# Understanding School Genres Using Systemic Functional Linguistics: A Study of Science and Narrative Texts 

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# UNDERSTANDING SCHOOL GENRES USING SYSTEMIC FUNCTIONAL LINGUISTICS: A STUDY OF SCIENCE AND NARRATIVE TEXTS 

A thesis submitted to the Graduate College of<br>Marshall University<br>In partial fulfillment of the requirements for the degree of<br>Master of Arts<br>in<br>English<br>by<br>Allison D. Canfield

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#### Abstract

The purpose of this study is to examine elementary level textbooks (grades 2-4; Houghton Mifflin Harcourt Publishing; The Trophies Collection) using Systemic Functional Linguistics as the theoretical framework to study the different types of lexical choice and grammatical options made in the textbooks. The two genres examined are science and narrative, which are significantly different from each other. Science texts are "information based," and narrative texts, "story based." It is very important for teachers to understand how the genres are different so that they can convey those differences to their students.

The two school genres, science and narrative, differ from each other in their lexicogrammatical features. These features can be analyzed and evaluated and then taught. An appraisal analysis identifies items that display the author's attitude in the text, and a grammatical metaphor analysis identifies modes of expression displaying incongruency between the two levels of semantics and lexicogrammar. Evaluating appraisal items and understanding how grammatical metaphors are arranged within these texts can help differentiate some of the discourse semantic features of science or "informational" texts and narratives or "story" texts. The results of this analysis may help teachers during class instruction.


## 1. Introduction

### 1.1 Systemic Functional Linguistics

Science texts and narratives feel different. They are different, because the two types of writing have different social purposes; but in school, the two are often taught (in terms of reading and writing) in a similar manner. The traditional framework for teaching grammar typically looks at language from one perspective, limiting contextual perspectives by dividing levels of language into individual grammatical units such as phrases, clauses, and sentences, which are regarded separately from lexical choices and contextual factors. In the context of schooling, this kind of severance between grammar and lexical choices may be responsible for the separation between grammar books and dictionaries. In the Hallidayan model of lexicogrammar, however, "lexicogrammatical choice can be traced systematically to social/ideological function. This puts it at odds with mainstream linguistic analyses, which do not effectively unknot the reflexivity between the social and the semiotic, between context of situation and lexicogrammar" (Luke, 1993, p. xii). Each part of language -semantics, syntax, and interpersonal meaning- should not be viewed separately, but traditional "grammar refers to a level of structural organization which can be studied independently of phonology and semantics" (Grammar, 2003).

Because of its theoretical underpinning, which views language from a social semiotic perspective, Systemic Function Linguistics (henceforth SFL) makes it possible to analyze language from a trinocular perspective of semantic, syntactic, and interpersonal meanings. Its orientation toward meaning based on semiotic views of language also explains metaredundancy which views language as redundant on different levels, related in all aspects of language use, from the level of phonetics and phonology to that of lexicogrammar and discourse semantics.

The following illustration depicts the stratification of language (Halliday \& Matthiessen, 2004, p. 25).


Figure 1.1 - Stratification of Language

Using the basic framework of semiotics, the study of signs and how they are related to sounds and meaning, Hasan (1987) explains the metaredundancy inherent in SFL as "lexis as the most delicate grammar;" and that is, meanings construed at each stratum of abstraction in this model greatly contribute with those made at the other strata of abstraction. In this model, meaning, lexicogrammar, word choice, and contextual factors are not simply separate entities, as
traditional grammar would have it. Instead, they are viewed as on the same plane but on opposite ends, much as weather and climate are one and the same phenomenon viewed from different perspectives, but they each provide different insights for meteorologists (Halliday \& Matthiessen, 2004; Hasan, 1987). Halliday, for example, actually identifies context with lexicogrammar in his model of language theory. What is theorized in the middle is the level of lexicogrammar. Central to the theoretical frameworks underpinning this research is the idea that language is social semiotic. According to Hunston (1993), "The production of a written text is a social process... in the sense that the text plays a role in a particular social system" (p. 57).

SFL's social semiotic approach to language was influenced by Swiss linguist Ferdinand De Saussure. The idea that there could be a "science of linguistics" helped pave the way for modern general linguistics today. De Saussure believed that linguistics should move away from concerns related to the history of the field and move toward studying modern, contemporary language at its place in time-studying it from a synchronic view. Contrary to pre-Saussurian diachronic language research, by removing the concept of time as a crucial contributing factor to language variation, a synchronic view on language made a paradigmatic shift toward a more modern linguistic theoretical framework. His work was very influential in Europe, and Halliday looked to De Saussure and referenced him in his work Language as Social Semiotic (Halliday, 1978).

Some of Halliday's ideas come from the Prague School formed in the 1920s. With some reference to De Saussure, the linguists in Prague focused not only on the grammar of a language but also the social implications and explanations of that language With this idea, Halliday looked to Polish-British anthropologist, Bronislaw Malinowski, and British professor of anthropology, J.R. Firth. Malinowski and Firth believed in the idea that all situations of
language have a context that should be analyzed. Halliday later adopted this theory into his SFL theory. Firth's idea of language as a system also attracted Halliday's attention (Bloor \& Bloor, 2004). Halliday also used this idea to form the SFL theory that is grounded in language choice and language function related to context. These two ideas of context and choice through systems are the basic building blocks of Systemic Functional Linguistics. SFL's name originates from these two ideas of system and function. The theory dictates that language gives speakers a set of choices from which they can choose to create what they want to say, and language can then be interpreted based on the context and function of these choices.

### 1.2 Genre and Schooling

Genre from the SFL perspective reflects the most abstract stratum or level in the theorization of the levels of linguistic abstraction ${ }^{1}$ considered a social and cognitive process (Johns, 2008). Although genre is rather a broad term, SFL defines it as a literary medium designed with certain social intents to transfer information with different specific social views in place (Cope \& Kalantzis, 1993; Donovan, 2001; Schleppegrell, 2004). School genres are different from one another because the social purpose of each is different. Simply put, "[t]exts are different because they do different things" (Cope \& Kalantzis, 1993, p. 7). School genres have different socially constructed meanings.

One of the primary reasons for understanding the differences in genres is due to the complexities within the social aspect of the relationships between texts and experiences. These complexities can be summarized in the following text:

[^0]School-based texts accomplish particular purposes in schooling by construing the kinds of experience and interpersonal relationships that are expected in the schooling context, which itself has particular cultural purposes. By recognizing how different linguistic choices are functional for construing experience, presenting one's perspective, and constructing particular kinds of texts, we keep the focus on the role of language as a social force. (Schleppegrell, 2004, p. 6)

School is, according to Cope and Kalantzis (1993), a means by which students can gain upward mobility and progress socially. School is the ideal place for young people to learn how to negotiate with others and to use language in a way that will help them move up in the world. Pedagogically, success in understanding how to read and use science (informational) and narrative (story) genres is critical for success in school.

All language communication has social implications. In the case of textbooks specifically, the writers have certain objectives. Their purpose is to communicate information in a certain way. The way the language of science has its own distinct lexicogrammatical and discourse semantic features relates specifically to the genre. The genre dictates the form and meaning at both the levels of lexicogrammar and discourse semantics. The same may be true of stories. Stories follow patterns of regularity and flow a certain way (Cope \& Kalantzis, 1993). Once the social implications are understood, the genre can be unpacked and explained so that areas of functionality among lexical items can be understood.

School subjects like science, history, and language arts can be called genres because these areas of school study have social intentions which theoretically are realized at the level of
lexicogrammar, which means that there are differences between genres which are also reflected in the way that discourse semantic and lexicogrammatical mechanisms are used.

### 1.2.1 Language of Science and Narrative

For the purpose of this thesis, the two specific academic texts to be studied are broadly classified as science and narrative. Narratives and sciences are organized around distinct lexicogrammatical patterns. Not all academic genres differ, however. The similarities between narrative stages and the stages of histories are a prime example of how typologically distinct genres can share topologically similar features. History and narrative are closely related because they share a similar purpose. Because history discourse is not technical, it is closely related to narrative form (Martin, 1993). History and narrative will therefore be briefly discussed as similar styles (Coffin, 2000; Johns, 2008; Martin, 1993). Histories are similar to narratives because, as Johns (2008) explains, these similar "genres can be grouped as 'chains,' or 'intertextual systems,' which draw from each other" (p. 241). Coffin (2000) adds that they draw from one another by sharing a similar purpose. The purpose of history texts is to lay out information in real or external time. The same is true of narratives, and because of this, histories and narratives can be classified as accounts and recounts (Donovan, 2001; Martin, 1993). The language of histories and narratives share similar organizational patterns: "This temporal ordering of experience brings history into relationship with a widespread cultural practice of story-making ... Such a structure is the basis of the traditional literary narrative" (Coffin, 2000, p. 200). In the previous case, the genres of history and narrative are similar because of the temporal sequencing using real time. Although there are often similarities between genres, more commonly there are obvious distinctions between genres.

Sciences, on the other hand, are organized around experimentation and explanations.
They are written to focus on characteristics that intend to persuade. Science's purpose is to slow things down to examine the natural world: "Generically then science is about what the world is like, whereas history is about what happened" (Martin, 1993, p. 267; Hunston, 1993). In the data, the science-based texts carry features of classification, definition, and of taxomony realized as ideational features of meronymy and hyponomy, and the narrative-based texts are concerned more with happenings as the primary lexical content is carried through the use of various processes. Because the two genres are broad categories, "science" and "narrative" are broken down to sub-genres. For this thesis, the examined genres will be referred to as "informationbased" and "story-based" texts.

Information-based texts and story-based texts are different. The informational language of science differs from descriptive language used in narratives. It is, according to Luke (1993), a "linguistic/semiotic practice which has evolved functionally to do specialized kinds of theoretical and practical work in social institutions" (p. x). According to Martin and Rose (2003), scientific lexicogrammatical patterns produce definitions, classifications, and are used to further exemplify concepts, and produce technical writing. In contrast, history and narrative based grammatical patterns classify and describe events and people by using generic terminology related to those events: "The scientific reports in a sense construct new knowledge while the history reports generalize and rearrange the old. Science invents; history interprets-this at least is how the grammar of their discourse works when the genre focuses on how things are" (Martin, 1993, p. 233). Informative texts and stories are typical in their format in that these genres are set up and displayed in certain ways. These school genres do not deviate from their particular parameters (Johns, 2008).

### 1.3 Related Pedagogies

The concept of genre and what it means in terms of the ability for students to understand its forms can be put into practice by using SFL-based language learning approaches. SFL lays the foundation for the "genre approach" and the "whole text" approach to learning language and advocates a most promising result. According to Johns (2008), the SFL approach to learning school genres is the most productive pedagogy because the pedagogy reaches inexperienced students where they are and teaches them language from a meaning-based perspective, focusing on social interaction as a key.

### 1.3.1 Genre Approach

In a 1993 study, Bill Cope and Mary Kalantzis explain language as a social phenomenon. Halliday and many other systemic functional linguists assert that language is social—it is created and manipulated socially. The focus of Cope’s and Kalantzis’ study was to look at language through a "genre approach" (p. 1). This "genre approach" to language focuses on the meaning of the language and not simply the formal rigidness of grammar. A genre approach to learning language could help educators and their instructional methods. A "genre approach" to learning language maintains the genre has social implications (Cope \& Kalantzis, 1993). First, to understand different genres, such as science and narrative, the process of genre acquisition must begin. When students are forced to begin learning the genre, however, and acquiring it before genre awareness is taught, genre acquisition is a difficult process. Students are asked to learn and mimic these writing styles while they are in school and as they are learning, and it is often difficult for them to do this without being aware that genres such as informational texts and stories are different in lexico-grammatical structuring. This gap in teaching and learning is where

Johns’ explanation of genre awareness becomes important. Genre awareness refers to the ability to cognitively distinguish between different genres, and not only to distinguish between them, but also to adapt to them. Genre awareness, therefore, should come before genre acquisition, but genre acquisition is usually taught first in American schools (Johns, 2008). Others, such as Donovan (2001), explain that the process of teaching students to adjust to different genres, without teaching them first to recognize those separate genres, is not as effective as a genre-awareness-first, then genre-acquisition-second approach. Schools should focus on genre awareness education for the sole purpose that students will be best prepared for what lies ahead academically and socially (Johns, 2008).

This idea of a genre approach to learning language stems from the observation that not all students learn equally, though it seems that the educational system is meant to provide all students with that opportunity. Yet some students still struggle to read and understand. The problem could lie in the traditional method of teaching grammar solidified by Chomsky in the 1960s: "The role of language in learning was not addressed and it was assumed that learning traditional school grammar would equip students to meet their language needs on all occasions" (Rothery, 1996, p. 86). Traditional grammar is taught in school from the early years, and for some children it can be confusing to teach language constructions (subjects, verbs, direct objects) rather than to focus on the text's meaning. It is the role of the teacher to be explicit and to communicate the meanings between parts of language and the social context surrounding the text. The teacher should be the expert, and it is the student's role to be the apprentice (Coffin, 2000; Cope \& Kalantzis, 1993).

To further this point, Rose (2005) suggests that "[s]kills in learning from reading are rarely taught explicitly in upper primary or secondary school; rather successful learners acquire
them tacitly over years of practising [sic] reading and writing the overt curriculum content in class and homework" (p. 138). Johns (2008) says that the SFL pedagogical approach can help teachers and students both not simply to learn but to understand language through genre awareness using rhetorical flexibility.

### 1.3.2 Whole Text Approach

Johns (2008) refers to Rose's study which used SFL pedagogy help students with reading was based on a "whole text" approach because it greatly compliments the "genre approach" of learning language. Rose's whole text approach to reading and writing is called the Learning to Read: Reading to Learn initiative that began in Australia, and it was first applied in South Africa. The program uses Bernstein's, Vygotsky's, and Halliday's ideas and combines their tools to create a way for students to learn school genres. The whole text approach allows for "focusing on language as a means of understanding content" (Schleppegrell, 2004, p. 4; Donovan, 2001; Rose, 2005).

Rose (2005) has suggested that as parents read to their children at home, they are being exposed to the language of narrative. Reading to children at home gives reading and writing " a readily accessible starting point [in] narrative ... [because] students can draw on their own everyday experience to construct the field" (Rothery, 1996, p. 113). These children have an advantage when it comes to their peers who have not had this kind of language interaction: "It is crucial that these children are independently reading with understanding and engagement by the end of Year 2 or $3 \ldots$ and to demonstrate what they have learnt in written assessment tasks" (Rose, 2005, p. 138). Because middle class children from literate households have had previous
knowledge of the language of stories, they have little trouble with the required tasks of reading and writing at school.

Donovan studied informational reading and writing and story reading and writing within children's schooling. Her explanation of the traditional set-up of learning literacy is that " $[\mathrm{t}] \mathrm{he}$ genres of school are typically those to which children of mainstream literate backgrounds have been exposed prior to entering school. ... [And] it is the genre implicitly expected by teachers when they say 'write a story'" (Donovan, 2001, pp. 401-2). These students have begun narrative genre recognition and acquisition before even entering the classroom. Both of these skills are important because these children are "learning that a single, focused, unproblematized story is a compelling tool for giving shape to the past. In this way, they are acquiring the discourse strategies to construct a simplified yet plausible picture of social experience" (Coffin, 2000, p. 215). The social experience expressed in narratives is different from the social experience constructed in science texts, but SFL provides insight into both.

## 2. Review of Relevant Literature

### 2.1 Grammatical Metaphor

In SFL, grammatical metaphor (GM) refers to the semantic connection that happens between semantics and lexicogrammar. This phenomenon is related to the textual, ideational, and interpersonal metafunctions in language in a way that makes semantic level meaning different from lexicogrammatical meaning.

This distiction in the way that different meanings interact with each other can be seen, for example, in the way that clausal linking elements, realized at the level of lexicogrammar as conjunctions, are realized semantically as either processes (verbs) or participants (nouns) within the system of transitivity (Halliday, 2001). Grammatical metaphors can be seen in three ways: experientially, logically, and interpersonally. Interpersonal metaphors convey ulterior meaning between interlocutors. Interpersonal GMs are also known as "speech acts" in areas of linguistics not affiliated with SFL. Speech acts occur when commands are understood as declarative statements or interrogatives at the level of lexicogrammar. Because of the clause-connecting functions of conjunctive meanings, logical metaphors primarily deal with cohesive matters and hide conjunctive meanings, and experiential metaphors reclassify semantic units, such as processes, into new lexicogrammatical units such as participants or even circumstantial elements. Grammatical metaphors can help hide or emphasize personal agendas or general human social agendas (Martin \& Rose, 2003).

Grammatical metaphors reconstrue two meanings as if there are two separate levels of the text. The hidden, "semantic," meaning is often hidden by the obvious lexicogrammatical wording (Martin \& Rose, 2003). It takes unpacking to disassemble the clause to view both the
discourse semantic and the grammatical meanings at once: "One major advantage of presenting other elements as entities is that things can be described, classified and qualified in ways not available to other elements" (Martin \& Rose, 2003, p. 111). Reclassification of elements can be illustrated by using a regular process (verb) and transferring its meaning to a nominal form (object/thing). Restructuring lexicogrammatical elements by reclassification is an example of an experiential GM. Take the words begin and beginning. At first glance begin and beginning both support the same meaning-"start" or "initiate." The obvious meaning of the word begin, a verb, is to start or to initiate. Not only does reinterpreting the process "begin" as its nominalized form "beginning" reflect morphological change, but it now also carries new lexicogrammatical resources which are unavailable to its verbal form. Nominalizing the semantic process, "beginning," for example, can create a textual thematic role for the lexical item, and can be realized in the subject position of a clause. This phenomenon was unavailable to its semantic form "begin." The nominalized form can also be a part of the transitivity system in the form of Actor, Goal, or have circumstantial meaning. Take this example: "In the beginning of my day I brush my teeth," and "I begin my day by brushing my teeth." These two clauses essentially convey the same propositional semantic meaning. The speaker brushes his or her teeth in the morning. But lexicogrammatically the two clauses are positioned to focus on two separate elements. In the first example, the focus is on the time-morning, as the prepositional phrase carries a thematic meaning. In the second example, the clause is much more focused on the speaker. I actively begin brushing, and the process "begin," as its finite form, cannot be argued. To show how the two clauses can be manipulated in language, it is interesting to observe that in the first clause, it is possible to emphasize the thematic portion of the clause, "in the beginning of my day," by putting focus on its construction, while the congruent version "begin" cannot be
used in the same way and turned into the same structure. For example, although it is possible to imagine a situation in which one might hear, "It is in the beginning of my day that I brush my teeth," in which "in the beginning of my day" is circumstantial, lexicogrammar does not allow for "it is begin that I my day by brushing my teeth." The process "begin" cannot be used circumstantially. "Begin" and "beginning" are not simply two morphological variations of one word but entail two rather distinct semantic and lexicogrammatical meanings and structures.

