

Running Head: Kindergarten Classrooms

The Curriculum Dilemma in Michigan Kindergarten Classrooms

A Research Study

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Current research of kindergarten curriculum has shown a dramatic increase in the academic nature of standards and the number of tests for current kindergarten students. This increase is evident throughout the country and also pronounced in the state of Michigan due to the new Michigan High School Initiative and No Child Left Behind movements. These movements were initiated to create accountability for both teachers and students. The intent is to create an educational system that consistently produces high achieving students. To create this system, high standards and new requirements have been put in place for each grade level, including kindergarten. The dramatic curriculum shift is characterized by higher standards and is due, in part to societies growing need for accountability, and thus more assessment of student achievement as shown by the implementation of No Child Left Behind.

In the past, kindergarten was a place where five year old students were given a gentle introduction to school through social interaction and various play opportunities. William H. Jaynes describes the vision of Frederick Froebel, the inventor of kindergarten, in his article entitled, Standardized Tests and Froebel's Original Kindergarten Model. In this article, Froebel's intentions for kindergarten are highlighted. Froebel did not place academic standards to be tested and measured on the young students of this grade. He intended for students to learn basic social, moral, and some academic skills mainly through play and group activities. Now, we require kindergarten students to demonstrate the ability to do much more than function as moral, ethical, and cooperative members of a classroom. Standards are now requiring kindergartners to add and subtract, read and comprehend, and write and request suggestions for revision (MDE, 1996). More importantly, we are using standardized testing and rigid assessment techniques to verify that these standards are being met. Kindergarten curriculum and the demands placed on students of this grade have changed dramatically and have begun to include much more rigorous academic standards and testing than in the past. (Deyer & Barta, 2001)

While there is an increase in the level of standards and demands, there has not been an increase in the minimum entrance age for kindergarten enrollment. Minimum entrance age of five years old has remained the same as it has from the onset of this crucial grade. Educators are simply requiring more of students at a younger age. And, because of the increased need for accountability, these five year old students are subjected to a multitude of both standardized and non-standardized tests and assessments. The practice of utilizing standardized tests is not proven to be effective for students in this young age group. (Jeynes, 2006) However, due to the need for accountability, schools are allowing such testing methods. I question whether these practices of higher academic standards and increased use of standardized assessments are developmentally appropriate for a five year old student.

While there has not been a state mandated change to the minimum kindergarten entrance age, there has been a recent trend for both parents and teachers to postpone kindergarten enrollment of those students who turn five between July and December. This practice, commonly referred to as “red-shirting”, highlights the fact that some members of our society recognize that the traditional kindergarten student may not be mature enough to handle the new demands and have accepted the practice of postponing enrollment in order to give these students a better chance at academic success (Stipek & Byler, 2001). The education system has also attempted to remedy this issue by providing pre-kindergarten or kindergarten readiness programs such as young five’s kindergarten, developmental kindergarten, and alternate retention programs or transitional kindergarten. However, are these management plans the correct response, or do policy makers need to pay more attention to child development research and develop a more age appropriate kindergarten curriculum? New demands and graduation requirements do not seem to be a passing trend. Each generation brings new information and technology that must be integrated into current educational standards and practices. Our education system needs to

develop a more appropriate method to deal with these other than the “pushing down” of old standards method that is currently used. This method currently appears to be creating developmentally inappropriate kindergarten classrooms through the introduction of standards and practices formerly required of older, more educationally experienced, first grade students. Can we assume that first and second grade classrooms will soon follow this pattern? In order to answer this and other questions about current kindergarten curriculum and testing practices in Michigan, I have developed the following research question: Is current kindergarten curriculum in Michigan developmentally appropriate for a typical five year old student? This question addresses what education practices are appropriate for five year old students as well as those practices which are considered inappropriate by current child development standards. It also addresses the current curriculum standards and how they are currently utilized in kindergarten classrooms in Michigan with regards to academic subjects, classroom activities and routines, and assessment of students. It then addresses whether these practices are appropriate according to child development research of the five year old.

In order to answer this question I have collected data on current kindergarten curriculum standards and assessment strategies in Michigan. Current state curriculum includes benchmarks and standards for the primary grades. I have also attempted to collect a variety of standards from individual school districts in order to gain an understanding about the curriculum and student requirements for the many subjects offered in kindergarten classrooms. Current research on child development and the physical, emotional, academic, and social characteristics of a typical five year old has also been researched.

