task after a delay with no intervening task may help dissociate these two possibilities.
number of key differences between our task and that used by Merriman & Marazita that may account for these discrepancies in findings. First, Merriman & Marazita primed both initial phonemes and rhymes of the novel words whereas we used only rhyming words. Thus, it is possible that children may need exposure to both types of sounds to show a priming effect. Second, Merriman & Marazita used an indirect word-referent mapping task that involved presenting children with two pictured objects, one novel and one familiar, and asking them for the referent of a novel noun. In their task, children were not required to maintain a representation of the novel label in memory for any length of time nor were they required to recall the novel label, as they mapped the novel label to a referent immediately after it was presented. In contrast, we used a direct mapping task with objects, rather than pictures, and an elicited production test to assess children’s word learning, rather than an indirect mapping task. Thus, in our study, children were required to represent the novel label, both phonologically and semantically, and then retrieve that label after a brief delay. It is conceivable that the way in which we taught children the novel labels, that is, by directly linking the label with the object, may have led children to emphasize the meaning of the novel label, thereby de-emphasizing the impact of the phonological pre-exposure.

When considered with other recent research, the results of the present studies provide insights into the varying influence of phonological priming on young children’s performance on language-related tasks. As described earlier, studies have demonstrated that phonological priming improves children’s subsequent performance on indirect word-mapping tasks, word identification tasks and familiar picture naming tasks. For example, Church & Fisher (1998) found that two-year-old children more accurately identified low pass filtered words that had been presented during a study phase two minutes earlier than words that had not been presented. Similarly, Brooks & MacWhinney (2000) demonstrated that hearing phonologically rhyming words (e.g. chair) led five-year-old children to name subsequently presented familiar pictures more quickly (e.g. bear) than hearing phonologically unrelated words (e.g. sock). Thus, when children are required to identify a previously presented word or name pictures, phonological priming improves performance. Our study suggests, however, in a word learning task requiring children to first encode the novel label for the novel object and then recall that label after a brief delay, priming the phonological neighbours of the novel label does not improve their word learning performance.

In summary, the present studies demonstrate that when children are required to first learn a novel label for a novel object and then recall that label after a brief delay, pre-exposing them to similar-sounding labels does not influence their word learning. Exposing them to these similar-sounding words after they have learned a novel word does enhance their word learning.
Future research clarifying the specific conditions under which phonological exposure does and does not affect children’s word learning will further our understanding of the role of phonological memory in word learning.

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**APPENDIX**

**STORIES USED IN EXPERIMENTS 1 AND 2**

**TANE**

‘A man with a cane drove a crane. One day, the chain on the crane got rusty in the rain. He thought with his brain: should I take a train or a plane to buy a chain for my crane?’

**PAKE**

‘Joey the snake likes to eat cake. One day, he decided to bake a cake to take to the lake. On the way there, he started to shake and the cake started to break. Oh dear, poor Joey the snake.’

**BOCK**

‘A lady with a clock liked to walk around the block. Usually, on her walk she would knock on her friend’s door to talk. But today she had a rock in her sock so she couldn’t walk to her friend’s to talk.’

**YICK**

‘Fluffy the chick went to pick up a brick. She slipped and gave it a kick and felt sick, so sick. Instead of the brick, she decided to grab a stick. She took a lollipop to lick and didn’t feel sick.’