Nominalizations, which are the prime example of almost all experiential GMs, are possibly the most common form of grammatical metaphors. Grammatical metaphors happen in all genres of writing in all stages of writing, and, once grammatical metaphors become a regular linguistic feature, they regularly feed into turning everyday language into technical terms. In this regard, Martin and Rose (2003) argue that "[i]n technical and institutional fields, grammatical metaphors become naturalized as technical terms" (Martin \& Rose, 2003). The technical text may become too complicated for a reader to unpack because the patterns of discourse are not understood: "Halliday describes such patterns as grammatical metaphors, in which a semantic category such as a process is realized by an atypical grammatical class such as a noun, instead of a verb" (Martin \& Rose, 2003, p. 106; emphasis in original). In contrast, a regular lexical metaphor refers to the process whereby the meaning of a lexical item is transferred to another word for its appearance and reaction. For instance, hearing a speaker say, "You are my world," makes the recipient react a certain way. Simply to have said, "You are very important to me," may have gone unnoticed. This elaborate phrasing of a metaphor allows the appearance of a dull phrase, "You are important to me," to become extravagantly complex in its semantic meaning only. A grammatical metaphor works in a similar way, but the key difference is the way it
transfers information, not from the meaning of words, but from the kind of word to another kind of word (Martin \& Rose, 2003).

Another use of grammatical metaphors is through conjunctions. These are seen in logical GMs. Logical GMs help maintain time, purpose, and causal meanings. These meanings are primarily conditioned by social reasoning.

One consequence of logical GMs is that they can be used to mark time without temporal conjunctions, to keep the text moving. Some adverbial clauses can be used to mark conjunctive meanings: "Event A led to event B." In this case, the temporal circumstantial meaning of "after that happened, and after that..." is repackaged as the process "led to."

Disguising conjunctions as prepositions or adverbs is not the only purpose of logical GMs, though. Logical GMs also serve a causal purpose. An author may not wish to emphasize how severe the effects of a war were on a group of people, so he might say, "The result of their disobedience was their execution." The previous clause illustrates cause and effect. A caused B. Because of A, B happened. Because the people disobeyed, they died. What the author really means is that people died because they disobeyed. In this case, the noun "result" really has a conjunctive meaning—and this is a logical GM. This conjunctive expression is the unique social purpose of a logical GM. This type of GM allows speakers to convey the truth while covering the unattractive causality with lexical items that position the reader or interlocutor to blindly accept the statement without consideration of ulterior motives. In the previous example, the initial portion of the clause bears all of the focus of the sentence-"The result of their disobedience..." Initially, part of the focus of the sentence is on "disobedience" as it is used as a clausal Theme. Directing the reader's focus is precisely the author's intent. In this way, the reader does not need to focus on the fact that hundreds or thousands of people died. A logical
metaphor can remove the direct causal relations by reorganizing and packaging its direct meaning in a different manner.

The third type of grammatical metaphor is the interpersonal grammatical metaphor. This phenomenon reconstrues semantic meanings such as commands, offers, and statements as mood choices other than their unmarked lexicogrammatical structures. Interpersonal GMs are also social constructs with which speakers can avoid being so direct. When a passenger in a car says to the driver, "Do you want to stop for coffee?" $s /$ he is not necessarily being considerate of the driver's needs. This question is an attempt from the passenger to get the driver to stop the car for the passenger's sake. The basic propositional meaning of the clause has more to do with the command "stop for coffee." In the previous example, the desire to stop for coffee was presented as a question, which at the level of lexicogrammar, requires a verbal response, but in this particular case, the intended meaning has to do with a request for action, not a request for a verbal answer. The social intent, directing the interlocutor to action, can also be phrased as a statement: "My coffee cup is empty." This interpersonal GM also calls the driver to action.

### 2.2 Appraisal

The appraisal system is used to evaluate interpersonal meanings within texts. These system choices "give language users choice in terms of how they appraise, grade and give value to social experience. The systems belong, therefore, to the category of interpersonal meaning" (Coffin, 2000, p 205). Appraisal is a tool used in SFL in order to assess kinds of attitudes that are in texts. These attitudes may be personal comments within the text given by the author, judgmental comments towards others, or comments evaluating the worth of things. These three aspects of attitude are termed affect, judgment, and appreciation, respectively.

In histories, along with narratives, the use of appraisal is important within the context and resulting meaning of historical significance or sequences of the past in narratives. Appraisal items are used in texts in order to redirect readers' attention in a way intended by the author. Managing the outcome of language is a form of socially constructing the intended and appropriate reality for the situation. In the case of histories, the stories are constructed in a way that only allows the reader to interpret one meaning-the meaning the author intended. Appraisal realized and used in historical texts assists in building historical significance as the authors use the system to their advantage. As authors control the text, they are simultaneously creating a purposeful socially constructed text to build an interpretation of history and putting readers in a state of mind to accept the information (Coffin, 2000). In this way, the construction of the text tells the reader how to feel about the text.

To express personal feelings, a writer will use affect. Affect items in texts make the reader sympathize with the writer or even to ascribe to certain beliefs based on the lexical choices the author makes. Feelings can be implied in a direct or indirect way. Direct affect items are words or phrases that, on their own, allow the reader to sympathize with the character in the text or with the author: sadness, passionate love, deafening, etc. Indirect affect items also allow the reader to experience the emotions with characters or with the author but do so in a way that leaves room for further interpretation: cold with sweat, sitting motionless, staring blankly, etc. (examples adapted from Martin \& Rose, 2003, pp. 30-1). Within affect, there are categories that range from happiness to security. By identifying these categories within text, the intents of the author become clear as s/he tells about characters' feelings or reactions.

The eight main categories-happiness, unhappiness, satisfaction, dissatisfaction, inclination, disinclination, security, and insecurity-can further be broken down into fourteen
subcategories, seven of which are positive, and seven of which are negative. These fourteen categories can also be divided into two types: surge and disposition. A surge is, as it sounds, a sudden exposure of emotion or a sudden reaction. It may happen more than once, but surges do not last long. Disposition, on the other hand, is a reaction or emotion that lasts longer. Literally, it is the disposition of the character-how inclined the person is to react or behave a certain way. Affect categories are further listed in the following table.

| Affect Categories | Examples |
| :--- | :--- |
| Happiness: Cheer | he was happy |
| Happiness: Affection | he loved her |
| Unhappiness: Misery | she was upset |
| Unhappiness: Antipathy | his spiteful feelings grew |
| Satisfaction: Interest | she was eager to begin |
| Satisfaction: Admiration | they were pleased with him |
| Dissatisfaction: Ennui | she wants to be alone |
| Dissatisfaction: Displeasure | he shook his head |
| Security: Trust | she put her faith in him |
| Security: Confidence | took a bold stand |
| Insecurity: Disquiet | he was uneasy |
| Insecurity: Surprise | he jolted away |
| Inclination: Desire | she stood up to volunteer |
| Disinclination: Fear | he closed his eyes and cried |

Table 2.1 - Categories of Affect

To express feelings toward another person, a person will use items indicating judgment.
Positive and negative judgments are used to evaluate people based on personal issues and moral issues. Personal judgment items, or social esteem, apply when the author makes an implication or claim about a person. Positive social esteem (admiration) and negative social esteem (criticism) can also be made directly and indirectly. Social esteem items reflect whether a person
is good or bad in terms of emotional and personal worth. Judgment items also reflect moral issues, not just issues attached to a person's character. These items are related to social sanction-whether a person is right or wrong. Positive moral judgments (praise) relate terms of judgment toward the people the author intends to praise. The author can also imply negative moral judgment (condemnation) in a situation.

There are categories within social esteem and social sanction as well. Social esteem can be reflected by positive or negative normality (how normal is someone), positive or negative capacity (how capable is a person to do something), and positive and negative tenacity (how determined is a person). Social sanction can be indicated by positive and negative propriety and veracity-how decent or honest a person is respectively. These classes of judgment are depicted in Table 2.2.

| Judgment Categories | Examples |
| :--- | :--- |
| Social Esteem: Normality | he was unusual |
| Social Esteem: Capacity | she couldn't do it alone |
| Social Esteem: Tenacity | he didn't want to participate |
| Social Sanction: Veracity | he was sympathetic |
| Social Sanction: Propriety | she did the right thing |

Table 2.2 - Categories of Judgment

The last section of attitude within the appraisal system is appreciation. An author will use appreciation resources to give value to things. Similar to judgment, appreciation applies positivity and negativity, but where judgment evaluates people, appreciation gives value only to things. For example, positive appreciation items look like this: It was a very serious issue. All of these examples imply appreciation of things. But what is notable here is that appreciation items
can appear double-coded in the way that some lexical items, coded as appreciation items, could also be mistaken for judgment items. For example, "He was a very serious man." Appreciation items reflecting descriptive words such as "serious" may further imply the judgment made by the author toward the one responsible for such appreciation items: "The serious issue was caused by the man."

Appreciation has three categories: reaction, composition, and valuation. Reaction indicates how a person literally reacts to something. Composition is related to the make-up of the thing, and valuation indicates worth of a thing. The five subcategories of appreciation include: impact and quality (reaction), balance and complexity (composition), and valuation. These appraisal expressions can be summed up as the following table.

| Appreciation Categories | Examples |
| :--- | :--- |
| Reaction: Impact | he went all the way and back |
| Reaction: Quality | the small, shiny apple |
| Composition: Balance | we only had a few cookies |
| Composition: Complexity | it was a difficult situation |
| Valuation | what an excellent book |

Table 2.3 - Categories of Appreciation

## 3. Purpose and Research Questions

Reading/Language Arts (RLA) textbooks present students at early grades with information from all disciplines. As students are directed to read and write certain genres, they should be guided by the teacher to understand and write in a similar fashion to the models that they read. The purpose of this study is to clarify the differences between the two most encountered school genres, science and narrative, hereafter referred to as "informational" and "story" texts, and to make them understandable and easily recognizable by instructors. In doing so, the task of educating students in distinguishing between informational texts and story texts and in learning to write within each genre might be easier for teachers. It is possible that most teachers are unaware of the differences-purpose, positioning, and utilization-between informational and story texts. As Schleppegrell (2004) has pointed out, "Schools need to be able to raise students' consciousness about the power of different linguistic choices in construing different kinds of meanings and realizing different social contexts" (p. 3).

Two elements within Halliday's SFL theory, grammatical metaphors and appraisal, will be used to analyze informational and story-based texts in a way that illuminates the differences between the two and sheds insight into how their structures can be evaluated and taught. The transfer of knowledge between teacher and student greatly depends on the knowledge of the teacher, and although the contexts of the two school genres are present in the textbooks, the textbooks alone cannot facilitate appropriate learning. It is important for teachers to understand how the genres are different so that they can convey those differences to their students. The research questions are as follows:

- How are appraisal items treated differently between stories and informational texts?
- How are grammatical metaphors treated differently between stories and informational texts?
- What strategies can teachers use to convey the differences between stories and informational texts to students?

Through the analysis of appraisal items and grammatical metaphors between the story texts and informational texts, these questions can be answered and be used to differentiate some of the most obvious features, on the level of lexicogrammar, of school-based story texts and informational texts.

## 4. Description of Methods

### 4.1 Description of Books

The texts used for analysis are Reading/Language Arts (RLA) books that span grades two through four. These books are in the same collection published by Houghton Mifflin Harcourt (HMH publishing). The selected textbooks progress in levels of skill and difficulty by grade.

School textbooks contain many genres of writing. RLA textbooks display the most variation of genres within one textbook. The individual passages found within textbooks are designed to be "textbook material" because of their interpersonal relationships. Language is a social construction and schooling is a social process. It makes sense, therefore, to acknowledge that textbooks are used to groom students socially as academic minds (Schleppegrell, 2004). Students are directed to learn and develop as the school learning outcomes specify.

HMH publishing has produced a line of books called "Trophies." The Trophies Collection actually spans from Kindergarten through grade six. Trophies textbooks are designed to be read from beginning to end. The teachers and parents need not jump around from section to section. Not only does the level of difficulty increase from the beginning of the book to the end, but what is unique about Trophies is that all of the textbooks are also subcategorized by genre and skill.

Just above every title lie a genre and a sub-genre. For example, the text "Donavan’s Word Jar," from the fourth grade book, is labeled Realistic Fiction as a sub-genre. This category falls under the genre of Language Arts. In other areas of the contents page, other science and history based texts are also used, and they are classed accordingly. Directly under the title and author information lies the skill that the editors want students to practice and learn. In the case of
"Donovan’s Word Jar," the focus skills listed are: prefixes, suffixes, and roots (Beck et al., Lead, 2007, p. 4).

All of the Trophies books are separated into themes as well. For example, the fourth grade book begins with Theme 1: You Can Do It! Appropriately, all of the readings in this section, regardless of sub-genre or skill to be taught, relate to ability or accomplishment. The editors' purposeful organization of texts further solidifies the argument that textbooks are in a fine position to groom students as social beings (Johns, 2008; Schleppegrell, 2004). Readers progress from Theme 1 with an easier reading level on to Theme 2: Side by Side (in which stories are situated next to a separate reading, possibly from a newspaper, magazine, or even a poem), all the way through Theme 6: New Lands, which focuses on travel and historical places. The books are designed so that while the students are reading through their RLA textbook, their teachers' academic teaching units center on these meaningful themes. By completion of the textbook, the goal is for students to be able to make meaningful social connections within the themes by applying the focus skills associated with each reading.

### 4.1.1 Grade Two

The second grade textbook, titled Just For You, focuses on characters whose lives help other people feel special and unique. The editors note that they hope the students will be able to apply some of these good choices to their own lives and even see how helping others can be fun (Beck et al., Just, 2007, p. 3).

The specific texts from this book related to narrative or story telling are "Days with Frog and Toad," and "The Enormous Turnip." The series "Days with Frog and Toad," is a children’s classic—full of memorable yet casual dialogue back and forth between the characters. Classified
as a story, "Days with Frog and Toad" is subcategorized as a social studies text. Paired with a poem, this story's focus skill is "compare and contrast"- the main goal being to understand the difference and similarities between stories and poems. "Days with Frog and Toad" is about two friends, Frog and Toad, who learn the value of friendship through a misunderstanding. Frog worries that he has lost Toad's friendship, and these characters and their feelings, along with the setting, are the focus of the story. The second text, "The Enormous Turnip," is a folk tale targeting younger readers. The genre of the story is Folktale, but the sub-category of the text is also Social Studies. The focus skill is "sequence," which is appropriate; the progression of this story is first, then, next oriented, which is important for young readers to understand. This text contains no conversational dialogue, but in spite of there being no dialogue between characters, conversation among the characters is implied as the folk tale is told.
"The Enormous Turnip" depicts a tale of an old man who wishes to grow a large turnip. Once the turnip is fully grown, it is so strong and deeply rooted that he cannot uproot it himself. He employs the help of his family and pets to assist him in his struggle.

The second grade informational texts are "Fun Animal Facts: Chameleons," "The Secret Life of Trees," and "From Seed to Plant." All three texts use illustrations to help convey the larger ideas behind the text, and each displays variety in its length and sentence variety. No dialogue is found in either text, but as far as informational texts are concerned, there is an implied dialogue happening between the author and the reader. The chameleon text is subcategorized as a science text although its main genre is that of informal writing. The focus skill is to understand the "main idea." The text is about the appearance and skills of chameleons, and the text beckons the reader to become involved by asking questions.

The next informational text, "The Secret Life of Trees," is classified as Expository Nonfiction under Science. This text is about trees-from seeds to full-grown trees-and their growth, functions, and purposes. Classified as Expository Nonfiction, the third text, "From Seed to Plant" is also sub-classified as a science text. This text is also about plant growth. It focuses on the beginning of a plant, the seed, and how it changes into a fully grown plant. The focus skill for this text is "reading diagrams," as the images in the text have labels that the students should be able to read and understand.

### 4.1.2 Grade Three

The third grade textbook, still within the Trophies Collection of Harcourt books, Changing Patterns, is a good step forward from grade two. In this textbook, the authors shift the main focus from "be kind to others" to "see the world as it changes." The authors not only point out that the world constantly changes, but they also explain to the reader that people change. As people change they need new skills in order to make sense of the world (Beck et al., Changing, 2007, p. 3). The editors' note is in direct agreement with the notion that texts are social constructs that can manipulate readers to grow up believing certain things. That is why this book, just like Just For You, separates stories into genre and skill. One difference between Just For You, the second grade textbook, and Changing Patterns, the third grade textbook, is that the selected readings are longer in Changing Patterns. The sentences are short, but the texts as a whole are longer. The number of clauses to be analyzed in this study remained relatively the same, but the texts are longer at this grade level.

The third grade story is also heavy in dialogue, like the second grade stories. The story, "Pepita Talks Twice," is categorized under the genre of Realistic Fiction/Social Studies. "Pepita

Talks Twice" is about a Mexican-American girl's struggle to accept her bilingual capabilities and how her family treasures Spanish and English. Appropriately, as a narrative, the focus skill for this story is "narrative elements."

Both informational texts from grade three are about animals. The first, "Sue, the Tyrannosaurus Rex," is classified as Expository Nonfiction/Informational Article. By giving background information about the dig site and the archeologists, the text is presented like a story describing the Tyrannosaurus Rex and its past. The focus skill is "word relationships." The second informational text, "Wild Shots, They're My Life," is a science-based magazine article. This text, though deemed "informational," reads very much like a "story." The narrator tells about her experiences while photographing wildlife, and inserts herself into the story. The focus skill is "author’s purpose." Just like in the second grade textbook, both informational texts are enhanced by many pictures though some are illustrations and some are photographs. These texts lack dialogue but maintain a conversation with the reader.