In addition, kindergarten teachers in Michigan were surveyed in order to discover what these teachers feel has changed since the introduction of a more academic kindergarten. Survey questions included address the experience of the teacher, age range of students in the classroom

from the past and present, type of kindergarten classroom (full or half day), academic requirements, assessment techniques used, as well as, thoughts and feelings about the current trends in kindergarten curriculum and their effect on kindergarten students. A sample of the school districts in Michigan was created in order to represent all the regions in Michigan as well as other district characteristics including size, funding, and location (urban vs. rural). From these districts, the two most experienced kindergarten teachers in the districts selected were asked to complete the survey. In doing this I hoped to acquire valuable information about the recent curriculum shift and how it has changed the kindergarten classroom of the past into what is seen today. I believe teacher perspectives are essential in understanding the effect of the shift in curriculum on current kindergarten students.

After data collection, current curriculum standards and assessment techniques were compared to typical five year old developmental characteristics in order to determine whether these standards and assessment methods are developmentally appropriate. The teacher survey was used to gain insight on the effect of new standards on the actual classroom practices of a kindergarten classroom in Michigan, as well as, the average age and developmental level of students entering kindergarten and their projected success. From this data, I attempt to depict a kindergarten classroom that is developmentally appropriate for the five year old with regards to curriculum, standards, assessment, classroom practices, and daily routines and activities.

I begin my research with the assumption that educational trends of accountability have caused the shift in kindergarten curriculum. This study will not attempt to prove this causal relationship between educational programs such as No Child Left Behind and Michigan High School Initiative and the changes in traditional kindergarten curriculum. Also, this study is focused only on the state of Michigan. It will not address curriculum standards and classroom practices of other states around the nation. Thus, I will be unable to make conclusions about

national curriculum standards or trends in education. In addition, this study will not look at the effect of higher kindergarten standards on educational success in later years. I do not intend to make a statement about a correlation between kindergarten standards and future academic success. This question will also not address what practices are appropriate for other age groups, nor address curriculum practices of other grade levels.

In addition to these limitations, there are some steps in the data collection process which required close attention and scrutiny. First, when selecting a “random” sampling of schools, I have attempted to include all levels of various district characteristics in the final sample set. These characteristics include level of funding, classification (urban or rural), size, and location in the state. To assist in obtaining a more detailed description of curriculum differences, I limited surveying to those teachers with the most experience in the district. However, this did not ensure that I will receive responses from teachers who have actually experienced a curriculum shift in their kindergarten teaching career. Since information obtained from these teachers is less valuable to this study than that of more experienced teachers, there was a risk of not gaining enough usable information that I took when conducting the teacher survey.

Even with these risks and limitations, this study has produced research and data utilized to obtain a valuable understanding of the question of curriculum and practices in Michigan kindergarten classrooms. First, I will address what current research has shown about developmental characteristics. It is generally accepted that children reach specific milestones at varying ages. However, there is a definite point at which a child should have reached said milestones. On average, according to the American Association of Pediatrics, at the end of age five, the following characteristics can be seen in most children:

Movement

- Stands on one foot for 10 seconds or longer
- Hops, somersaults
- Swings, climbs
- May be able to skip

Hand and Finger Skills

- Copies triangle and other geometric patterns
- Draws person with body
- Prints some letters
- Dresses and undresses without assistance
- Uses fork, spoon and (sometimes) a table knife
- Usually cares for own toilet needs

Language

- Recalls part of a story
- Speaks sentences of more than five words
- Uses future tense
- Tells longer stories
- Says name and address

Cognitive Milestones

- Can count 10 or more objects
- Correctly names at least four colors
- Better understands the concept of time
- Knows about things used every day in the home (money, food, appliances)

Social

- Wants to please friends
- Wants to be like her friends
- More likely to agree to rules
- Likes to sing, dance and act
- Shows more independence and may even visit a next-door neighbor by herself

Emotional Milestones

- Aware of sexuality
- Able to distinguish fantasy from reality
- Sometimes demanding, sometimes eagerly cooperative

This list, while not exhaustive, gives an overview of the capabilities of the typical five year old. In addition, other sources suggest that “Six- to 8-year-olds can rarely sit for longer than

15-20 minutes for an activity". (DeBord, 1996, p.3). Thus, younger children should not be expected to have achieved an attention span of this length.