### 4.1.3 Grade Four

The third book is the fourth grade textbook in the Harcourt Trophies series. The title of this book is Lead the Way. The editors' progression from Just For You and Changing Patterns continues here with the major theme of the textbook regarding how the characters in the book are leading the way and setting good examples. The authors point out that the characters in these stories are taking steps to becoming better people (Beck et al., Lead, 2007, p. 3). It is implied that students will take these lessons from the book and apply them accordingly, which is the social intention of the authors and editors through their book.

To keep the basic theme of consistent dialogue between animal or human characters, the fourth grade narrative text is a section of Newbery Award winning book, "The Cricket in Times Square." The main characters in this story are animals personified so that they can hold conversations. Similar to grades two and three, there is a drastic change in the length of narrative stories in this fourth grade story. This section of "The Cricket in Times Square" is over ten pages of separated clauses. The genre of the text is considered Fantasy and subcategorized as a musicbased text. The focus skill involved is to "draw conclusions." The adventures of the characters in "The Cricket in Times Square" are the focus of this story.

Just like in the second and third grade textbooks, the informational texts for fourth grade are also about animals. The first informational piece, "Caring for Crocs," came from a magazine and is categorized as a science text. This text is heavily saturated with images of young crocodiles in their natural habitat. This science text's focus skill is practicing the ability to "summarize." Two scientists help tell "Caring for Crocs" with information about how crocodiles live in the wild. The second informational text, "Saguaro Cactus," is an expository nonfiction story subcategorized as a science text. The focus skill for this text is to understand elements of nonfiction. Being a nonfiction piece, this text is also full of photographs of the cactus in the desert and its surroundings. These two informational texts do not have dialogue, similar to the previous informational texts, but like the others maintain a conversation with the reader.

### 4.2 Method of Analysis

My method of analysis began by breaking down each of these stories and informational texts into simple clauses. The average of the 11 texts’ 1,128 clauses was 103 clauses per text. The same approximate number of clauses allows for a better comparison among the texts. The purpose of breaking down each paragraph and sentence into clauses comes from the SFL perspective on the semogenetic property of clauses as the most basic unit of meaning making. This way, the clauses can be analyzed for grammatical metaphor and appraisal, each being a key tool in a Systemic Functional approach to grammar and language. See Appendix for specific break downs and categorization of clauses, GMs and Appraisal items.

The second grade stories, "Days with Frog and Toad," and "The Enormous Turnip," had 97 and 51 clauses, respectively. In sum, the second grade stories had 148 clauses. There were three informational texts in the second grade textbooks. "From Seed to Plant" contained 72 clauses, "The Secret Life of Trees" contained 91 clauses, and "Chameleons" had 15 clauses. In total, the informational second grade texts contained 178 clauses. Altogether, there were 326 clauses in the second grade texts. See Table 4.1 for clear second grade clause details.

## Second Grade - Total Clauses 326

Story Texts - Total 148 Informational Texts - Total 178

| Days with | The Enormous | From Seed | The Secret | Chameleons |
| :---: | :---: | :---: | :---: | :---: |
| Frog and Toad | Turnip | to Plant | Life of Trees |  |
| total clauses | total clauses | total clauses | total clauses | total clauses |
| 97 | 51 | 72 | 91 | 15 |

Table 4.1 - Total $2^{\text {nd }}$ Grade Clauses

The third grade story, "Pepita Talks Twice," had a total of 219 clauses. Third grade’s informational texts totaled 193 clauses. "Wild Shots: They’re My Life" had 114 clauses, and "Sue the Tyrannosaurus Rex" contained the remaining 79 clauses. Altogether, there were 412 clauses in the third grade texts. See Table 4.2 for details.

## Third Grade - Total Clauses 412

| Story Text - Total 219 | Informational Texts - Total 193 |  |
| :---: | :---: | :---: |
| Pepita Talks | Wild Shots: | Sue the |
| Twice | They're My Life | Tyrannosaurus Rex |
| total clauses | total clauses | total clauses |
| 219 | 79 | 114 |

Table 4.2 - Total $3^{\text {rd }}$ Grade Clauses

The fourth grade story, "The Cricket in Times Square," contained over 200 clauses, but only 196 clauses were used, while the informational texts tallied 194 clauses. "Caring for Crocs" was 73 clauses in length, and "The Saguaro Cactus" had 121 clauses. The fourth grade texts contained 390 clauses altogether. See table 4.3 below.

| Fourth Grade - Total Clauses 390 |  |  |
| :---: | :---: | :---: |
| Story Text - Total 196 | Informational Texts - Total 194 |  |
| The Cricket | Caring for | Saguaro Cactus |
| In Times Square | Crocs |  |
| total clauses | total clauses | total clauses |
| 196 | 73 | 121 |

Table 4.3 - Total $4^{\text {th }}$ Grade Clauses

After the texts were broken apart clause by clause, they were put into charts representing the frequency and purpose of affect, judgment, and appreciation. Separate charts were created to illustrate the kind and frequency of grammatical metaphors used in the texts.

## 5. Results and Discussion

### 5.1 Grade 2

### 5.1.1 Affect

Of the 97 clauses in the second grade story, "Days with Frog and Toad," 28 were examples of affect. "The Enormous Turnip" had only one case of affect in its 51 clauses. There were, then, 29 instances of affect items in the 148 clauses. Happiness (cheer only) and unhappiness were the most commonly used affect items, at 17 of 29 instances. Other affect items such as desire and fear were not used at all. Affect can be as obvious as this example of happiness in "Days With Frog and Toad:" "I am happy," (clause 77) and a bit more disguised as in this case of unhappiness: "[Frog] wants to be alone" (clause 49). The second example is more indirect than the first example, but they are both examples of affect. The lone instance of affect in "The Enormous Turnip" was analyzed as a token of happiness (cheer) as well. The farmer and his family pulled on the deeply rooted turnip for a very long time. At the end the narrator finally said, "and up came the turnip at last" (clause 51). "At last" in this case indicates that the farmer and his family were very relieved and happy that the turnip was uprooted. The following chart illustrates the frequency of affect items by percentage in the second grade stories.


Chart 5.1.1- $2^{\text {nd }}$ Grade Stories Affect

The informational texts at the second grade level were less saturated when it comes to affect items. Of the 178 clauses, there were only two instances of affect, which constitutes $1.12 \%$ of the entire second grade informational texts. The two instances were both based on confidence within Security, and they were both found in the "Chameleons" text. The first implication of this text is that, because affect items are used to describe personal feelings, this informational text should shy away from "feeling oriented" words. What was unique about the "Chameleons" text was that, though it was based on providing information, the narrator told about chameleons in a way that gave them "personality"-confidence in this case: "They whip them out to zap their food" (clause 8). In a way, the author personified the chameleons just long enough to give them characteristics that humans possess.

### 5.1.2 Judgment

In "Days with Frog and Toad," of the 97 clauses, there were ten instances of judgment items. They were all positive instances of the author imposing judgment onto his characters. In clause 73, Toad explained to Frog about the lunch he made, "I made it for you, Frog." In this statement the author was using a positive example of propriety to prove what an honest, decent character Toad was. In contrast, in "The Enormous Turnip" there were 23 negative instances of judgment. There were 51 clauses total, indicating "The Enormous Turnip" was highly saturated with judgment items. The style of "The Enormous Turnip" was very repetitive, which led to the repetition of one negative term - old. This word deals with normality. Being old was not a good thing, especially in this text in which a strong able-bodied man should be working in the field. This usage of negative normality is the way the author chose to pass judgment on his characters: "the old woman pulled the old man" (clauses 13, 20, 28, 37, 47).

In "From Seed to Plant" in which there were 72 total clauses, there were no cases of judgment items used by the author. A lack of judgment items was not surprising as there were no characters in this informational text. In the short 15 clause text, "Chameleons," there was only one positive case of judgment as the author addressed the reader: "All the better to see you with, my dear" (clause 5). This example of judgment was positive normality. Finally, in "The Secret Life of Trees," a text with 91 clauses, there were no instances of judgment at all. Chart 5.1.2 illustrates the frequency by percentage of judgment items in all of the second grade texts.


Chart 5.1.2-2 ${ }^{\text {nd }}$ Grade Judgment

### 5.1.3 Appreciation

"Days with Frog and Toad" and "The Enormous Turnip" together had 18 appreciation items at nine each. This number was considerably lower than the total number of appraisal items in the affect and judgment categories.

When it comes to informational texts, affect and judgment items are limited. The purpose of informational texts is to provide information without narrative or authorial perspective. In "From Seed to Plant," "The Secret Life of Trees, and "Chameleons" specifically, which were classified as science texts, the purpose of the text was to explain details and facts to the reader. What was different about appreciation from affect and judgment items in the informational texts was that informational texts could have a high amount of appreciation items, because the texts
focused on "things." Appreciation tells the worth of things; therefore, it is feasible to find more appreciation items than affect and judgment items in informational texts.

In "From Seed to Plant" there were 15 instances of appreciation items. "Chameleons" produced one, and "The Secret Life of Trees" contained 41. By far, reaction (quality) was the most frequently used appreciation item. This means that in all of the informational texts, things were valued according to their quality, based on the reaction of the reader and author. One example of how the author of "The Enormous Turnip" used reaction in his story was by describing the turnip: "And the turnip grew up sweet and strong and big and enormous" (clause 7). All four adjectives in this case describe the turnip in ways that would make the reader react to the turnip's quality. Reaction (quality) was the most frequent appreciation item in the informational text "The Secret Life of Trees" as well. Appreciation was used in a very similar way when describing leaves: "Others turn bright yellow or brilliant red" (clause 50). The data presented in Chart 5.1.3 represent the second grade texts and their saturation with appreciation items.


Chart 5.1.3-2 ${ }^{\text {nd }}$ Grade Appreciation

### 5.2 Grade 3

### 5.2.1 Affect

In "Pepita Talks Twice," Pepita dealt with personal issues. The story focused on Pepita’s attitude and her family's attitudes. Of the 219 clauses, there were 63 instances in which Pepita or her family was described with words dealing with emotion or human characteristics. Of the fourteen categories, happiness (cheer), unhappiness (antipathy - at you), and dissatisfaction (displeasure) were the most frequently used at 11,9 , and 11 respectively. The least used categories were satisfaction (admiration) —which was not used at all. Desire, security (trust), and insecurity (surprise) were all used once. Surges of affect were most common with 50 instances. Unhappiness (misery) is different from Unhappiness (antipathy). Whereas misery is being upset
or unhappy about oneself, antipathy is the same feeling only directed toward others. There were instances of both in "Pepita." Unhappiness (misery) was seen in this way: "and Pepita just wanted to run away and hide" (clause 102). In this example, the author uses affect to illustrate to the reader how unhappy Pepita was with the situation and herself internally. Unhappiness (antipathy), which was much more common than misery, was applied in the following way: "But deep inside of her | a grumble began" (clauses 18-19). In this instance, the author uses affect to illustrate how unhappy Pepita was at what others were doing externally. The chart below (5.2.1) depicts the percentage of use of affect items in "Pepita Talks Twice."


Chart 5.2.1 - $3^{\text {rd }}$ Grade Story Affect
The two informational texts in the third grade have human participants or characters. The first text, "Sue the Tyrannosaurus Rex," had one primary character, the archeologist, and a few
other unnamed scientists. The text had few affect items because the focus of the text was the $T$ rex, not human beings. "Sue" only contained one instance of affect-disinclination (fear). This item was located toward the end of the text when the narrator focused on extracting a reaction from the readers, "How would you feel if it had just seen you?" (clauses 77-78). The whole clause implied that the readers should feel afraid. "Wild Shots: They're My Life" also had fewer affect items than Pepita's story. "Wild Shots" was told from the narrator's perspective as she described her adventures while photographing wildlife. The narrator discussed some of her personal feelings in both fun and scary situations. She also used words that implied the animals she photographed had emotions as well: "My friends were the gentle, trusting creatures of the Galapagos Islands" (clause 3). This example displays security (trust). Still an informational text, it was clear that, although some affect items were present, they were considerably lower than a story. "Wild Shots" had a total of 12 affect items out of 114 clauses. The most common categories within "Wild Shots" were unhappiness (misery) and dissatisfaction (displeasure) at four each. Other items such as unhappiness (antipathy), dissatisfaction (ennui), and satisfaction (interest and admiration) were not used at all. Chart 5.2.2, is an example of the low percentage of use of affect items in the informational texts.


Chart 5.2.2 - $3^{\text {rd }}$ Grade Informational Affect

### 5.2.2 Judgment

Judgment was consistent throughout "Pepita Talks Twice." At 219 clauses, 45 instances of judgment of people were present. Most of these instances dealt with Pepita and how the author intended to cast a negative light on the character by insinuating that Pepita was proud and unwilling to change. Other common instances of judgment dealt with Pepita and other characters' abilities to do things, and in this case it was mostly the ability to speak Spanish. With 23 positive cases of judgment and 22 negative cases of judgment, "Pepita Talks Twice" was balanced in terms of positivity and negativity. The most frequent use of judgment dealt with capacity (24 instances) - the ability to do something: "She wanted to teach their dog Lobo a new trick" (clause 9). The second most common use of judgment was concerned with propriety (18 instances)-dealing with morality, as in the following case when Pepita proved her true nature: "After breakfast, Pepita kissed her mother, | picked up her lunch box, | and started to school" (clauses 68-70).

Even though there were characters and people in "Sue" and "Wild Shots" these informational texts dealt very little with peoples' goodness, badness, and character. The characters were in the story, more or less, to move the story along. With only three instances of judgment (all capacity), "Sue the Tyrannosaurus Rex" conveyed little information about the characters themselves except in this one instance: "In 1997 the Field Museum, with the help of some investors, paid $\$ 8.36$ million for Sue" (clause 32). "Wild Shots" had only four cases of judgment (capacity and normality). The following case of positive normality was passed on the personified animals: "all my best friends were furry, feathered, or scaly!" (clause 2). And with only seven cases of judgment in 193 total clauses, the informational texts clearly displayed very
little judgment passed on people. Chart 5.2.3 depicts the percentage of use of judgment items in all of the third grade texts.


Chart 5.2.3-3 ${ }^{\text {rd }}$ Grade Judgment

### 5.2.3 Appreciation

Dealing with the description of things, appreciation gave value to many tangible and nontangible things in "Pepita Talks Twice." With 42 cases of appreciation, "Pepita" used mostly reaction. Both forms of reaction, impact and quality, were used almost evenly at 17 and 18 instances apiece. The following sentence in "Pepita Talks Twice" depicted both cases of reaction. Impact is first and quality is second: "But deep inside of her the grumble grew larger"
(clause 36). "Deep" illustrated the impact of how intense the feeling was and "larger" described the quality of the grumble. The other seven cases of appreciation fell to valuation.

The third grade informational texts, "Sue the Tyrannosaurus Rex" and "Wild Shots," both had more instances of appreciation items than affect and judgment-just as the second grade informational texts. "Sue" had 17 cases of appreciation items in its 79 clauses, and "Wild Shots" had 35 appreciation items in its 114 clauses. Altogether, there were 49 appreciation items in the informational texts. The most common were reaction (quality) and valuation. Generally, a thing's quality and value are deemed most important in informational texts. "Sue" had nine instances of quality related appreciation items, and one valuation term. These clauses from "Sue" illustrate how the author used appreciation to guide the reader's reaction: "Hendrickson spotted some strange bones sticking partway out of the cliff-side. | The bones were huge!" (clauses 2021). Both cases indicate to the reader that he should react a certain way. "Wild Shots" had 21 quality related terms and 6 valuation terms. The author/narrator in "Wild Shots" used appreciation, specifically valuation, to indicate to the reader how important she believed an item to be: "Tortoises love a good cactus" (clause 59). This wasn’t just any cactus. The narrator wanted the reader to understand that tortoises won't settle for sub-par cacti. Similar to the second grade informational texts, the two third grade informational texts had a greater percentage of appreciation items as shown in Chart 5.2.4.


Chart 5.2.4-3 ${ }^{\text {rd }}$ Grade Appreciation

### 5.3 Grade 4

### 5.3.1 Affect

"The Cricket in Times Square" had 196 clauses. There were 39 cases of affect. The story, about a brave cricket and a friendly mouse, was appropriately full of affect items dealing in happiness (cheer) and security (confidence). Cheer was relayed 10 times and confidence was displayed eight times. Take this section of "The Cricket in Times Square" in which the author used affect items to indicate a character's happiness or confidence:

"They were having such a good time laughing and singing songs that they didn't notice me when I jumped into the picnic basket," continued Chester.<br>"I was sure<br>they wouldn't mind<br>if I had just a taste." (clauses 143-149)

In this short passage, Chester tells Tucker about the people he saw. He did not have to directly say that the people were happy, which was implied by the first statement. Similarly, Chester didn't have to specifically tell Tucker that he was confident in his decision to jump in the basket and steal a taste. The affect items in this passage convey those ideas and feelings perfectly.

Other common affect items included unhappiness (misery) and satisfaction (interest). The least common items were unhappiness (antipathy), dissatisfaction (ennui), and disinclination (fear). These items were not displayed at all because Tucker Mouse encouraged Chester the Cricket to be happy, calm, and unafraid. The following chart illustrates the percentage of affect items in the fourth grade story.


Chart 5.3.1 - 4th Grade Story Affect

The informational fourth grade texts "Caring for Crocs" and "Saguaro Cactus" totaled to 194 clauses. "Caring for Crocs" had two human characters, two scientists, but they weren't the focus of the text. Instead, the focus was on the crocodiles and their habitat. Because of this, affect items in "Caring for Crocs" was low-3 of 73 clauses. In "Caring for Crocs" the author used happiness (cheer) to signal to the reader that the following statement should make the reader feel happy on behalf of the scientists: "Luckily, by the end of the early 1980s, the U.S. government started to help" (clause 18).

The text "Saguaro Cactus" was also low in affect items. This informational text did not have human characters at all. The only "characters" were a few wild desert animals and plants. None of these were fully capable of having human characteristics, though some animals did display what seemed to be courageousness. Only one instance of happiness (cheer) was displayed, and the other four examples of affect were instances of security (confidence): "Up here, they stay safe from coyotes and are free to spy on small prey" (clause 89). Chart 5.3.2 illustrates the low percentage of affect items in fourth grade informational texts.