In addition to these milestones, I have researched theories of child development that are accepted and utilized in the current educational system. Jean Piaget theories on child development are not recent, but are still currently accepted in the practice of education. Piaget theorized that a child's development can be divided into four stages. Five year old students fall into the Preoperational Thought Stage. At this stage, according to Piaget, children acquire representational skills in the area of mental imagery, and especially language. They are very self-oriented, and have an egocentric view. Thus, preoperational children can use these representational skills only to view the world from their own perspective (Woolfolk, 1998). Piaget stages allow for closer scrutiny of current curriculum standards and how they are aligned with what children in this age range can be expected to achieve.

With regards to school curriculum, research has revealed that the state of Michigan has developed a curriculum framework of benchmarks for all grade levels and subjects. In addition, there are Grade Level Content Expectations for language and math for kindergarten students. The Michigan Curriculum Benchmarks give standards for various levels, but are not sorted by grade level. Therefore, they would be an inadequate measure for standards specific to kindergarten classrooms. However, the Grade Level Content Expectations are directed toward specific grade levels and can be used to identify those items which are expected of kindergarten students. According to the state of Michigan web site for curriculum and grade level expectations, kindergarten students should be able to complete numerous tasks within the areas of mathematics and language. While the complete list can be viewed in Figure 3, I have listed those tasks below which will be compared to the above mentioned developmental characteristics.

Mathematical tasks

- Count, compare, order, recognize, and manipulate numbers to 30
- Count orally to 100 by ones and to 30 by 2's, 5's, and 10's using grouped objects as needed.
Compose and decompose numbers 2-10 through addition
- Describe and make drawings to represent addition and subtraction situations/ use finger and object counting.
- Record mathematical thinking by writing simple addition and subtraction sentences
- Create, describe, and extend simple number and geometric patterns.
- Know and use the common words for the parts of the day and relative time
- Identify tools that measure time (clocks and calendars).
- Identify daily landmark times to the nearest hour (lunchtime is 12 o'clock; bedtime is 8 o'clock).
- Compare two or more objects by length, weight and capacity
- Compare length and weight of objects by comparing to reference objects, and use terms such as shorter, longer, taller, lighter, heavier.
- Relate familiar three-dimensional objects inside and outside the classroom to their geometric name
- Identify, sort, and classify objects by attribute and identify objects that do not belong in a particular group.

Language tasks

- demonstrate phonemic awareness and understand the alphabetic principal
- automatically recognize a small number of frequently encountered, personally meaningful words
- know the meanings of words encountered frequently in reading and oral language contexts.
- discuss setting, characters, and events in narrative text.
- begin to make connections and comparisons by activating prior knowledge and connecting personal knowledge and experience to ideas in text through oral and written responses.
- retell up to three events from familiar text using their own words or phrasing.
- begin to make meaningful predictions based on illustrations or portions of texts.
- choose books, book activities, word play, and writing on their own during free time
- write a brief personal narrative and informational piece using pictures, words, word-like clusters, and/or sentences as support.
- brainstorm to generate and structure ideas for narrative or informational writing.
- draft focused ideas using semi-phonetic spelling to represent narrative and informational text when writing, incorporating pictures, and drawings.
- attempt to revise writing based on reading it aloud, requesting suggestions and clarifications that support meaning.
- in the context of writing, correctly spell a small number (about 18) of frequently encountered and personally meaningful words.
- in the context of writing, correctly spell less frequently encountered words, relying on structural cues and environmental sources
- form upper and lowercase manuscript letters, leave space between words and word-like clusters of letters, and write from left to right and top to bottom.
- engage in substantive conversations, remaining focused on subject matter, with interchanges beginning to build on prior responses in literature discussions, paired conversations, or other interactions.
- briefly tell or retell about familiar experiences or interests focusing on basic story grammar or main ideas and key details.
- plan and deliver presentations using a descriptive informational organizational pattern providing several facts and details to make their point clearly and audibly.
- understand and follow one- and two-step directions.
- ask appropriate questions during a presentation or report.
- listen to each other, interact, and respond appropriately.

In addition to researching the developmental characteristics of five year olds and the requirements placed on kindergarten students, this study allowed for a survey of Michigan kindergarten teachers. This survey asked for the insight of the two most experienced teachers from 56 different school districts in Michigan. To obtain the sample set, a list of public schools in Michigan was acquired from the Center for Educational Performance and Information on the Michigan Department of Education Website. Each school district was assigned a number from 1 to 552. Then a random set of numbers was obtained from the following web site: <http://www.randomizer.org/form.htm>. To ensure even distribution throughout the state, Michigan was divided into seven regions. The map (Figure 1) shows six of these regions. Region 2: Northern Michigan; Region 3: Central Michigan; Region 4: Thumb Area; Region 5: Detroit Metro; Region 6: Southern Michigan; and Region 7: Western Michigan. Region 1, the Upper Peninsula, is not shown on the map. The original sample set was not evenly distributed among the seven regions, so random number sets were generated until the sampling was evenly distributed and resulted in eight school districts from each region. This study then researched the classification, size, and funding of each district and it was determined that the sample (Figure 2) obtained held representative districts from each classification (urban, rural, suburban, etc.), size, and funding level. The two most experienced teachers from each district were asked to participate in the survey. However, due to the time constraints of this study, the number of returned surveys was much smaller than the sample set. Out of the 112 possible survey participants, only five responded. While this is an extraordinarily small sample set, I did gain some insight on what kindergarten teachers have observed about age of students as well as their thoughts about curriculum and assessment.

First, the survey addressed the teaching experience of the teacher and the entrance ages and number of students in the classroom. The average number of years teaching kindergarten

was 9 years. The surveys represented two half day programs and three full day programs. The average number of students per class was 21 students. All classrooms reported a minimum student entrance age of four years old. Three classrooms reported a maximum student age of five years, while two reported a maximum of five years for entrance age. Only three of the teachers noticed a difference in the average entrance age of students. All three reported a decrease in entrance age to include more four year old students and all felt this was due to monetary issues of childcare for students.

Next, the survey collected information about daily schedules and entrance and promotion criteria. These responses varied for every classroom. However, it is important to note that all classrooms participate in whole group instruction and minimal free play time for students. Three of the five teachers surveyed reported a noticed increase the amount of academic standards required of kindergarten students. The most experienced kindergarten teacher did not feel curriculum standards were appropriate for her students, while the other four teachers felt that they could sufficiently adapt the standards to make them appropriate for their students. When asked how teachers felt standards should be changed, responses included requests for more time for social, developmental, and physical development, accommodations for the wide developmental gap represented by students ranging in age from four to six, and fewer academic requirements for students. Teachers also reported what types of assessments were utilized in their classrooms. Only one of the five classrooms did not include any form of standardized assessment. This teacher reported using anecdotal records, running records, observations, discussions, writing samples, and one on one assessment strategies. The other four surveys reported paper pencil tests, standardized tests, observations, and one on one assessment strategies. Four of the five teachers surveyed noticed an increase in the amount of student assessment and a decrease in the amount of “play” time in their classrooms.

Three of five teachers reported that struggling students are typically younger and high achieving students are typically older. More importantly, while none of the teachers felt there was a negative effect on the older students in the classroom, all five reported such an effect on the youngest students. Terms used to describe the effect were stressful, crying students, exasperating, and overwhelming.

The compilation of research surrounding five year olds and kindergarten requirements has led to some conclusions. First, curriculum standards and requirements in kindergarten classrooms vary greatly from the accepted developmental milestones and stages of child development. According to this research, a child that is not developmentally delayed according to the American Academy of Pediatrics, may not be able to achieve the standards placed upon him/her in a typical kindergarten classroom. One needs only to read the complete list of curriculum standards in Figure 3 to see how extensive requirements have become for students who developmentally are only required to count to ten, understand the concept of time, and name four colors (AAP, 2002). Curriculum standards for language are even more varied from the milestones. Developmentally, we can expect a child in the end of the fifth year of life to recall part of a story, speak in sentences of five or more words, use future tense, tell longer stories, and repeat name and address (AAP, 2002). However, current curriculum standards require that this same student be able to read, spell correctly, make revisions on writing samples, and plan a presentation (MDE, 1996). These requirements do not seem to be appropriate for a student about to turn six, and are definitely inappropriate for students who have not yet reached five years old. In addition, Jean Piaget's theories on child development, while still widely accepted by educational institutions, highlight the inadequacy of several required content standards for kindergarten. For example, standards S.DS.00.01, W.WPR.00.01, and R.CM.00.04 require students to consider audience reactions, remain focused on the topic of paired conversations, and

apply content knowledge to outside texts. According to Piaget, students of five years old are incapable of performing such tasks due to their egocentric nature (Woolfolk, 1998). Children can only apply knowledge to themselves and their own world as they understand it. They are incapable of projecting their knowledge or emotions onto someone or something else.