Chart 5.3.2 - $4^{\text {th }}$ Grade Informational Affect

### 5.3.2 Judgment

"The Cricket in Times Square" was entirely focused on the goodness, sincerity, and other personal character traits of the two characters involved. But of the 196 clauses, there were only a total of 14 judgment items, which was considerably low, compared to the amount of judgment items found in second and third grade stories. Judgment items were dispersed fairly evenly among the five categories, but the two most prevalent categories were capacity and tenacity, both dealing with social esteem. There were seven instances of judgment dealing with capacity and three instances of judgment dealing with tenacity. The use of capacity and tenacity meant that the characters were plagued mostly with concerns about capability of doing certain things, like in the following sentence: "I knew | every minute was taking me farther away from my stump | but there wasn't anything I could do" (clauses 181-183). Tenacity, as seen in the following phrase, showed that they were also determined to succeed in the face of fear: "At first, I wasn't too frightened" (clause 167).
"Caring for Crocs," at 73 clauses, displayed mostly propriety, eight instances, which is doing right or wrong. These eight uses of propriety dealt mostly with ethical issues concerning what to do with the habitat of the crocodiles: "It [the government] began to protect a big chunk of what remained of the crocs' natural area" (clause 19). The other four instances of judgment were tenacity, normality, and capacity. "Saguaro Cactus" displayed only three cases of judgment (capacity, tenacity, and propriety) out of its 121 clauses. The cactus text had little to do with the concerns of people and their characteristics. Chart 5.3.3 illustrates the percentages of judgment in the informational texts and the story.


Chart 5.3.3 $-4^{\text {th }}$ Grade Judgment

### 5.3.3 Appreciation

"The Cricket in Times Square" had two main characters, Tucker Mouse and Chester Cricket, whose story told of adventurous tales, delicious food, and startling experiences. All of these cases were filled with appreciation. With 26 examples of appreciation items, "The Cricket in Times Square" was very detailed. Tucker's and Chester's story was full of observations, so the most common appreciation items were based on reaction (quality and impact at 10 and 9 instances respectively). Chester and Tucker reacted to one another's stories and to the events around them. In the following scene, the narrator described Chester Cricket's voice as heard by Tucker Mouse: "He had a high, musical voice. | Everything he said seemed to be spoken to an unheard melody" (clauses 38-39). The first example of reaction, "high, musical," depicted the
quality of Chester's voice, which was the meaning the author wished to convey. Further, to strengthen this idea, the narrator used reaction in the form of impact in order for the reader to understand the extent of how beautiful Chester's voice was. In the rest of the text, composition (balance) was the next most common appreciation item with 6 instances reflecting how things were laid out and pieced together.

Dealing mostly with habitat and surrounding creatures and plants, "Caring for Crocs" and "Saguaro Cactus" were especially full of appreciation items. These items reflected reaction mostly. "Caring for Crocs" and "Saguaro Cactus" contained 17 reaction (impact) appreciation items and 36 reaction (quality) appreciation items. The text "Saguaro Cactus" displayed four reaction items immediately at the beginning of the text:

> The Sonoran Desert is a small bit of land in the southwestern United States. The weather is hot and dry there for most of the year.
> It is a very difficult place for plants to grow.
> Yet, rising out of the desert sand and scrub brush is an amazing sight the giant saguaro (pronounced suh WAH row) cactus. (clauses 1-5)

All of these instances display reaction in quality (clauses 1 and 2 ) and impact (clauses 3 and 4). The reason the word "giant" in the fifth clause isn't considered an appreciation item is because the word is so closely related to the cactus that it is almost a part of the cactus' name. This cannot be an appreciation item because appreciation must be decided interpersonally. This term is attached to the cactus's name. Chart 5.3.4 illustrates the higher percentages of appreciation among the informational texts and the low percentage of appreciation in the fourth grade story.


Chart 5.3.4-4 $4^{\text {th }}$ Grade Appreciation

### 5.3.4 Summary of Appraisal

The statistics clearly showed that appraisal items were highly useful in stories. Affect, judgment, and appreciation were all used fairly consistently in stories from grades two through four. Informational texts, on the other hand, did not use appraisal items as frequently. In fact, affect and judgment items were scarce. The only significant type of appraisal item in informational texts was appreciation. Story texts, overall, displayed a high percentage of appraisal items at 55\%. Informational texts, conversely, displayed a lower overall percentage, $38 \%$, of appraisal items. However, the amounts based on percentage by genre and grades are equally as important when assessing grade level performance.

Affect items contributed $42.39 \%$ to the total amount of appraisal items in the story texts, and affect items only contributed $10.74 \%$ of the total amount of appraisal items in the
informational texts. The total amount of second grade story texts contained 19.59\% of affect items. A striking difference was presented by the second grade informational texts. These texts only produced $1.12 \%$ of affect items. The third grade story text presented high results in the affect category— $28.76 \%$, especially when compared side by side to its informational counterpart. The third grade informational texts only produced $6.73 \%$ affect items. Fourth grade texts did not deviate from the previous pattern. The story text's usage of affect items was $19.89 \%$ - very similar to second grade. The fourth grade informational texts produced a low affect percentage of $4.12 \%$. Chart 5.4 . 1 shows the percentages of affect items according to grade level and text type.


[^1]Second grade story texts produced $22.29 \%$ judgment items. Second grade informational texts only produced $.56 \%$ judgment items. This statistic was so low that it cannot be ignored, because it means that, in all of the information presented by the text, there were basically no opinions or judgments made by people. The third grade story presented a very similar percentage as second grade. Judgment items totaled to $20.54 \%$ in the third grade story. Third grade judgment items in the informational texts were low but not as low as the second grade texts. This time, judgment items were found in $3.62 \%$ of the text. Finally, fourth grade presented the most unique results. In the fourth grade texts, the story text did not have a higher percentage of affect items; the fourth grade informational text percentage of judgment items was higher than the story texts. Fourth grade story judgment items were only used $7.14 \%$ of the time. This percentage of use was surprising due to the nature of the fourth grade story having opportunities for judgment. Although the fourth grade story was a prime candidate for large usage of judgment items, the author chose to use very few (compared to second and third grade texts). This statistic is not to say that all fourth grade level stories contain low judgment items. This particular story might just be low. The informational texts were surprisingly higher in usage of judgment items than the story texts at 7.73\%, though not significantly higher. What was unique about judgment items was that judgment items were revealed by the graph as being more prevalent in stories at younger ages, decreasing with by grade level. On the other hand, judgment items seem to be more effective in informational texts at higher grade levels, being less prevalent at younger grades. These findings are indicated by the following data. Chart 5.4.2 shows the percentage of judgment items by grade level and text type.


## Chart 5.12.2 - Judgment by Grade Level

Appreciation items are the most different of the three parts of appraisal. At all grade levels, the dependence on appraisal, specifically appreciation, increased for informational texts and decreased among the story texts. With informational texts presenting information, whether about places, animals, phenomena, or man-made items, appreciation was more valued among these texts. With only $12.16 \%$ of appreciation items, the second grade stories produced a fair amount of appreciation items though the statistic was lower than the other second grade story statistics. Second grade informational texts, on the other hand, produced a rather high percentage of appreciation items. At 32.02\%, this percentage was higher than any other total percentage of appraisal use by a single grade. The production of third grade appreciation items in the story text was lower opposed to the informational texts; but this time, the story percentage was very similar to percentages seen in affect and judgment categories among story texts. Third grade contained
19.17\% of appreciation items. The informational third grade texts contained 25.38\% appreciation items. Fourth grade produced another low percentage of appreciation items among story texts. The fourth grade story only had $13.26 \%$ appreciation items. Finally, the fourth grade informational text provided the highest statistic of all appraisal items through all the grades. The fourth grade informational texts contained 34.02\% appreciation items. This statistic was very high, especially compared to the lower percentages of affect and judgment items seen among the informational texts, at all grade levels. Chart 5.4.3 illustrates the percentages of appreciation items by grade level and text type.


Chart 5.4.3 - Appreciation by Grade Level

### 5.4 Grade 2 Grammatical Metaphor

The second grade story, "Days with Frog and Toad," contained only 9 grammatical metaphors (GMs). These metaphors dealt mostly with conjunctions. Two of the nine metaphors were interpersonal, in that the phrasal meaning in the dialogue between the two characters was hidden. "The Enormous Turnip" did not have any grammatical metaphors. All together, there were only nine grammatical metaphors out of 148 story clauses. The informational texts, on the other hand, held more GMs than the stories. "From Seed to Plant" had 14 metaphors, "The Secret Life of Trees" had 22, and "Chameleons" had only one. None of the informational texts contained interpersonal GMs. Experiential GMs were the most common. The following chart depicts the frequency of grammatical metaphors by percentage in the second grade texts.


Chart 5.5.1 $-2^{\text {nd }}$ Grade GMs

The types of grammatical metaphors within the second grade texts illustrate the importance of the different kinds of semantic changes. The story, "Days with Frog and Toad," favored the semantic change of a verb realized as a preposition: "Because I have you for a friend" (clause 85) means, "You are my friend." The informational texts, overall, favored verbs realized as adjectives, as in "The Secret Life of Trees:" "A tree can live longer than all other living things" (clause 17). The second most common occurrence, as in "From Seed to Plant," was verbs realized as nouns: "Pollination happens in different ways" (clause 11). Chart 5.5.2 shows the percentages of semantic changes among the second grade texts.


Chart 5.5.2 - $2^{\text {nd }}$ Grade Semantic Changes

### 5.5 Grade 3 Grammatical Metaphor

The story, "Pepita Talks Twice," contained 21 grammatical metaphors. The informational texts, "Sue the Tyrannosaurus Rex" and "Wild Shots: They’re My Life," contained 48 grammatical metaphors. Just like the second grade texts, the informational texts did not contain any interpersonal GMs. There were three interpersonal GMs in "Pepita." Fourteen of the GMs in "Pepita" were experiential, and four were logical. Combined, the informational texts had five logical GMs and 43 experiential. Although logical GMs were the most prevalent in the second grade stories, in the case of third grade, experiential were the most common. They were also the most common in the informational texts. Chart 5.6.1 illustrates the higher percentages of GMs among informational texts as opposed to the low percentages of GMs in the story text.


Chart 5.6.1 - $3^{\text {rd }}$ Grade GMs

The types of grammatical metaphors in the third grade texts highly favored verbs realized as nouns, as in the following example from "Pepita:" "And she did what they asked without a grumble" (clause 5). The next most common type of semantic change was verbs realized as adjectives. The following portion of "Sue" illustrates this fact: "Team members also made models to replace some of the missing bones" (clause 39). Because there were nine logical GMs, there were also semantic changes illustrating conjunction as verb, conjunction as noun, and conjunction as adjective. Refer to the figure below for the frequency, in percentage, of semantic changes among the third grade texts.


Chart 5.6.2-3 ${ }^{\text {rd }}$ Grade Semantic Changes

### 5.6 Grade 4 Grammatical Metaphor

The fourth grade texts differ from the rest of the data in that the story text did not contain any interpersonal grammatical metaphors. This difference does not mean that story texts at the fourth grade level and above are void of interpersonal GMs; instead, it could simply indicate that there are few. Experiential GMs were most frequent in the fourth grade data, and logical GMs were minimal. Of the 88 GMs , only four of them were logical. The other 84 were experiential. The story, "The Cricket in Times Square," had two of the four logical GMs, and the other two were found in "Saguaro Cactus." The other informational text, "Caring for Crocs," had only Experiential GMs—16 total. Again, informational texts proved to have more GMs than stories. See Chart 5.7.1 for the percentage of GM use in fourth grade texts.


Chart 5.7.1 - $4^{\text {th }}$ Grade GMs

In the fourth grade, of the semantic changes, verbs realized as adjectives were used most frequently at 38 instances, and the next highest category was verbs realized as nouns- 23 total. There were 19 nouns realized as adjectives, and then the amount of GMs in each category quickly declined to two and one, ending with conjunctive logical GMs. Chart 5.7.2 depicts the frequency of semantic changes, by percentage, among fourth grade texts.


Chart 5.7.2 - $4^{\text {th }}$ Grade Semantic Changes

### 5.6.1 Summary of Grammatical Metaphor

The previous data indicate that grammatical metaphors were used more extensively in informational texts at all grade levels. Chart 2.7 displays the frequency of GM usage based on percentage. Informational texts totaled 142 instances of GMs, whereas story texts totaled only 56

GMs. There were 565 informational clauses; this statistic means that GMs saturated 25.13\% of the texts. The story texts at all three grade levels contained 563 clauses. GMs were not nearly as prevalent in story texts; at only 9.94\%, the results clearly reveal the lesser importance of GMs in story texts. Informational texts hold approximately 10\% more GMs than story texts. Chart 5.8 displays the percentages of GM usage by grade and text type.


Chart 5.8 - Percentage of GMs by Grade and Text

## 6. Conclusions

### 6.1 Grammatical Metaphors

### 6.1.1 Interpersonal GMs in Stories

First, when introducing interpersonal GMs to students, it is best to teach narrative style while students are learning to read and write stories. Interpersonal GMs are only used in stories. Informational texts, like science, social studies, math, or music, lack interlocutors between which interactive, personal meaning can be made. Interpersonal GMs happen when one speaker intends one meaning but hides it with a less obvious statement. One example of an interpersonal GM is when a delicate conversation reaches the point of argument, and, in an attempt to keep from starting a fight, one speaker might speak his mind by phrasing the comment as an afterthought: "Oh, I thought you were supposed to turn right." This means, "You are supposed to turn right," but the speaker hides his direct meaning in an opinion-based statement. A very similar example was seen in "Pepita Talks Twice" when the man at the bus told Pepita that it was a good thing to speak two languages: "I thought it was a good thing to speak two languages" (clause 91). After the bus stop attendant said this to Pepita, she was forced to think about his response. Whether the reply was positive or negative, the social intent of an interpersonal grammatical metaphor is to elicit a response. In Pepita's case, she chose to stand firm and argue that speaking two languages was bad. She was forced; nonetheless, to consider the alternative. Interpersonal GMs rarely occur in true informational texts because informational texts lack meaning communicated between people.

### 6.1.2 Experiential GMs in Informational Texts

Experiential GMs were the most common and possibly the easiest to recognize. Basic GMs, nominalizations, are not difficult to understand, and, as soon as students begin to learn the parts of speech, they should be introduced to how those parts of speech can change, like a literary metaphor, in certain situations-especially in informational texts such as science and social studies. The types of nominalizations seen in informational texts differ from that of their story counterparts. Both types of nominalizations take processes and change their forms to nouns, but the purpose of the two genres is different.

When students are asked to identify the "do-er" of the sentence in a science text, and the subject is "Pollination," as in the second grade text "From Seed to Plant," understanding how a grammatical metaphor has changed the verb (pollinate) to a noun (pollination) will assist students' critical thinking skills and encourage them to understand why verbs are being used as subjects. Shifting semantic meaning of nominalized processes is the social intent of informational texts. Informational texts immobilize verbs-slowing down processes-so that they can be studied more effectively. By using "Pollination" as a subject, students can understand the entire process of an insect moving pollen from one plant to another and that this can be referred to in one nominalization. In the language of science "we find that this motif [nominalizations as head of a clause/grammatical metaphor] recurs all the time. The clause begins with a nominal group, typically embodying a number of instances of grammatical metaphor" (Halliday, 2001, p. 186).

However, one important note is that not all experiential GMs are nominalizations. Words can convey meaning using other parts of speech other than verbs and nouns. One example from the third grade informational text, "Saguaro Cactus," illustrates how nouns can be used as
adjectives: "...for creatures that live close to the desert floor" (clause 104). Desert is a noun, so how can a noun be used to describe another noun? This change in semantic meaning happens in precisely the same way that processes are slowed down, immobilized, and dissected for individual separate meanings. What is the desert? It is a large, hot, sandy area with dry plants and little rain. This statement alone promotes critical thinking about what "desert" implies. Even as a noun, the word "desert" holds many meanings. Desert in one context may mean "dry place." Desert in another context may mean "habitat for particular animal species." The latter example is what desert means in the example clause-creatures that live close to this particular habitat's floor. As seen in the previous example, nouns can be descriptive and functionally serve as adjectives. Authors use nouns like "desert" to compel the reader to think critically-to take things apart; to see what they mean.

### 6.1.3 Experiential GMs in Stories

Just as informational texts will use nominalizations to refer to a whole process as a single event, stories do the same, although the social purpose-the function and purpose of the wordis different. Take the recurring example from "Pepita Talks Twice." The word "grumble" was used repeatedly throughout the story to refer not to the actual action of grumbling, but to the time and place of the grumbling. Grumbling, the action, can then be called "the grumble," and the process will be understood as one word. "The grumble" means that there was a time in a certain context when a person became unhappy, impatient, and unwilling to acknowledge the logic of others. The purpose of nominalizing a process like grumbling is not so that readers can freeze the process in time to study it or understand it further, like in informational texts; instead, nominalizing a process like grumbling allows the reader to imagine and anticipate how
characters might react or respond in the situation or in following scenarios. Essentially, these nominalizations allow the reader to experience the action with the character. Another example of how Experiential GMs reinforce actions as single events was in the fourth grade story "The Cricket in Times Square." In this text, Tucker Mouse explained that the process of overhearing other people's conversations in secret was a great thrill for him. He also talked about how the process of searching for food presented him with an enjoyable challenge. The narrator says, "Next to scrounging, eavesdropping on human beings was what he enjoyed most" (clauses 34). The previous example provide two very clear nominalizations or experiential GMs. Now that Tucker used the words "scrounging" and "eavesdropping," the reader can envision these processes in his mind, imagine what might be the cause or effect of the process, and even move him/her to continue looking for further meaning. This movement into critical thinking is the social intent of an experiential GM in a story text.