According to the survey of Michigan teachers, the age of some students when they enter the kindergarten classroom is just four years old. In fact, 60% of teachers surveyed reported an increase in four year old students entering the kindergarten classroom. So, not only have academic standards increased for the kindergarten student, average entrance ages appear to be decreasing. Thus we are requiring more of even younger students. If the standards seem unsuitable for the five year old they are grossly inappropriate for the four year old. “Although no two children develop at the same rate, they should be able to do certain things at certain ages”. (AAP, 2002) Children may achieve milestones earlier or later, but on average, they are reached by a specific age. If this is true, students entering kindergarten prior to the end of the fifth year may not have achieved the accepted milestones, and, if most students are entering kindergarten prior to turning six, then they can not be expected to have reached these milestones, yet. Consequently, if they have not, it is not appropriate that we require them to achieve standards so far beyond the accepted milestones.

However, according to the survey, most teachers do not feel that current standards are inappropriate for their students. Most feel that it is their responsibility to adapt the standards and present them in a manner which *is* appropriate for all the students. So, while policy makers have created standards which appear to be far beyond the capabilities of the five year old student, teachers have taken it upon themselves to adapt these standards to the abilities of their students. All teachers surveyed reported a willingness to offer extra assistance to those students who appear to be struggling and enrichment and extension opportunities for those who have shown

competency in the current standards and requirements. With these adaptations, perhaps five year old students can adequately function within the classroom. While the variance between milestones and standards was great, there did not seem to be any great concern among the teachers that the standards could not be integrated into the classroom.

Most teachers also felt there was a negative effect on the students who have been asked to meet such high standards. Teachers reported that students feel stressed, overwhelmed, exasperated, and frequently cry when asked to perform in the classroom. This is not the experience that teachers want to offer students, nor is it one which parents expect of the education system. I presume that the reason for this effect is not the high requirements themselves, but the assessment that is taking place due to the issuance of curriculum standards. It is not inappropriate to expose students to an academically rigorous curriculum. But, it does appear to be detrimental to require that they perform skills so obviously beyond the average capabilities of the five year old. Creating high pressure situations for children of this young age is both harmful and unnecessary.

In his 2002 article, J. Amos Hatch states the following:

Getting children to do more sooner sounds like a logical way to cure the ills of education. But ask someone who has comforted a child who cries because she cannot distinguish between a 3 and a 5 or who has coaxed a child to keep trying when he refuses to demonstrate (once again) his inability to match the letters with the sounds. Those who know young children understand that putting them under stress is an unacceptable by - product of accountability efforts designed to achieve dubious educational advantages.” (p 458)

Yet, most assessment practices reported in the survey involved paper and pencil tests from text books and standardized tests. According to teachers surveyed, this has been the most dramatic change in the classroom. Students are required to demonstrate the knowledge they

have acquired in a formal and comprehensive manner. Teachers feel they can present the academic material in a developmentally appropriate manner, but not all seem to have the required resources or time to be able to employ developmentally appropriate assessment techniques for their young students. Susan Cress addressed the issue of kindergarten assessment in her article entitled *Assessing Standards in the “Real” Kindergarten Classroom*. In this article Cress states that assessment must be developed with consideration of a student’s age, development, and experience. (Cress, 2004) If teachers are unable to do develop or access assessment techniques of this type, then they can not be considered developmentally appropriate practices for kindergarten students.

With these conclusions in mind, I propose the following solution. If the “pushing down” of academic material has resulted in a kindergarten classroom that is too stressful for five year old students, then the education system could compensate for this by creating another grade level preceding kindergarten. If preschool became an extension of the current educational system, four and five year old students would be offered the opportunity for a more relaxed introduction to school. They would receive time and instruction to develop socially, physically, emotionally, and mentally, in an atmosphere similar to traditional kindergarten classrooms without any need for the rigorous assessments required for accountability.

If all 4-5 year students were offered this opportunity it would circumvent many of the issues highlighted by this study. First, students would not become overwhelmed immediately upon entering school. They would have a chance to transition from a home or day care setting into an academic educational setting and develop the social, physical, and emotional skills necessary to achieve success in current kindergarten programs. Also, teachers would reap the benefits of a reduced range in the ability levels of students entering kindergarten. Since we have begun to hold kindergartners accountable for specific academic tasks, it would be beneficial if all

students entered with some preparation. Currently, there is no guarantee that kindergartners have received any preparation for school because in the past, kindergarten was the preparation.

There is much about this study that was restricted by the time constraints placed upon it. First and foremost, the survey of Michigan teachers is vastly incomplete. To gain more valuable insight to what is truly happening in the classrooms a larger more representative survey sample should be obtained. If given more time to complete the surveys, teachers would be more willing to divulge their own thoughts about the practice of assessing kindergartners and the effect of curriculum requirements on their classroom. Also, more time and a larger collection of surveys, would have resulted in a more adequate depiction of current standards and requirements and their effect on the five year old student. To further this study, that is the first step which should be taken. In addition, more could be added to the survey of teachers in Michigan. Since, grade level content standards are limited to the subjects of math and language, there is a sizable gap in the information regarding academic standards in kindergarten. The subjects of science, social studies, health, music, art, and technology were not accounted for in this study due to lack of information. Obtaining standards specific to surveyed school districts would offer a more complete picture of the appropriateness of standards for the five year old student.

Further research could also include a study of trends in entrance age for kindergarten students. I assumed at the beginning of the study that retention programs and practices such as red shirting would cause entrance age to decrease. However, according to the teachers surveyed, entrance appears to be decreasing. Whether this is due to lack of parental/familial funding for an extra year of child care or an attempt to give younger students a head start in education is not shown. However, a study of this trend would be beneficial in understanding the nature of education in the current kindergarten classroom in Michigan.

This study was inconclusive in determining whether current standards for kindergarten classrooms in Michigan are developmentally inappropriate. When comparing developmental milestones to the grade level content standards for kindergartners in Michigan, there is not sufficient information on how the standards are presented in actual classrooms. More research is necessary to determine if standards can be adapted to the developmental needs of five year old students. The study highlighted another practice in current Michigan curriculums that may also be developmentally appropriate. The assessment techniques currently utilized for kindergartners vary greatly from one district to another. A study of these practices would also be necessary to determine whether it is the standards or the assessment of standards that is developmentally inappropriate for young students.

This study does emphasize the need for an educational experience for students prior to entering kindergarten. The benefits of districts offering preschool programs in the same building as kindergarten classroom are many and include ensuring a smooth and steady transition into our current educational system, a reduced developmental gap for students entering kindergarten, predicted reduction in current retention programs, transitional kindergarten classrooms, and practice of red shirting, and the return to a less stressful, more child centered introduction to learning and education for five year old students in Michigan.

Figure 1

Map of Regions of Michigan

(Upper Peninsula not pictured)