### 6.1.4 Logical GMs in Informational Texts

Logical grammatical metaphors were not used as frequently but should still be approached and explained differently according to genre. The informational texts used 12 logical GMs, and eight of them were used in a cause and effect scenario. The other four were used to hide conjunctive meaning as in the story texts. A prime example of how a logical grammatical metaphor hides cause and effect was in the fourth grade text "Wild Shots." In this text, the narrator described the Galapagos Islands: "The islands were formed long ago by a bunch of volcanoes" (clause 8). This logical GM, "formed," was disguised as a verb to help promote the author's intended meaning. What this statement really meant was that the islands happened because of volcanoes. A happened because of B. Because of volcanoes, the Galapagos Islands
exist. This causal logical GM meaning was predominant throughout the informational texts. Another interesting example of a causal logical GM was in the fourth grade text, "Saguaro Cactus." This logical GM initiated the clause with what seemed to be a nominal group. It was, in reality, a causal conjunction: "No wonder the people of the desert look for cactus boots to use as dishes and bowls!" (clause 67). This logical GM accomplished two things. First, it was a conjunction that linked two clauses together. On its own, the reader might be left wondering, "What makes people use the boots as dishes and bowls?" The text's previous clauses answered that question: "Even after the cactus dies, | the boot stays hard and strong" (clauses 65-66). The logical GM in this case was used conjunctively to tie the ideas together without saying "and" or "so." The second purpose this logical GM accomplished was to convey a cause and effect relationship between the two clauses: "Because the boots stay hard, people use them for bowls."

### 6.1.5 Logical GMs in Stories

Story texts use logical grammatical metaphors as well, but they tend to use them differently. First, when logical GMs are presented in stories, they are usually used as indicators of time or to describe the extent of something. Logical GMs in informational texts, on the other hand, are used more as a means of conveying cause and effect.

The clauses in the story texts used logical GMs primarily to mask conjunctive meanings with adverbial phrases, prepositional phrases, and even adjectives. The story texts used ten logical GMs, and in seven of those ten cases adjectives, prepositions, and adverbs disguised the conjunction. In "Days with Frog and Toad" the narrator used a circumstantial adverbial clause as a conjunction to link two ideas together: "With a splash, he fell in the river" (clause 66). "With a splash," in this case, disguised the common conjunction "and then." This logical GM linked
clauses together to keep the text flowing smoothly. Another example of how story texts used logical GMs to relay conjunctive meaning was in "Pepita Talks Twice," the third grade story. This example illustrated the conjunctive purpose of a logical GM in story texts very well. The clause said, "Pepita said with a long sad sigh" (clause 173). The author did not mean that Pepita, long sad sigh in hand, spoke words. She did not carry the sigh in her pocket as the word "with" might imply. The long sad sigh did not characterize how Pepita said the words: "Pepita said with urgency" is an example of when the word "with," used with a nominalized adjective, helps describe the way in which she said it. Instead, the word "with" in the example was a conjunction bringing two ideas into one clause. This sentence meant that Pepita said what she had to say, and then she sadly sighed a long time. Story texts socially position logical GMs in this way in order to join ideas together.

### 6.2 Appraisal

If instructors are to teach their students to write in the story genre by understanding appraisal, judgment items might be the first category to approach, according to the data. Terms of judgment are extremely important at the second grade level. Judgment items seem to pan out by the time the students move on to fourth grade readers. The lack of judgment items does not mean that the skill is not necessary at the fourth grade level, but it may imply that students should have mastered the skill by this point and do not need readings to reinforce the skill. Without doubt, the younger the student, the more important it is to understand how judgment items can affect a story and how the reader is supposed to feel about the story. The social intent of the text is for readers to take the author's direction. Emphasizing how judgment of others affects peoples' behaviors and attitudes, using examples of bullying for instance, will help
students understand how the stories they read have social intentions. For instance, while teaching a story like "Days with Frog and Toad," the teacher should prompt her students to ask, "Why did Toad think Frog was sad?" This question could then lead to discussion about how Toad’s opinion of Frog may have affected the students’ opinions of Frog. Frog may not have been sad, but when Toad suggested that Frog was sad, the students would all agree that Frog was sad. Students then might make the connection to real life situations where someone's judgment affected their opinion.

Stronger use of affect was seen especially toward the end of second grade and into third grade. Affect may be the easiest to teach, since it deals with personal feelings or attitudes of characters. Students might be led with a feeling-based approach to writing. At the second grade level, "How does that make the character feel?" And at the third grade, a less obvious approach might help strengthen the students' skills in using affect: "What words tell you that Pepita is mad?" Students might then turn to words like "grumble," which was used repeatedly, or phrases like "with a frown." Based on the decline of affect from third to fourth grade, the students should begin understanding how stories have social intentions.

Finally, when it comes to reading and writing stories, the data suggest that appreciation items are of almost equal importance but should not be stressed as building blocks of a story. When students are encouraged to write stories, one tip to keep students from over-emphasizing events and objects is to urge them toward describing how they (or their character) felt about the event or object (affect) or how other people reacted or behaved (judgment). Teachers can take a scenario like this one from "The Cricket in Times Square" and use it to show students that emphasis does not necessarily need to be put on "things," because emphasis on characters, their feelings, and their judgments can also be equally as effective. In the following example, Chester

Cricket explains to Tucker Mouse that, while he was in a picnic basket, a pile of roast-beef sandwiches fell on top of him. He responded in this way: "At first I wasn't too frightened" (clause 167). The author could have chosen to say, "The roast-beef sandwiches weren't scary," which would have placed the emphasis on the sandwich, making the appraisal item an appreciation term. Instead, the author used affect to describe the character's feeling toward the event.

Feelings and attitudes of the characters are not the goal of informational texts; therefore, teachers’ first instructions toward writing in the informational genre should be to teach their students to refrain from using their own perspective or perspective from a character. This can be reinforced by reading appropriate story texts with many characters and informational texts with no characters and pointing out the differences of personal bias to students. Take "From Seed to Plant," for example. This text had zero participants. While students are reading, teachers should point out the lack of personal bias by the author so that the students can understand the social connotations within the informational genre. Informational texts can, however, be saturated with appreciation items. Dealing with the nature of things, appreciation is vital for making meaning in informational texts.

Heavy emphasis on appreciation while students are in second grade, discussing "things" in science and social studies, like how big Earth is or how dry the desert is, is of utmost importance. Without putting emphasis on items that appraise "things," students may never distinguish how appreciation items are used in informational texts as opposed to stories. According to the data, appreciation items in stories tend to deal with reaction. Reaction in stories appraises how characters reacted. Appreciation items in informational texts not only use reaction, but also valuation and composition as major indicators of how a thing "is" -how valuable it is
and of its structure-- Several good examples of how informational texts use valuation and composition items, along with reaction, were in the second grade text, "From Seed to Plant." Reaction was used to describe the quality of the juice: "...their sweet juice" (clause 14), composition was used to describe the balance of the seed coat: "it needs rain to soak the seed and soften its seed coat" (clause 56), and valuation was used to describe the taste of the seeds: "...and they are tasty, too!" (clause 72).

In informational texts, judgment may be the least important factor. Judgment can only be used in an informational text when people are introduced into the picture, as the scientists were in the third grade dinosaur text and the fourth grade crocodile text. The least amount of judgment items were in the second grade informational texts, because there were no human characters in the first two texts. "Chameleons" only implied judgment one time when it referenced people kindly, saying, "my dear" (clause 5). Teachers may be most successful in teaching students how to refrain from using judgment when they encourage students to write their own informational texts by eliminating people from the equation. Teachers could introduce informational texts to students that contain human participants or personified animals and ask the students how they could remove the narrator's or character's judgment. In the fourth grade text, "Caring for Crocs," the author implied that the mother crocodile cared for her babies by listening closely to the eggs every day: "She lays her head on the nest to listen closely" (clause 41). "Closely" indicated capability. Teachers might ask their students how they could rephrase this sentence so that the crocodile isn’t judged as being an able-minded creature, capable of listening "closely." The teacher should urge the students to decide how else the crocodile could be described.

Affect is equally of little importance in informational texts. Unless the informational text is told in first person, affect should be eliminated. The reason affect was high in the third grade
informational text, "Wild Shots", was that the narrator personified the animals. She told the reader information about the animals-their size, their qualities-but she used feelings to influence the reader to believe what she said. Simply to have said, "The adult penguins walk away from their annoying babies," would have placed emphasis on the thing-babies. The author, in this case, chose to say, "They finally got tired of being pestered and started waddling away" (41-42). The reason "Wild Shots" felt more like a story than an informational text was because of how the penguins were personified, as if they had feelings. "Got tired of" implies that the penguins, like people, made a choice to feel a certain way.

## 7. Discussion and Implications for Teachers

Stories use grammatical metaphors in a different way than informational texts. Therefore, teaching methods in aiding students to understand interpersonal, logical, and experiential grammatical metaphors can be approached in different ways.

The data show that use of grammatical metaphor in story texts increases by grade level and use of grammatical metaphor in informational texts remains fairly even at around $20 \%$. Teachers should instruct students to identify grammatical metaphors in texts as they read class textbooks, library books, and other texts. Identification of GMs might help engage the students in actively understanding what language can do when presented in an informational or story context. Teachers can make these notions clear to their students with the goal that they will understand how to understand and write the informational genre.

It then seems to be beneficial, in terms of pedagogy, that teachers could support student learning by explaining and unpacking grammatical metaphors in informational texts. Informational texts become complicated for the young reader when (1) they are instructed in traditional grammar lessons to locate the "subject," "verb," and "objects" in a sentence, and (2) it is obvious that a "do-er" or subject of the sentence is not a person or something capable of performing an action, and (3) they have not been explained the differences in how subjects or transitive actors can be portrayed in informational texts as opposed to story texts which make much less use of grammatical metaphor.

Information regarding frequency of appraisal items within writing is useful in instructing students when writing informational texts and story texts. The two writing styles are distinct; time for teaching both styles of writing should be separate and distinct. One key factor is that,
when affect and judgment are used, it is because there are human characters or participants, or sometimes personified inanimate characters. Human characters are the focus of stories, so affect and judgment are important because characters can have emotions and pass judgment.

Appraisal items are important in locating the author’s personal feelings toward a person or matter. This idea is another example of how language has social implications. The implications here are that no matter what an author may write—whether story or informationalit will have an embedded personal agenda. These "agendas" are not sinister and may not be overbearing. They are, however, included in all written communication. Even when an author may try his or her hardest not to imply negativity about a person, he or she may inadvertently use negative appreciation toward a "thing" so that the attention is removed from the character.

The differences in how grammatical metaphors and appraisal items are used between informational texts and stories are understandable and identifiable. Grade levels use grammatical metaphors and appraisal items at different frequencies, and, because these two lexicogrammatical resources are crucial features in grade-appropriate textbook materials, teachers may then be able to adjust their instructional approaches regarding how they identify with these meanings and how they convey them to students.

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## Appendix

## 1. Grammatical Metaphor

| 1.1-2nd Grade Story Clause by number | Frog and Toad Kind of GM | Semantic change |
| :---: | :---: | :---: |
| 6. I want to be alone." Leave me alone | Interpersonal |  |
| 40. but it was no use. | Experiential | verb -> noun |
| 44. Toad climbed on the turtle's back. | Experiential | noun -> adjective |
| 52. "why don't you leave him alone?" Leave him alone. | Interpersonal |  |
| 66. With a splash, he fell in the river | Logical | conjunction -> adverb |
| 85. Because I have you for a friend. | Logical | relational verb -> preposition |
| 90. That is a very good reason for wanting to be... | Experiential | verb -> noun |
| 93. "I will be glad not to be alone | Logical | relational verb -> preposition |
| 96. They ate wet sandwiches without iced tea. | Logical | verb -> preposition |


| 1.2-2nd Grade Informational Clause by number | From Seed to Plant |  |
| :---: | :---: | :---: |
|  | Kind of GM | Semantic change |
| 2. A seed contains the beginning of a new plant. | Experiential | verb -> noun |
| 10. This is called pollination. | Experiential | verb -> noun |
| 11. pollination happens in different ways. | Experiential | verb -> noun |
| 18. If a pollen grain from a flower lands on the pistil ... | Experiential | noun -> adjective |
| 20. This is the beginning of a seed. | Experiential | verb -> noun |
| 38. The wind scatters seeds. | Experiential | verb -> noun |
| 39. Some seeds have fluff on them | Experiential | relational verb -> noun |
| 51. The beginning of a plant is curled up inside each... | Experiential | verb -> noun |
| 54. A seed will not sprout until certain things happen. | Experiential | verb -> noun |
| 56. Then it needs rain to soak the seed and | Experiential | verb -> noun |
| 60. This is called germination. | Experiential | verb -> noun |
| 62. ...water and minerals from the soil for food. | Logical | conjunc. -> preposition |
| 67. Finally, the plant is full-grown. | Experiential | verb -> noun |
| 71. They are full of nutrition, vitamins and minerals | Experiential | adjective -> noun |

2nd Grade Informational

| Clause by number | Kind of GM | Semantic change |
| :--- | :---: | :---: |
| 8. They whip them out to zap their food. | Logical | conjunction -> prep. |


| 2nd Grade Informational Clause by number | Secret Life of Trees |  |
| :---: | :---: | :---: |
|  | Type of GM | Semantic change |
| 4. that protects the tree's trunk and branches. | Experiential | relational verb -> adjective |
| 6. It is rough and cracked. | Experiential | verb -> adjective |
| 14. ...pushing their way through the thick earth. | Experiential | verb -> adjective |
| 17. A tree can live longer than all other living things. | Experiential | verb -> adjective |
| 21. ground, the tree's roots spread out in search of water. | Experiential | verb -> adjective |
| 21. ground, the tree's roots spread out in search of water. | Logical | verb -> prepositional phr. |
| 29. Insects and bugs live on and under a tree's bark. | Experiential | relational verb -> adjective |
| 34. ...two main types: broad-leaved trees and conifers. | Experiential | verb -> adjective |
| 35. flat leaves on its wide-spreading branches. | Experiential | verb -> adjective |
| 36. are mostly made up of broad-leaved trees. | Experiential | verb -> adjective |
| 37. Many broad-leaved trees change their leaves as... | Experiential | verb -> adjective |
| 38. ...most broad-leaved trees have no leaves. | Experiential | verb -> adjective |
| 41. As spring begins, fresh new leaves open from buds... | Logical | conjunction -> adverb |
| 42. The tree wakes up from its winter sleep. | Experiential | noun -> adjective |
| 42. The tree wakes up from its winter sleep. | Experiential | verb -> noun |
| 45. By summer, the tree is covered with bright green... | Logical | conjunction -> adverb |
| 48. the tree'sleaves change color. | Experiential | verb -> adjective |
| 55. ...live in colder places than most broad-leaved trees. | Experiential | verb -> adjective |
| 60. they don't snap even when covered with thick snow. | Experiential | verb -> adjective |
| 74. that hardly any light reaches the forest floor. | Experiential | noun -> adjective |
| 78. This palm tree's seed is inside its hairy coconut shell. | Experiential | noun -> adjective |
| 87. You can see the source of wood and paper. | Experiential | adjective -> noun |


| 1.3-3 ${ }^{\text {rd }}$ Grade Story | Pepita Talks Twice |  |
| :---: | :---: | :---: |
| Clause by number | Kind of GM | Semantic Change |
| 5. And she did what they asked without a grumble | Experiential | verb -> noun |
| 19. a grumble began | Experiential | verb -> noun |
| 28. the grumble grew | Experiential | verb -> noun |
| 36. But deep inside of her the grumble grew larger | Experiential | verb -> noun |
| 38. the grumble grew so big that it exploded | Experiential | verb -> noun |
| 64. They are all Spanish words, you know | Experiential | noun -> adjective |
| 66. Pepita said with a frown. | Logical | conjunction -> adjective |
| 66. Pepita said with a frown. | Experiential | verb -> noun |
| 79. Will you please keep wolf for me? Keep wolf for me. | Interpersonal |  |
| 91. I thought it was a good thing to speak two languages. It is a good thing to speak two languages. | Interpersonal |  |
| 105. but I can't. -> I won't. | Interpersonal |  |
| 126. Pepita said with a frown. | Logical | conjunction -> adjective |
| 126. Pepita said with a frown. | Experiential | verb -> noun |
| 141. Pepita said with a frown. | Logical | conjunction -> adjective |
| 141. Pepita said with a frown. | Experiential | verb -> noun |
| 173. Pepita said with a long sad sigh. | Logical | conjunction -> adjective |
| 173. Pepita said with a long sad sigh. | Experiential | verb -> noun |
| 176. ...the blankets up to her chin and made a stubborn face. | Experiential | noun -> verb |
| 207. Lobo turned back just before a loud screech of the car's... | Experiential | verb -> noun |
| 207. ...back just before a loud screech of the car's brakes. | Experiential | noun -> adjective |
| 209. A red-faced man shouted out of the window of the car, | Experiential | verb -> adjective |


| 1.4-3 ${ }^{\text {rd }}$ Grade Informational Clause by number | Sue the Tyrannosaurus Rex |  |
| :---: | :---: | :---: |
|  | Kind of GM | Semantic change |
| 1. ...Chicago, Illinois, opened one of its grandest shows ever | Experiential | verb -> noun |
| 2. ...most complete dinosaur fossil found so far. | Experiential | noun -> adjective |
| 6. Here's why | Logical | causual conj. -> noun |
| 9. Hendrickson stayed behind to look for fossils | Logical | conjunc. -> prep/noun |
| 10. ...be one of the greatest fossil discoveries ever made | Experiential | noun -> adjective |
| 10. ...be one of the greatest fossil discoveries ever made | Experiential | verb -> noun |
| 25. When the other fossil hunters returned to the site, | Experiential | noun -> adjective |
| 28. that this amazing find was indeed a T-rex | Experiential | verb -> noun |
| 32. ...with the help of some investors, paid... | Experiential | verb -> noun |
| 33. This was a very important buy | Experiential | verb -> noun |
| 35. ...learn about natural history, or the history of our nat... | Experiential | verbs -> nouns 2 |
| 37. so that they can learn more about the past | Experiential | verb -> noun |
| 39. to replace some of the missing bones, using what they... | Experiential | verb -> adjective |
| 44. How have scientists learned from Sue's discovery? | Experiential | verb -> noun |
| 48. and they drew some conclusions. | Experiential | Verb -> noun |
| 49. the T. rex had a very small brain. | Experiential | relational verb -> adj. |
| 50. The brain cavity, or the area where the brain was, | Experiential | noun -> adjective |
| 56. The length and shape of its teeth tell scientists | Experiential | adjectives -> nouns 2 |
| 66. the plant-eating dinosaurs in the area had plenty to eat | Experiential | verb -> noun |
| 69. They wanted visitors to leave with a feeling | Experiential | verb -> noun |