Figure 2

Selected sample of Michigan School Districts

#	District Name	County	region	Code	classification	# of Schools	# of students	Expend/stud
16	Alpena Public Schools	Alpena	2	04010	ST	11.00	4977	\$8,016.00
23	Arenac Eastern School District	Arenac	2	06010	R	2.00	414	\$9,133.00
28	L'anse Area Schools	Baraga	1	07040	R	3.00	821	\$8,762.00
32	Bay City Public Schools	Bay	3	09010	C	17.00	9854	\$7,959.00
33	Bangor Public Schools	VanBuren	7	80020	R	4.00	1524	\$8,845.00
44	Brandywine Community Schools	Berrien	7	11210	UF	5.00	1478	\$8,333.00
61	Homer Community Schools	Calhoun	6	13080	R	3.00	1099	\$7,816.00
69	Dowagiac Union Schools	Cass	7	14020	UF	8.00	2705	\$11,932.00
83	Pickford Public Schools	Chippewa	1	17090	R	3.00	533	\$11,858.00
93	Ovid Elsie Area Schools	Clinton	3	19120	R	6.00	1800	\$15,804.00
101	Bark River Harris School District	Delta	1	21090	R	2.00	666	\$7,911.00
106	North Dickinson Co School	Dickinson	1	22045	R	1.00	391	\$8,221.00
108	Charlotte Public Schools	Eaton	6	23030	UF	7.00	3402	\$12,584.00
118	Public Schools of Petoskey	Emmet	2	24070	ST	7.00	3083	\$8,642.00
119	Flint City Schools	Genessee	4	25010	C	40.00	19760	\$11,409.00
120	Grand Blanc Community Schools	Genessee	4	25030	UF	13.00	7635	\$8,490.00
132	Swartz Creek Community Schools	Genessee	4	25180	UF	8.00	4239	\$8,030.00
145	Watersmeet Township School District	Gogebic	1	27080	R	1.00	245	\$46,844.00
147	Buckley Community School District	Grand Traverse	2	28035	R	1.00	427	\$8,802.00
156	Hillsdale Community Public Schools	Hillsdale	6	30020	ST	5.00	1882	\$9,458.00
157	Jonesville Community Schools	Hillsdale	6	30030	R	4.00	1389	\$8,517.00
166	Chassell Township School District	Houghton	1	31050	R	1.00	314	\$8,399.00
175	Elkton - Pigeon - Bay Port Schools	Huron	4	32050	R	3.00	1114	\$8,556.00
180	Uby Community Schools	Huron	4	32170	R	2.00	905	\$7,621.00
204	Saranac Community Schools	Ionia	3	34120	R	4.00	1272	\$11,029.00
212	Forest Park School District	Iron	1	36015	R	1.00	597	\$8,922.00
221	Concord Community Schools	Jackson	6	38080	R	4.00	999	\$11,606.00
229	Kalamazoo Public School District	Kalamazoo	6	39010	C	25.00	10580	\$11,487.00
232	Galesburg Augusta Community Schools	Kalamazoo	6	39050	R	5.00	1360	\$16,885.00
250	Forest Hills Public Schools	Kent	7	41110	UF	17.00	9598	\$14,005.00
254	Kenowa Hills Public Schools	Kent	7	41145	UF	9.00	3656	\$9,583.00
285	Hartland Consolidated Schools	Livingston	6	47060	UF	8.00	5394	\$11,523.00
309	Richmond Community Schools	Macomb	5	50180	R	3.00	2134	\$8,069.00
318	Onkama Consolidated Schools	Manistee	2	51060	R	2.00	465	\$9,145.00
331	Ludington Area School District	Mason	7	53040	ST	8.00	2495	\$8,318.00
335	Carney Nadeau Public Schools	Menominee	1	55010	R	1.00	256	\$8,339.00
354	Carson City - Crystal Area Schools	Montcalm	3	59020	ST	5.00	1278	\$8,235.00
398	Farmington Public School District	Oakland	5	63200	C	27.00	12344	\$12,749.00
403	Oak Park City School District	Oakland	5	63250	UF	8.00	3793	\$11,196.00
419	Pine River Area Schools	Osceola	2	67055	R	2.00	1364	\$7,965.00
424	Johannesburg-Lewistown Area Schools	Otsego	2	69030	R	3.00	877	\$9,302.00
428	Allendale Public School District	Ottawa	7	70040	UF	5.00	2092	\$16,757.00
441	Carrollton School District	Saginaw	3	73030	UF	5.00	1681	\$8,767.00
442	Saginaw Township Community Schools	Saginaw	3	73040	C	9.00	5244	\$7,744.00
444	Chesaning Union Schools	Saginaw	3	73110	R	5.00	2030	\$7,785.00
474	Peck Community Schools	Sanilac	4	76180	R	2.00	627	\$7,619.00
483	Corunna Public School District	Shiawassee	3	78100	ST	6.00	2383	\$8,317.00
487	Cass City Public Schools	Tuscola	4	79030	R	3.00	1527	\$8,449.00
492	Unionville Sebewaing Area Schools	Tuscola	4	79145	R	3.00	1037	\$9,404.00
504	Paw Paw Public School District	Van Buren	7	80160	R	5.00	2366	\$9,917.00
522	Grosse Pointe Public Schools	Wayne	5	82055	UF	16.00	9009	\$12,484.00
526	Lincoln Park Public Schools	Wayne	5	82090	UF	13.00	5197	\$9,867.00
527	Livonia Public Schools	Wayne	5	82095	C	34.00	18133	\$10,306.00
529	Redford Union School District	Wayne	5	82110	UF	11.00	4635	\$10,699.00
548	Southgate Community Schools	Wayne	5	82405	UF	11.00	5461	\$9,397.00
550	Cadillac Area Public Schools	Wexford	2	83010	ST	9.00	3363	\$8,477.00
				AVG:		7.65	3491	\$10,539.63
			STATE	AVG:			3743	
					R/Rural			50.00%
					ST/Small Town			12.50%
					UF/Urban Fringe			26.79%
					C/City			10.71%