| $3^{\text {rd }}$ Grade Informational - GM | Wild Shots: They're My Life |  |
| :---: | :---: | :---: |
| Clause by number | Kind of GM | Semantic change |
| 2. all my best friends were furry, feathered, or scaly | Experiential | verb -> noun |
| 3. My friends were the gentle, trusting creatures of the... | Experiential | verb -> noun |
| 8. The islands were formed long ago by a bunch of volcanoes | Logical | conjunction -> verb |
| 20. See the shot I got? | Experiential | verb -> noun |
| 22. I'm still taking lots of wildlife photos | Experiential | noun -> adjective |
| 23. and my best friends are still furry, feathered, and scaly | Experiential | verb -> noun |
| 34. and the adventures we had getting them | Experiential | verb -> noun |
| 35. The king penguin chick below looks like | Experiential | noun -> adjective |
| 35. The king penguin chick below looks like | Experiential | verb -> noun |
| 44. and I had to scurry to get this shot. | Experiential | verb -> noun |
| 47. When early Spanish-speaking explorers came the islands | Experiential | verb -> noun |
| 56. But look at the kind of action shot | Experiential | verb -> adjective |
| 56. But look at the kind of action shot | Experiential | verb -> noun |
| 64. that grows along the wave-beaten shoreline | Experiential | verb -> adjective |
| 66. sea dragons are right at home in the pounding waves | Experiential | verb -> adjective |
| 69. First I put my camera into a waterproof case with a clear... | Experiential | verb -> adjective |
| 75. and got lots of cuts and bruises | Experiential | verb -> noun |
| 77. Watching animals fight can be pretty wild | Experiential | verb -> noun |
| 82. They were squabbling Galapagos neighbors | Experiential | verb -> adjective |
| 85. The male on the right had his pouch puffed-out. | Experiential | verb -> adjective |
| 87. The fight in the lower photo was between elephant... | Experiential | verb -> noun |
| 94. All of a sudden, | Logical | Conjunction -> adverb |
| 101. they were back to their lazy pushing and shoving | Experiential | verb -> noun |
| 102. Finally, they collapsed into a heap. | Experiential | verb -> noun |
| 107. In a few months | Logical | Conjunction -> adverb |
| 109. and, with luck, head out to sea too. | Experiential | noun -> verb |


| 1.5 - 4th Grade Story |
| :--- |
| Clause by number |
| The Cricket <br> Kind of GM |
| 3. Next to scrounging, eavesdropping on human beings was <br> Semantic change |
| 3. Next to scrounging, eavesdropping on human beings was |
| Experiential |


| 1.6-4th Grade Informational | Caring for Crocs |  |
| :---: | :---: | :---: |
| Clause by number | Kind of GM | Semantic change |
| 5. Late July is an exciting time of year for scientists FM and LB. | Experiential | verb -> adjective |
| 6. they walk along certain beaches and inlets on Florida's Southern coast | Experiential | relational process -> adj |
| 9. Dug-out nests in the sand. | Experiential | verb -> adjective |
| 10. Broken eggshells. | Experiential | verb -> adjective |
| 11. Tiny tracks at the water's edge. | Experiential | relational process -> adj |
| 12. ...clues that lead to newly hatched American crocodiles! | Experiential | verb -> adjective |
| 13. Frank and Laura have been studying this endangered species since... | Experiential | verb -> adjective |
| 15. One reason was that too much of the croc's natural home area had been bulldozed to make way for houses. | Experiential Experiential | relational process-> adj verb -> noun |
| 19. ...a big chunk of what remained of the croc's natural area. | Experiential | relational process-> adj |
| 24. How much living space do they need? | Experiential | verb -> adjective |
| 28. American crocodiles are more scared of people than you... | Experiential | verb -> adjective |
| 31. but the most important time is nesting season | Experiential | verb -> adjective |
| 44. The babies will hang out near the water's edge for a few weeks | Experiential | relational process -> adj |
| 49. Later, by looking at the different patterns of clipped scales | Experiential | verb -> adjective |
| 52. even when it's grown up. | Experiential | verb -> noun |


| 4th Grade Informational Clause by number | Saguaro Cactus |  |
| :---: | :---: | :---: |
|  | Kind of GM | Semantic change |
| 4. Yet, rising out of the desert sand and scrub brush is an... | Experiential | verb -> noun |
| 12. It is the center of life for hundreds of creatures... | Experiential | verb -> noun |
| 16. Life for a new saguaro begins in the summer, | Experiential | verb -> noun |
| 17. when warm rains come to the desert | Experiential | verb -> noun |
| 19. when the bright red fruit of a full-grown cactus falls to ... | Experiential | verb -> adjective |
| 23. By chance, a seed may stick to a mouse's paw or to a rabbit's ear. | Experiential Experiential | Relational verb -> adj <br> Relational verb -> adj |
| 25. And maybe it will fall to the ground and take root. | Experiential | noun -> verb |
| 27. Most cactus seedlings die in the blazing heat. | Experiential | noun -> adjective |
| 28. But a few lucky plants take root in shady spots, safe from the burning sun. | Experiential Experiential | noun -> adjective <br> verb -> adjective |
| 30. this ten-year-old saguaro is off to a good start | Experiential | noun -> adjective |
| 38. bits of flower dusk, called pollen, stick to their bodies | Experiential | noun -> adjective |
| 44. a fully grown saguaro can stretch | Experiential | verb -> adjective |
| 46. The saguaro's roots do not grow deep. | Experiential | relational verb -> adj |
| 47. They stay shallow to catch any bit of rainwater that drips | Experiential | verb -> noun |
| 52. ...the bird [taps] through the saguaro's tough skin to build | Experiential | relational verb -> adj |
| 55. The dark hole makes a cool nesting place for the woodpecker's family. | Experiential Experiential | verb -> adjective relational verb -> adj |
| 56. Safely inside, the birds hunt and feast on insects | Experiential | noun -> verb |
| 57. A woodpecker family does not stay in the same nest for... | Experiential | noun -> adjective |
| 62. a hard wall grows around the hole in the cactus's skin | Experiential | relational verb -> adj |
| 67. no wonder the people of the desert look for cactus boots to use as dishes and bowls! | Logical Experiential | conjunction -> noun noun -> adjective |
| 71. Elf owls are among the first to take over | Experiential | adjective -> noun |
| 77. There, white winged doves build cozy nests | Experiential | verb -> adjective |
| 78. Red-tailed hawks and horned owls also find homes on the growing saguaro. | Experiential <br> Experiential <br> Experiential | verb -> adjective <br> verb -> adjective <br> verb -> adjective |
| 80. By the time it is $\mathbf{7 5}$ years old, | Experiential | noun -> adjective |
| 82. It is more like a crowded village than a plant. | Experiential | verb -> adjective |
| 83. Birds aren't the only creatures in search of a cool cactus home | Experiential | noun -> adjective |
| 84. Lizards, insects, and spiders also fill empty nest holes | Experiential | noun -> adjective |
| 90. Keen-eyed coyotes and bobcats hunt in the brush | Experiential | verb -> adjective |
| 97. But when necessary, coyotes will even eat berries... | Logical | conjunction -> noun |
| 98. ...provides an important habitat for many desert creatures | Experiential | noun -> adjective |
| 100. When this happens, desert \| winds topple the dead plant | Experiential Experiential | noun -> adjective verb -> noun |
| 101. ... living in the saguaro must move to a new cactus home. | Experiential | noun -> adjective |
| 103. it is still necessary to desert life. | Experiential | noun -> adjective |
| 104. ...for creatures that live close to the desert floor | Experiential | noun -> adjective |

## 2. Appraisal -

2.1-Grade: 2nd Story

| Clause by number | Appraiser | App. Item | Affect S/D | Judgment +/- | Apprec. +/- |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 4 "Dear Toad, I am not at home. | Frog | Toad |  | normality + |  |
| 6 I want to be alone." | Frog | Frog | dissatisfaction: ennui-D |  |  |
| 7 "Alone?" | Toad | Toad | unhappiness: antipathy - D |  |  |
| 9 "Frog has me for a friend. | Toad | Frog |  | normality + |  |
| 20 ...sitting on an island by himself. | narrator | Frog | unhappiness: misery - D |  |  |
| 21 "Poor Frog," | Toad | Frog | unhappiness: misery - D |  |  |
| 23 "He must be very sad. | Toad | Frog | unhappiness: misery - D |  |  |
| 24 I will cheer him up." | Toad | Frog | happiness: cheer - S |  |  |
| 31 he shouted, | narrator | Toad | security: confidence - S |  |  |
| 33 It's your best friend, Toad!" | Toad | Toad |  | tenacity + |  |
| 36 and waved it like a flag. | narrator | Toad |  | propriety (t) |  |
| 49 He wants to be alone." | Toad | Frog | unhappiness: misery - D |  |  |
| 50 "If Frog wants to be alone," | Turtle | Frog | unhappiness: misery - D |  |  |
| 52 "why don't you leave him alone?" | Turtle | Toad | dissatisfaction: displeasure - D |  |  |
| 53 "Maybe you are right," | Toad | Turtle |  | veracity + |  |
| 55 ...Frog does not want to see me. | Toad | Toad | dissatisfaction: displeasure - D |  |  |
| 56 Maybe he does not want me... | Toad | Toad | dissatisfaction: displeasure - D |  |  |
| 56 ...me to be his friend anymore." | Toad | Toad | dissatisfaction: displeasure - D |  |  |
| 61 cried Toad. | narrator | Toad | unhappiness: misery - S |  |  |
| 62 "I am sorry for all the dumb... | Toad | Toad | insecurity: disquiet - D |  |  |
| 62 ...all the dumb things I do. | Toad | TOad |  | propriety (t) |  |
| 63 I am sorry for all the silly... | Toad | Toad | insecurity: disquiet - D |  |  |
| 63 ...all the silly things I say. | Toad | Toad |  | propriety (t) |  |
| 66 With a splash, he fell in the river. | narrator | Toad |  |  | composition: balance $+$ |
| 69 The sandwiches were wet. | narrator | sandwiches |  |  | composition: balance - |
| 70 ...pitcher of iced tea was empty. | narrator | pitcher |  |  | composition: balance |


| Clause by number | Appraiser | App. Item | Affect S/D | Judgment +/- | Apprec. +/- |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 71 "Our lunch is spoiled," | Toad | lunch |  |  | composition: balance - |
| 73 "I made it for you, Frog, | Toad | lunch |  | propriety (t) |  |
| 74 so that you would be happy." | Toad | Frog | happiness: cheer - D |  |  |
| 77 "I am happy. | Frog | himself | happiness: cheer - D |  |  |
| 78 I am very happy. | Frog | himself | happiness: cheer - D |  |  |
| 80 I felt good | Frog | himself | happiness: cheer - D |  |  |
| 81 because the sun was shining. | Frog | sun |  |  | reaction: impact + |
| 82 I felt good | Frog | himself | happiness: cheer - D |  |  |
| 84 And I felt good | Frog | himself | happiness: cheer -D |  |  |
| 85 because I have you for a friend. | Frog | Toad |  | propriety (t) | reaction: quality + |
| 86 I wanted to be alone. | Frog | Frog | satisfaction: admiration - D |  |  |
| 87 ...about how fine everything is." | Frog | everything |  |  | reaction: quality+ |
| 89 "I guess | Toad | his opinion | insecurity: surprise - S |  |  |
| 90 that is a very good reason... | Toad | reason |  |  | valuation + |
| 90 reason for wanting to be alone." | Toad | Frog's status | satisfaction: admiration-D |  |  |
| 93 "I will be glad | Frog | Frog | happiness: cheer - S |  |  |
| 93 not to be alone. | Frog | Frog | satisfaction: admiration-D |  |  |
| 96 They ate wet sandwiches... | narrator | sandwiches |  |  | compo: balance - |
| 97 They were two close friends | narrator | Frog \& Toad |  | normality + |  |
| 97 ...friends sitting alone together. | narrator | Frog \& Toad | satisfaction: admiration - S |  |  |


| Grade: 2nd Story Text: The Enormous Turnip |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Clause by number | Appraiser | App. Item | Affect +/- | Judgment +/- | Apprec. +/- |
| 1 Once upon a time an old man... | Narrator | man |  | normality - |  |
| 1 ...old man planted a little turnip | Narrator | turnip |  |  | reaction: impact - |
| 3 "Grow, grow, little turnip, | old man | turnip |  |  | reaction: impact - |
| 4 grow sweet! | old man | turnip |  |  | reaction: quality + |
| 5 Grow, grow, little turnip, | old man | turnip |  |  | reaction: impact - |
| 6 grow strong!" | old man | turnip |  |  | reaction: quality + |
| 7 And the turnip grew up sweet | Narrator | turnip |  |  | reaction: quality + |
| 7 ...sweet and strong and big and.. | Narrator | turnip |  |  | reaction: quality + |
| 7 ...strong and big and enormous. | Narrator | turnip |  |  | reaction: quality + |
| 7 ...strong and big and enormous. | Narrator | turnip |  |  | reaction: quality + |
| 8 Then, one day, the old man... | Narrator | man |  | normality - |  |
| 12 He called the old woman. | Narrator | woman |  | normality - |  |
| 13 The old woman pulled the... | Narrator | woman |  | normality - |  |
| 13 ...woman pulled the old man, | Narrator | man |  | normality - |  |
| 14 the old man pulled the turnip. | Narrator | man |  | normality - |  |
| 18 So the old woman called her... | Narrator | woman |  | normality - |  |
| 19 ...pulled the old woman, | Narrator | woman |  | normality - |  |
| 20 the old woman pulled the... | Narrator | woman |  | normality - |  |
| 20 ...woman pulled the old man, | Narrator | man |  | normality - |  |
| 21 the old man pulled the turnip. | Narrator | man |  | normality - |  |
| 27 ...pulled the old woman, | Narrator | woman |  | normality - |  |
| 28 the old woman pulled the... | Narrator | woman |  | normality - |  |
| 28 ...woman pulled the old man, | Narrator | man |  | normality - |  |
| 29 the old man pulled the turnip. | Narrator | man |  | normality - |  |
| 36 ...pulled the old woman, | Narrator | woman |  | normality - |  |
| 37 the old woman pulled the... | Narrator | woman |  | normality - |  |
| 37 ...woman pulled the old man, | Narrator | man |  | normality - |  |
| 38 the old man pulled the turnip. | Narrator | man |  | normality - |  |


| Clause by number | Appraiser | App. Item | Affect +/- | Judgment +/- | Apprec. $+/-$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 46 ...pulled the old woman, | Narrator | woman |  | normality - |  |
| 47 the old woman pulled the... | Narrator | woman |  | normality - |  |
| 47 ...woman pulled the old man, | Narrator | man |  | normality - |  |
| 48 the old man pulled the turnip. | Narrator | man |  | normality - |  |
| 51 and up came the turnip at last. | Narrator | relief | happiness: cheer $-S$ |  |  |

## 2.2 - Grade: 2nd Informational Text: From Seed to Plant

| Clause by number | Appraiser | App. Item | Affect $+/-$ | Judgment $+/-$ | Apprec. $+/-$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 2. beginning of a new plant. | narrator | plant |  | composition: balance + |  |
| 14. for their sweet juice, | narrator | juice |  | reaction: quality + |  |
| 19. it grows a long tube through | narrator | tube |  | composition: balance/ |  |
| 23. As the seeds become bigger, | narrator | seeds |  | composition: balance + |  |
| 26. When the fruit or pod ripens, | narrator | ripeness |  | valuation + |  |
| 28. ready to become new plants. | narrator | plants |  | valuation + |  |
| 40. ground like tiny parachutes. | narrator | fluffy seeds |  | reaction: quality |  |
| 47. garden is beautiful! | narrator | garden |  | reaction: quality + |  |
| 49. seeds come in small envelops | narrator | envelopes |  | reaction: quality - |  |
| 56. seed and soften its seed coat. | narrator | rain's action |  | composition: balance |  |
| 65. grows bigger and bigger. | narrator | plant |  | reaction: quality |  |
| 67. the plant is full-grown. | narrator | plant |  | reaction: quality |  |
| 69. where new seeds will grow | narrator | seeds |  | reaction: quality + |  |
| 71. They are full of nutrition, | narrator | foods |  | valuation + |  |
| 72. and they are tasty, too! | narrator | foods |  | valuation + |  |

Grade: 2nd Informational Text: Chameleon

| Clause by number | Appraiser | App. Item | Affect $+/-$ |  | Judgment $+/-$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Apprec. $+/-$ |  |  |  |  |  |
| 3. you'd never need new clothes. | narrator | clothes |  |  | reaction: + |
| 5. you with, my dear! | narrator | reader |  | normality + |  |
| 8. They whip them out to zap | narrator | actn of tongue | security: confidence - S |  |  |
| 8. to zap their food! | narrator | actn of tongue | security: confidence $-S$ |  |  |


| Grade: 2nd Informational Text: The Secret Life of Trees |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Clause by number | Appraiser | App. Item | Affect +/- | $\begin{aligned} & \text { Judgment } \\ & +/- \\ & \hline \end{aligned}$ | Apprec. +/- |
| 4. that protects the tree's trunk | narrator | bark |  |  | composition: complexity + |
| 5. The bark at the bottom is old. | narrator | bark |  |  | reaction: quality - |
| 6. It is rough and cracked. | narrator | bark |  |  | reaction: quality - |
| 7. the bark is young and smooth. | narrator | bark |  |  | reaction: quality + |
| 8. today is over 360 feet high! | narrator | tree |  |  | reaction: impact + |
| 10. trunk to build over 300 houses | narrator | amount |  |  | reaction: impact + |
| 14. through the thick earth. | narrator | earth |  |  | reaction: quality |
| 16. area the size of a soccer field!) | narrator | area |  |  | composition: balance (t) |
| 17. live longer than all other living | narrator | lifespan |  |  | reaction: impact + |
| 18. hundreds-even thousands | narrator | lifespan |  |  | reaction: impact + |
| 23. It is an amazing 4,900 years | narrator | lifespan |  |  | reaction: impact + |
| 26. birds carefully build nests. | narrator | care |  |  | composition: complexity + |
| 33. come in all shapes and sizes, | narrator | kinds of trees |  |  | composition: balance |
| 35. tree has large, flat leaves | narrator | leaves |  |  | reaction: quality + |
| 35. its wide-spreading branches. | narrator | branches |  |  | reaction: quality + |
| 36. The shady green forests of | narrator | forests |  |  | reaction: quality + |
| 38. In the cold chill of winter, | narrator | winter temps |  |  | reaction: quality - |
| 41. fresh new leaves open from | narrator | leaves |  |  | reaction: quality + |
| 43. as the days get longer | narrator | days |  |  | reaction: quality + |
| 45. with bright green leaves. | narrator | leaves |  |  | reaction: quality + |
| 47. in the misty autumn, | narrator | autumn |  |  | reaction: quality |
| 49. Some leaves turn brown. | narrator | leaves |  |  | reaction: quality |
| 50. Others turn bright yellow or | narrator | yellow |  |  | reaction: quality |
| 50. yellow or brilliant red. | narrator | red |  |  | reaction: quality |
| 55. can live in colder places | narrator | places |  |  | reaction: quality - |
| 56. they have short, sharp needles | narrator | needles |  |  | reaction: quality |
| 57. that shed snow easily. | narrator | needles |  |  | composition: complexity + |


| Clause by number | Appraiser | App. Item | Affect +/- | Judgment $+/-$ | Apprec. +/- |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 58. conifer are extra bouncy. | narrator | extent |  |  | composition: complexity + |
| 61. trees produce hard, scaly cons | narrator | cones |  |  | reaction: quality |
| 70. to keep the seeds dry. | narrator | seeds |  |  | reaction: quality + |
| 73. In steamy, wet jungles, | narrator | jungles |  |  | reaction: quality |
| 73. trees grow so close together | narrator | growth space |  |  | composition: balance |
| 74. that hardly any light reaches | narrator | amnt of light |  |  | composition: balance |
| 75. in the warmest countries | narrator | countries |  |  | reaction: quality |
| 76. Lots of tasty fruits and nuts | narrator | foods |  |  | reaction: quality + |
| 77. Coconut palms grow wild on | narrator | kind of growth |  |  | reaction: impact |
| 78. inside its hairy coconut shell. | narrator | shell |  |  | reaction: quality |
| 81. up somewhere dry. | narrator | place |  |  | reaction: quality |
| 84. its roots strangle the other | narrator | action of roots |  |  | reaction: quality |
| 90. And the biggest secret of all | narrator | secret |  |  | reaction: impact + |


| 2.3-Grade: 3rd Story Text: Pepita Talks Twice |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Clause by number | Appraiser | App. Item | Affect S/D | Judgment +/- | Appreciation. +/- |
| 5. they asked without a grumble. | narrator | Pepita | happiness: cheer - D | propriety + |  |
| 7. she didn't want to help anyone | narrator | Pepita | unhappiness: anipathy - D | tenacity - |  |
| 9. She wanted to teach their dog | narrator | P's ability |  | capacity+ |  |
| 9. teach their dog Lobo a new trick. | narrator | trick |  |  | reaction: quality |
| 10. She wanted to teach him to fetch | narrator | P's ability |  | capacity + |  |
| 13. Pepita raced by the grocery... | narrator | P's speed | inclination: desire - S |  |  |
| 13. , but not fast enough. | narrator | P's speed |  | capacity - |  |
| 15. speak to this lady in Spanish. | Mr. Hobbs | speech |  |  | reaction: quality |
| 17. ...did what Mr. Hobbs asked. | narrator | Pepita |  | propriety + |  |
| 18. But deep inside of her | narrator | extent |  |  | reaction: impact |
| 19. a grumble began. | narrator | Pepita | unhappiness: anipathy - S | propriety - |  |
| 20. She tiptoed by the house. | narrator | P's action | insecurity: disquiet - S |  |  |
| 21. but not softly enough. | narrator | P's action |  |  | reaction: impact - |
| 22. her aunt called in Spanish | narrator | Rosa |  |  | reaction: quality |
| 23. delivery man in English. | Rosa | speech |  |  | reaction: quality |
| 26. Pepita did what Aunt Rosa asked. | narrator | Pepita |  | propriety + |  |
| 27. But deep inside of her | narrator | extent |  |  | reaction: impact |
| 28. the grumble grew. | narrator | Pepita | unhappiness: antipathy - S | propriety - |  |
| 29. She ducked behind the fence | narrator | P's action | insecurity: disquiet - S |  |  |
| 30. but not low enough. | narrator | P's action |  | capacity - |  |
| 32. and said in Spanish | narrator | Miguel' |  |  | reaction: quality |
| 33. on the telephone in English. | Miguel | speech |  |  | reaction: quality |
| 35. Pepita did what Miguel asked. | narrator | Pepita |  | propriety + |  |
| 36. But deep inside of her | narrator | extent |  |  | reaction: impact |
| 36. the grumble grew larger | narrator | Pepita | unhappiness: antipathy - S | propriety - |  |
| 36. the grumble grew larger | narrator | grumble |  |  | reaction: quality |
| 38. the grumble grew so big ... | narrator | grumble |  |  | reaction: impact |
| 38. so big that it exploded. | narrator | Pepita | unhappiness: antipathy - S |  |  |


| Clause by number | Appraiser | App. Item | Affect S/D | Judgment +/- | Appreciation. +/- |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 40. she burst out, | narrator | Pepita | security: confidence - S |  |  |
| 41. "I would have been here first!" | Pepita | Pepita | dissatisfaction: displeasure- D | propriety - |  |
| 46. She slipped out of bed... | narrator | P's action | insecurity: disquiet - S |  |  |
| 46. ...of bed and tiptoed by Lobo, | narrator | P's action | insecurity: disquiet-S |  |  |
| 50. "I am never, ever going to... | Pepita | Pepita | unhappiness: antipathy - S |  |  |
| 50. ...to speak Spanish anymore," | Pepita | extent |  |  | reaction: impact - |
| 51. Pepita said loudly, | narrator | P's speech | security: confidence - S |  | reaction: impact |
| 52. "That's pretty dumb," | Juan | P's idea |  |  | valuation - |
| 54. "My, oh my, Pepita. | Mother | reaction | dissatisfaction: displeasure - S |  |  |
| 56. I'm tired of talking twice." | Pepita | P's attitude | dissatisfaction: displeasure- D |  |  |
| 60. So I'm never going to speak... | Pepita | extent |  |  | reaction: impact - |
| 60. ...to speak Spanish anymore." | Pepita | extent | unhappiness: antipathy - S |  |  |
| 61. tortilla and grinned. | narrator | Juan's reactn | happiness: cheer - S |  |  |
| 64. "They are all Spanish words, | Juan | words |  |  | reaction: quality |
| 65. "I will find a way," | Pepita | response | satisfaction: interest - S | capacity + |  |
| 66. Pepita said with a frown. | narrator | P's reaction | unhappiness: misery - S |  |  |
| 67. She hadn't thought about that | narrator | P's ability |  | capacity - |  |
| 68. Pepita kissed her mother, | narrator | P's action | happiness: affection - D | propriety + |  |
| 71. but not tight enough. | narrator | P's action |  |  | reaction: impact - |
| 72. ...and followed at her heels. | narrator | Lobo | happiness: affection-S |  |  |
| 74. Pepita scolded, | narrator | P's speech | unhappiness: antipathy - S |  |  |
| 76. But Lobo just wagged his tail | narrator | Lobo's action | happiness: affection-S |  |  |
| 81. I'll be late for school." | Pepita | herself | dissatisfaction: displeasure- D | tenacity + |  |
| 88. I don't speak Spanish anymore." | Pepita | extent |  |  | reaction: impact |
| 89. "That's too bad," | Mr. Jones | P's plan |  |  | valuation - |
| 91. it was a good thing to speak... | Mr. Jones | to speak |  |  | reaction: impact + |
| 92. "It's not a good thing at all, | Pepita | to speak |  |  | reaction: impact - |
| 94. Miss Garcia, smiled and said, | narrator | MG's action | happiness: cheer - S |  |  |
| 95. "We have a new student | Miss Garcia | student |  |  | reaction: quality + |


| Clause by number | Appraiser | App. Item | Affect S/D | Judgment +/- | Appreciation. +/- |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 97. and she speaks no English. | Miss Garcia | speech |  | capacity - |  |
| 98. ...all be as helpful as we can. | Miss Garcia | favor |  | propriety + |  |
| 101. Carmen smiled at Pepita | narrator | C's action | happiness: cheer - S |  |  |
| 102. wanted to run away and hide. | narrator | P's action | unhappiness: misery - S | propriety - |  |
| 103. Instead, she stood up and said | narrator | P's action |  | veracity + |  |
| 104. "I'm sorry, Miss Garcia, | Pepita | response | disinclination: fear - D |  |  |
| 105. but I can't. | Pepita | Pepita |  | capacity - |  |
| 106. I don't speak Spanish anymore." | Pepita | Pepita |  |  | reaction: impact - |
| 107. "That is really too bad," | Miss Garcia | P's plan |  |  | valuation - |
| 109. "It's such a wonderful thing | Miss Garcia | two langs |  |  | reaction: impact + |
| 110. Pepita mumbled to herself, | narrator | P's action | dissatisfaction: ennui - S | propriety - |  |
| 111. It is not a wonderful thing... | Pepita | spkng twice |  |  | reaction: impact - |
| 111. ...not a wonderful thing at all, | Pepita | extent |  |  | reaction: impact - |
| 118. he didn't open an eye or even | narrator | Lobo | dissatisfaction: ennui-D |  |  |
| 118. or even wiggle an ear. | narrator | Lobo | dissatisfaction: ennui -D |  |  |
| 119. behind her, Juan shouted, | narrator | J's action | security: confidence - S |  |  |
| 121. Like a streak, Lobo raced... | narrator | Lobo's action |  |  | reaction: impact + |
| 121. Lobo raced to the gate... | narrator | Lobo's action | security: trust - S |  |  |
| 121. to the gate and barked. | narrator | Lobo's action | satisfaction: interest -S |  |  |
| 122. Juan laughed and said, | narrator | Juan's action | happiness: cheer |  |  |
| 123. to teach old Lobo tricks | Juan | Lobo |  |  | reaction: quality |
| 124. if you don't speak Spanish?" | Juan | P's ability |  | capacity - |  |
| 125. "I'll find a way," | Pepita | response | satisfaction: interest - S | capacity + |  |
| 126. Pepita said with a frown. | narrator | Pepita | dissatisfaction: displeasure - S |  |  |
| 127. She had not thought about this | narrator | P's ability |  | capacity - |  |
| 129. on the front porch singing. | narrator | P's neighbors | happiness: cheer - D |  |  |
| 132. Pepita! Sing with us!" | neighbors | command | happiness: cheer - D |  |  |
| 133. "I can't," | Pepita | response |  | capacity - |  |
| 135. your songs are in Spanish, | Pepita | songs |  |  | reaction: quality - |


| Clause by number | Appraiser | App. Item | Affect S/D | Judgment +/- | Appreciation. +/- |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 136. and I don't speak Spanish | Pepita | P's action | dissatisfaction: displeasure - S | capacity - |  |
| 136. don't speak Spanish anymore." | Pepita | Pepita |  | capacity - |  |
| 137. "Too bad," | neighbors | Pepita |  |  | valuation - |
| 140. "I'll find a way," | Pepita | response | satisfaction: interest - S | capacity + |  |
| 141. Pepita said with a frown. | narrator | Pepita | unhappiness: misery - S |  |  |
| 142. she had not thought about. | narrator | Pepita |  | capacity - |  |
| 145. a new story for Pepita." | P's mother | story |  |  | reaction: quality + |
| 146. Juan laughed. | narrator | J's reaction | happiness: cheer - S |  |  |
| 147. all her stories in Spanish. | Juan | stories |  |  | reaction: quality - |
| 151. "I can listen in Spanish." | Pepita | P's ability |  | capacity + |  |
| 155. Pepita swallowed hard. | narrator | P's reaction | insecurity: disquiet - S |  |  |
| 156. speak Spanish anymore, Papa," | Pepita | extent |  |  | reaction: impact - |
| 158. "Too bad," | P's father | P's plan |  |  | valuation - |
| 160. "It's a fine thing to know | P's father | knowledge |  |  | valuation + |
| 161. "It's not a fine thing at all," | Pepita | knowledge |  |  | valuation - |
| 163. Her father was frowning at her. | narrator | Father | dissatisfaction: displeasure - S |  |  |
| 164. "She even calls Lobo | Juan | Pepita |  | propriety - |  |
| 168. and his frown grew deeper. | narrator | F's frown | dissatisfaction: displeasure - S |  |  |
| 169. find a new name for you, | P's father | name |  |  | reaction: quality + |
| 172. "I'll find a way," | Pepita | response | satisfaction: interest - S | capacity + |  |
| 173. said with a long sad sigh. | narrator | sigh | dissatisfaction: displeasure - S |  |  |
| 173. said with a long sad sigh. | narrator | P's reaction | unhappiness: misery - S |  |  |
| 174. never even thought about before. | narrator | P's reaction | insecurity: surprise - D |  |  |
| 176. and made a stubborn face. | narrator | Pepita |  | propriety - |  |
| 177. "I'll find a way," | Pepita | response | satisfaction: interest - S |  |  |
| 180. I can call myself Pete | Pepita | ability |  | capacity + |  |
| 181. I can listen to Spanish. | Pepita | ability |  | capacity + |  |


| Clause by number | Appraiser | App. Item | Affect S/D | Judgment +/- | Appreciation. +/- |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 182. I can hum with the singing. | Pepita | ability |  | capacity + |  |
| 183. I can call a taco a crispy, crunchy | Pepita | ability |  | capacity + |  |
| 183. taco a crispy....corn sandwich! | Pepita | taco |  |  |  |
| 184. Wolf will have to learn | Pepita | Wolf's ability |  | capacity + |  |
| 188. and dropped it at Pepita's feet. | narrator | Wolf's action | happiness: affection - S |  |  |
| 189. "You're a good dog, Wolf | Pepita | Wolf |  | propriety + |  |
| 192. boy laughed and clapped... | narrator | Miguel's actn | happiness: cheer |  |  |
| 196. Like a flash, Lobo ran | narrator | Lobo's action |  |  |  |
| 197. "Wolf!" Pepita yelled. | narrator | P's speech | disinclination: fear - S | capacity + |  |
| 198. But Lobo didn't listen | narrator | Lobo |  |  |  |
| 200. Pepita shouted. | narrator | P's speech | security: confidence - S |  |  |
| 201. darted right into the street. | narrator | Lobo |  | propriety - |  |
| 203. Pepita closed her eyes. | narrator | P's reaction | disinclination: fear - S |  |  |
| 205. she screamed. | narrator | P's reaction | disinclination: fear - D |  |  |
| 207. a loud screech of the car's | narrator | screech |  |  |  |
| 208. Pepita opened her eyes in time | narrator | P's action | security: confidence - S |  |  |
| 209. A red-faced man shouted | narrator | man | dissatisfaction: displeasure - S |  |  |
| 209. man shouted out the window | narrator | man | dissatisfaction: displeasure - S | propriety - |  |
| 211. Pepita shut the gate firmly | narrator | Pepita | unhappiness: antipathy - S |  |  |
| 211. behind Lobo and hugged him. | narrator | P's action | happiness: affection - S |  |  |
| 212. when I called in Spanish!" | Pepita | speech |  |  |  |
| 213. She nuzzled her face | narrator | P's action | happiness: affection - S |  |  |
| 213. her face in his warm fur. | narrator | fur |  |  |  |
| 214. "I'll never call you Wolf again," | Pepita | Pepita |  | propriety + |  |
| 218. I'm glad I talked twice! | Pepita | herself | happiness: cheer - S |  |  |
| 219. It's great to speak two | Pepita | opinion | happiness: cheer -S |  |  |

2.4-Grade: 3rd Informational Text: Sue the Tyrannosaurus Rex

| Clause by number | Appraiser | App. Item | Affect +/- | Judgment <br> +/- | Apprec. $+/-$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 1. one of its grandest shows ever. | narrator | shows |  | reaction: impact + |  |
| 7. On a hot summer day in 1990, | narrator | day |  | reaction: quality |  |
| 16. They looked very old. | narrator | bones |  | reaction: quality |  |
| 20. spotted some strange bones | narrator | bones |  | reaction: quality |  |
| 21. The bones were huge! | narrator | bones |  | reaction: quality |  |
| 23. belonged to one of the largest | Hendrickson | dinosaurs |  | reaction: quality |  |
| 23. perhaps strongest dinosaurs | Hendrickson | dinosaurs |  | reaction: quality + |  |
| 28. that this amazing find was | scientists | find |  | reaction: impact + |  |
| 32. with the help of some invstrs, | narrator | assistance |  | capacity + |  |
| 33. This was a very important buy. | narrator | buy |  | valuation + |  |
| 45. looking closely at the bones. | narrator | scientists |  | reaction: quality |  |
| 49. with such a gigantic head, | narrator | head |  | composition: balance - |  |
| 50. is just large enough to hold | narrator | brain cavity |  | capacity - |  |
| 52. may not have been very smart, | narrator | T.Rex |  |  | reaction: quality |
| 58. not need such big, sharp teeth. | narrator | teeth |  | reaction: quality |  |
| 63. Dkta was warmer and wetter | narrator | S. Dakota |  | composition: balance |  |
| 66. in the area had plenty to eat | narrator | food |  |  |  |
| 77. How would you feel | narrator | reader | disinclination: fear - S |  |  |


| Text: Wild Shots, They're My Life |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Clause by number | Appraiser | App. Item | Affect +/- | Judgment +/- | Apprec. +/- |
| 1. When I was a little girl, | Narrator | herself |  |  | reaction: quality |
| 2. all my best friends were furry, | Narrator | best friends |  | normality + |  |
| 3. the gentle, trusting creatures | Narrator | creatures | security: trust - D |  | reaction: impact + |
| 7. But my favorite classroom was | Narrator | classroom |  |  | reaction: quality + |
| 7. the great Galapagos outdoors! | Narrator | outdoors |  |  | reaction: quality |
| 8. ago by a bunch of volocanos | Narrator | volcanoes |  |  | composition: balance |
| 12. dad let me use his old camera. | Narrator | camera |  |  | reaction: quality |
| 16. The best part was | Narrator | part |  |  | valuation + |
| 17. were as curious about me | Narrator | reaction |  | normality + |  |
| 18. as I was about them. | Narrator | reaction |  | normality + |  |
| 19. get "up close and personal" | Narrator | location |  |  | reaction: impact |
| 23. and my best friends are | Narrator | friends | happiness: affection - D |  |  |
| 26. I like to photograph | Narrator | hobby | happiness: cheer - D |  |  |
| 30. until they get so used to me | Narrator | animl comfrt | security: confidence - D |  |  |
| 33. some of my favorite photos | Narrator | photos |  |  | valuation + |
| 37. its thick, downy baby feathers. | Narrator | feathers |  |  | composition: balance |
| 38. They work like a coat to | Narrator | feath. Functn |  |  | composition: balance |
| 41. They finally got tired of | Narrator | peng. Parents | dissatisfaction: displeasure - D |  |  |
| 41. got tired of being pestered | Narrator | peng. parents | dissatisfaction: displeasure - S |  |  |
| 42. and started waddling away. | Narrator | peng. parents | dissatisfaction: displeasure - S |  |  |
| 45. Islands are famous for their | Narrator | islands |  |  | reaction: impact + |
| 45. for their huge tortoises. | Narrator | tortoises |  |  | reaction: quality |
| 47. early Spanish-speaking explorers | Narrator | explorers |  |  | reaction: quality |
| 48. they saw tons of these | Narrator | tortoises |  |  | reaction: impact |
| 48. of these big fellas. | Narrator | tortoises |  |  | reaction: quality |
| 51. The tortoise was so busy | Narrator | tortoise | security: trust - D |  |  |
| 51. for just the right tasty plants, | Narrator | plants |  |  | reaction: quality + |
| 56. the kind of action shot | Narrator | photograph |  |  | reaction: quality + |


| Clause by number | Appraiser | App. Item | Affect +/- | Judgment +/- | Apprec. +/- |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 59. Tortoises love a good cactus. | tortoises | reaction | happiness: affection - D |  |  |
| 59. Tortoises love a good cactus. | tortoises | cactus |  |  | valuation + |
| 63. graze on stubby seaweed | Narrator | seaweed |  |  | reaction: quality |
| 66. these little sea dragons | Narrator | sea dragons |  |  | reaction: quality |
| 66. dragons are right at home | Narrator | sea dragons |  |  | reaction: impact + |
| 66. in the pounding waves. | Narrator | waves |  |  | reaction: quality |
| 69. camera into a waterproof case | Narrator | case |  |  | reaction: quality |
| 71. Iguanas have sharp claws, | Narrator | claws |  |  | reaction: quality |
| 72. can hang on tight to rocks | Narrator | Iguanas |  | capacity + |  |
| 74. I bounced around | Narrator | Narrator | insecurity: disquiet - S |  |  |
| 75. got lots of cuts and bruises | Narrator | injuries |  |  | reaction: quality |
| 76. But this neat photo | Narrator | photo |  |  | valuation + |
| 77. fight can be pretty wild | Narrator | fight |  |  | valuation + |
| 78. -and scary. | Narrator | fight |  |  | valuation - |
| 79. it looks worse than it is: | Narrator | fight |  |  | reaction: quality - |
| 81. birds in the big photo above. | Narrator | photo |  |  | reaction: quality |
| 83. with their sharp beaks. | Narrator | beaks |  |  | reaction: quality |
| 84. But neither delicate throat | Narrator | throat |  |  | reaction: quality |
| 88. I saw these guys having it out | Narrator | birds | dissatisfaction: displeasure - S |  |  |
| 89. They were so wrapped up in | Narrator | birds | insecurity: surprise |  |  |
| 96. and flashed their "fangs." | Narrator | bull | security: confidence - S |  |  |
| 101. their lazy pushing and | Narrator | bulls |  |  | reaction: quality - |
| 114. are always new animal friends | Narrator | friends |  |  | reaction: quality + |


| 2.5 - Grade: 4th Story |
| :--- |
| Clause by number Text: Tucker Mouse     <br> 4. what he enjoyed most narrator Tucker happiness: cheer - D   <br> 14. - just exploring. narrator Tucker security: confidence - S   <br> 19. he whispered narrator Tucker insecurity: surprise - S   <br> 24. again, louder this time. narrator Tucker security: confidence - S   <br> 25. like little feet feeling their way narrator scuffling    <br> 31. with two shiny black eyes, narrator eyes    <br> 38. He had a high, musical voice. narrator Chester  reaction: quality  <br> 39. spoken to an unheard melody. narrator Chester  reaction: quality  <br> 43. "I guess so," Chester himself insecurity: disquiet - S  reaction: quality + <br> 46. cricket and looked him all over. Tucker action satisfaction: interest  reaction: impact+ <br> 48. he said admiringly. Tucker Tucker happiness: affection - D   <br> 59. I'll never see it again," Chester Chester unhappiness: misery - D   <br> 60. he added wistfully. Chester Chester dissatisfaction: displeasureS   <br> 63. "It's a long story," Chester story    <br> 67. settling back on his haunches. narrator Tucker satisfaction: interest -S   <br> 68. He loved to hear stories. narrator Tucker happiness: cheer - D   <br> 69. It was almost as much fun as narrator Tucker    <br> 72. just enjoying the weather Chester attitude happiness: cheer - D   <br> 72. and thinking how nice it was Chester attitude happiness: cheer - D   <br> 78. to get my legs in condition for Chester Chester inclination: desire - S   <br> 84. when I smelled something," Chester Chester satisfaction: interest - S   <br> 87. which I love." Chester affection happiness: affection - D   <br> 88. "You like liverwurst?" Tucker Chester happiness: affection - D   <br> 89. Tucker broke in. narrator Tucker security: confidence - S   <br> 93. In one leap, he sprang down narrator Tucker  capacity +  <br> 93. down all the way from the shelf narrator extent    <br> 94. and dashed over to his drain narrator Tucker inclination: desire - S   <br> 97. Tkr was a very excitable person Chester Tucker happiness: cheer - D normality +  |


| Clause by number | Appraiser | App. Item | Affect +/- | Judgment +/- | Apprec. +/- |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 98. -even for a mouse. | Chester | extent |  |  | reaction: impact |
| 99. nest was a jumble of......change, | narrator | nest |  |  | reaction: quality- |
| 101. left and right in a wild search. | narrator | search |  |  | reaction: impact |
| 102. Neatness was not one of the | narrator | Tucker |  | capacity - |  |
| 106. a big piece of liverwurst he had | narrator | liverwurst |  |  | reaction: quality + |
| 107. It was meant to be for brkfst | narrator | gift | happiness: affection - S |  |  |
| 109. cricket was a special occasion. | narrator | meeting C | happiness: cheer - S |  | valuation + |
| 111. he whisked back to the nwstand | narrator | Tucker | satisfaction: interest - S |  |  |
| 113. he said proudly, | narrator | Tucker | security: confidence - D | tenacity + |  |
| 117. we'll enjoy a snack too. | Tucker | Chester | happiness: cheer - S |  |  |
| 118. "That's very nice of you," | Chester | T's action |  | propriety + |  |
| 120. He was touched | narrator | Chester | satisfaction: admiration-D |  |  |
| 122. "I had a little chocolate | Chester | extent |  |  | composition: balance - |
| 128. and gave Chester the bigger | narrator | Tucker | happiness: affection - S |  |  |
| 128. gave Chester the bigger one. | narrator | liverwurst |  |  | reaction: quality + |
| 129. "So you smelled the liverwurst | Tucker | Chester | inclination: desire - S |  |  |
| 132. "Very logical," | Tucker | Chester |  | capacity + |  |
| 134. munching with his cheeks full | narrator | Tucker | security: trust - D |  |  |
| 140. and a whole lot of other things | Chester | food |  |  | reaction: impact + |
| 142. Tkr Mse moaned with pleasure | narrator | Tucker | happiness: cheer-S |  |  |
| 143. having such a good time | Chester | people | happiness: cheer - D |  |  |
| 143. laughing and singing songs | Chester | people | happiness: cheer - S |  |  |
| 147. "I was sure | Chester | himself | security: confidence - D |  |  |
| 150. Tucker Mouse sympathetically. | narrator | Tucker |  | veracity + |  |
| 152. Plenty for all | Tucker | food |  |  | reaction: quality + |
| 154. "Now, I have to admit," | Chester | admission | security: trust - S |  |  |
| 156. "I had more than a taste. | Chester | taste |  |  | composition: balance |
| 157. of fact, I ate so much | Chester | food |  |  | composition: balance |
| 158. I couldn't keep my eyes open | Chester | reaction | satisfaction: interest - D |  |  |


| Clause by number | Appraiser | App. Item | Affect +/- | Judgment +/- |
| :--- | :--- | :--- | :--- | :--- |
| Apprec. +/- |  |  |  |  |
| 159. what with being tired from | Chester | exhaustion | security: confidence - S |  |
| 165. Tucker exclaimed. | narrator | Tucker | security: confidence |  |
| 166. Well there are worse fates." | Tucker | agreement |  |  |
| 167. ..first I wasn't too frightened," | Chester | Chester | security: confidence - D | tenacity + |
| 170. the basket sooner or later. | Chester | extent time |  | reaction: impact + |
| 171. Little did I know!" | Chester | Chester |  | reaction: impact |
| 172. He shook his head and sighed. | narrator | Chester |  | tenacity - |
| 178. was a rattling and roaring snd, | Chester | sound |  |  |
| 180. this time I was pretty scared. | Chester | Chester | insecurity: disquiet - D |  |
| 182. was taking me farther away | Chester | extent place |  |  |
| 183. wasn't anything I could do | Chester | his ability |  |  |
| 184. getting awfully cramped too, | Chester | his comfort |  |  |
| 189. the train would give a lurch | Chester | train |  | reaction: impact - |
| 190. to free myself a little. | Chester | extent |  |  |
| 191. We traveled on and on, | Chester | time |  | reaction: quality - |
| 193. I didn't have any idea where... | Chester | Chester |  | reaction: impact - |
| 195. I could tell from the noise | Chester | Chester |  | composition: balance |


| Text: Saguaro Cactus |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Clause by number | Appraiser | App. Item | Affect +/- | Judgment +/- | Apprec. +/- |
| 1. Desert is a small bit of land | narrator | land |  |  | reaction: quality |
| 2. weather is hot and dry there | narrator | weather |  |  | reaction: quality - |
| 3. It is a very difficult place | narrator | place |  |  | reaction: impact |
| 4. is an amazing sight | narrator | sight |  |  | reaction: impact + |
| 11. than just a giant plant. | narrator | saguaro |  |  | reaction: impact |
| 12. It is the center of life | narrator | place |  |  | composition: balance |
| 12. including the tiny elf owl. | narrator | elf owl |  |  | reaction: quality |
| 15. inside the cool saguaro.) | narrator | saguaro |  |  | reaction: quality + |
| 17. when warm rains come | narrator | rains |  |  | reaction: quality |
| 21. the sweet, juicy pulp | narrator | pulp |  |  | reaction: quality + |
| 22. rabbits gobble up the soft | narrator | rabbit | happiness: cheer - S |  |  |
| 22. the soft, black seeds. | narrator | seeds |  |  | reaction: quality |
| 26. The desert is a harsh place | narrator | place |  |  | reaction: quality - |
| 26. for young saguaros. | narrator | saguaro |  |  | reaction: quality |
| 27. die in the blazing heat. | narrator | heat |  |  | reaction: quality - |
| 28. But a few lucky plants | narrator | plants |  |  | reaction: impact + |
| 28. take root in shady spots, | narrator | spots |  |  | reaction: quality |
| 28. safe from the burning sun. | narrator | sun |  |  | reaction: quality - |
| 30. saguaro is off to a good start. | narrator | saguaro |  |  | composititon:complexity+ |
| 31. saguaro grows very slowly. | narrator | saguaro |  |  | reaction: impact - |
| 33. spring lovely flowers appear | narrator | flowers |  |  | reaction: quality + |
| 36. This is the sweet liquid | narrator | liquid |  |  | reaction: quality + |
| 39. a bit of pollen might fall | narrator | pollen |  |  | composition: balance |
| 40. saguaro has long folds | narrator | folds |  |  | reaction: quality |
| 43. sago. grows fatter and fatter. | narrator | saguaro |  |  | composition: balance - |
| 44. A fully grown saguaro | narrator | saguaro |  |  | reaction: quality + |
| 47. They stay shallow to catch | narrator | roots |  |  | reaction: quality |
| 48. shape of a giant bowl.) | narrator | bowl |  |  | reaction: quality |


| Clause by number | Appraiser | App. Item | Affect +/- | Judgment +/- | Apprec. +/- |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 52. With its long, sharp beak | narrator | beak |  |  | reaction: quality |
| 52. the saguaro's tough skin | narrator | sag. Skin |  |  | reaction: quality + |
| 55. a cool nesting place | narrator | place |  |  | reaction: quality + |
| 56. Safely inside, | narrator | birds | security: confidence -S |  |  |
| 56. otherwise harm the saguaro. | narrator | insects |  | propriety - |  |
| 68. Old woodpecker nests | narrator | woodpecker |  |  | reaction: quality |
| 74. birds find a safe, cool place | narrator | place |  |  | reaction: quality + |
| 76. from its sides like arms. | narrator | branch |  |  | valuation + |
| 77. build cozy nests. | narrator | nests |  |  | reaction: impact + |
| 81. and teeming with life! | narrator | saguaro |  |  | reaction: impact + |
| 82. more like a crowded village | narrator | saguaro |  |  | reaction: impact |
| 87. eat the tender plants | narrator | plants |  |  | reaction: impact - |
| 89. they stay safe from coyotes | narrator | creatures | security: confidence -D |  |  |
| 89. are free to spy | narrator | creatures | security: confidence -S |  |  |
| 89. on small prey. | narrator | prey |  |  | reaction: quality |
| 93. they are excellent hunters, | narrator | hunters |  | capacity + | reaction: impact + |
| 97. coyotes will even eat berries, | narrator | extent |  |  | composition: balance |
| 98. provides an important habitat | narrator | habitat |  |  | valuation + |
| 99. in the end, old age | narrator | age |  |  | reaction: quality |
| 99. trunk of the great plant. | narrator | plant |  |  | reaction: quality + |
| 106. Very, very slowly, | narrator | cactus |  |  | composition: complexity - |
| 109. Using all its strength, | narrator | javelina |  |  | reaction: impact + |
| 110. the javelina tears at the fallen | narrator | javelina |  | tenacity + |  |
| 111. meal of tender young plants | narrator | plants |  |  | reaction: quality + |
| 113. a young, healthy saguaro | narrator | saguaro |  |  | reaction: quality + |
| 116. rough, grayish-black coats | narrator | coats |  |  | reaction: quality |
| 118. prey on small animals.) | narrator | animals |  |  | reaction: quality - |
| 119. With a good deal of luck, | narrator | luck |  |  | composition: balance + |
| 119. the young saguaro will | narrator | saguaro |  |  | reaction: quality + |


| Clause by number | Appraiser | App. Item | Affect $+/-$ | Judgment $+/-$ | Apprec. $+/-$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 119. into a grand cactus. | narrator | cactus |  | reaction: quality + |  |
| 120. And if it succeeds, | narrator | saguaro | security: confidence - S |  |  |


| nal Text: Caring for Crocs |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Clause by number | Appraiser | App. Item | Affect +/- | Judgment +/- | Apprec. +/- |
| 1. are gentler than they look | narrator | Amer. Crocs | propriety + |  |  |
| 3. But the good news is that | narrator | news | reaction: quality + |  |  |
| 4. working to save them. | narrator | people | tenacity + |  |  |
| 5. an exciting time of year | narrator | time of year | reaction: impact + |  |  |
| 10. Broken eggshells. | narrator | eggshells | composition: balance |  |  |
| 11. Tiny tracks at the water's edge. | narrator | tracks | reaction: quality |  |  |
| 15. too much of the crocs' natural | narrator | home | reaction: impact - |  |  |
| 18. Luckily, by the end of the | narrator | fortune | happiness: cheer -S |  |  |
| 18. government started to help. | narrator | government | propriety + |  |  |
| 19. It began to protect a big chunk | narrator | government | propriety + |  |  |
| 19. It began to protect a big chunk | narrator | chunk | reaction: quality |  |  |
| 21. But these huge reptiles | narrator | reptiles | reaction: impact |  |  |
| 22. To help save them, | narrator | people | propriety + |  |  |
| 27. these crocs aren't so scary. | narrator | crocs | normality + |  |  |
| 28. crocodiles are more scared of | narrator | crocs | disinclination: fear - D |  |  |
| 31. But the most important time | narrator | time | valuation + |  |  |
| 39. comes back often to check | narrator | time | reaction: impact + |  |  |
| 40. she hears little chirps | narrator | chirps | reaction: impact |  |  |
| 41. nest to listen closely. | narrator | crocodile | capacity + |  |  |
| 42. babies are finally hatching! | narrator | time | happiness: affection -D | reaction: impact + |  |
| 47. catching the little creatures | narrator | creatures | reaction: quality |  |  |
| 58. keep track of how fast they | narrator | babies | capacity |  |  |
| 62. that's not the best idea. | Frank | idea | valuation - |  |  |
| 63. "The most important way | Frank | way | valuation + |  |  |
| 63. we can help these animals | Frank | people | propriety + |  |  |
| 67. they do just fine." | Frank | crocodile | propriety + |  |  |
| 69. Keep up the good work, | narrator | Frank \& Laura | propriety + |  |  |
| 72. will snatch up most of them | narrator | birds \& fish | propriety - |  |  |

## 3. IRB Exemption Letter

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Alli G.arstield
13021455
2(N) Iujell 气t,
Gilenvil.le, Kit 26351
Dear Wh. Cpaiticld:



 Cole ol'Fenleral Reyulaííns (45CtR4í) has set Aorth the criferitu uliliyed in making this determintilon. Since the information in this surly is a texund analysis of publicly available irliormation it is ont consicicrod humati subjesi seswanel. TF there are any changer to the atsirace you provided then you swould need la restlbnil that intiormarion to the Offien of Research lutesgivy for ieview and a sleleriminatian.
 t:onlact the Olliee of Research [ntecrity if you bave any queskicins jenarding fiture protocoly hal tray rexume lkB review:

## We Are...MARSHALL.





[^0]:    ${ }^{1}$ There is a distinction between levels of abstraction and generalization, the first of which refers to redundancy features, and the second, to embedded meanings.

[^1]:    Chart 5.4.1 - Affect by Grade Level