Figure 3

Michigan Grade Level Content Standards for Mathematics and Language

Mathematics

- N.ME.00.01** Count objects in sets up to 30.*
- N.ME.00.02** Use one-to-one correspondence to compare and order sets of objects to 30 using phrases such as “same number”, “more than”, or “less than”; use counting and matching.
- N.ME.00.03** Compare and order numbers to 30 using phrases such as “more than” or “less than.”
- N.ME.00.04** Read and write numbers to 30 and connect them to the quantities they represent.*
- N.ME.00.05** Count orally to 100 by ones. Count to 30 by 2’s, 5’s and 10’s using grouped objects as needed.
- N.ME.00.06** Understand the numbers 1 to 30 as having one, or two, or three groups of ten and some ones. Also count by tens with objects in ten-groups to 100.
- N.MR.00.07** Compose and decompose numbers from 2 to 10, e.g., $5 = 4 + 1 = 2 + 3$, with attention to the additive structure of number systems, e.g., 6 is one more than 5, 7 is one more than 6.*
- N.MR.00.08** Describe and make drawings to represent situations/stories involving putting together and taking apart for totals up to 10; use finger and object counting.
- N.MR.00.09** Record mathematical thinking by writing simple addition and subtraction sentences, e.g., $7 + 2 = 9$, $10 - 8 = 2$.
- N.MR.00.10** Create, describe, and extend simple number patterns.
- M.UN.00.01** Know and use the common words for the parts of the day (morning, afternoon, evening, night) and relative time (yesterday, today, tomorrow, last week, next year).
- M.TE.00.02** Identify tools that measure time (clocks measure hours and minutes; calendars measure days, weeks, and months).
- M.UN.00.03** Identify daily landmark times to the nearest hour (lunchtime is 12 o’clock; bedtime is 8 o’clock).
- M.UN.00.04** Compare two or more objects by length, weight and capacity, e.g., which is shorter, longer, taller?
- M.PS.00.05** Compare length and weight of objects by comparing to reference objects, and use terms such as shorter, longer, taller, lighter, heavier.
- G.GS.00.01** Relate familiar three-dimensional objects inside and outside the classroom to their geometric name, e.g., ball/sphere, box/cube, soup can/cylinder, ice cream cone/cone, refrigerator/prism.
- G.GS.00.02** Identify, sort, and classify objects by attribute and identify objects that do not belong in a particular group.
- G.GS.00.03** Create, describe, and extend simple geometric patterns.

READING

- R.WS.00.01** demonstrate phonemic awareness by the wide range of sound manipulation competencies including sound blending and deletion.
- R.WS.00.02** recognize that words are composed of sounds blended together and carry meaning.
- R.WS.00.03** understand the alphabetic principle, that sounds in words are expressed by the letters of the alphabet.
- R.WS.00.04** use grapho-phonemic (letter-sound) cues to recognize a few one-syllable words when presented completely out of context. Begin to associate letters and sounds, particularly initial and final consonants.
- R.WS.00.05** automatically recognize a small number (about 18) of frequently encountered, personally meaningful words in print.
- R.WS.00.06** make progress in automatically recognizing a few of the 220 Dolch basic sight words.
- R.WS.00.07** follow familiar written text while pointing to matching words.
- R.WS.00.08** narrow possibilities in predicting words using initial letters/sounds (phonics), patterns of language (syntactic), and picture clues (semantic).
- R.WS.00.09** know the meanings of words encountered frequently in grade-level reading and oral language contexts.
- R.WS.00.10** in context, determine the meaning of a few words, familiar and repeated phrases including objects, actions, concepts, content vocabulary, and literary terms, using strategies and resources including picture clues, prediction, and other people.
- R.FL.00.01** automatically apply the following aspects of fluency: naming of letters, association of letters and their sounds, recognition of a few words both when encountered in context and isolation, and demonstrating understanding of concepts of print.
- R.NT.00.01** become familiar with classic, multicultural, and contemporary literature recognized for quality and literary merit that represents our common heritage as well as cultures from around the world.
- R.NT.00.02** identify the basic form and purpose of a variety of narrative genre including stories, nursery rhymes, poetry, and songs.
- R.NT.00.03** discuss setting, characters, and events in narrative text.

- R.NT.00.04** identify how authors/illustrators use literary devices including pictures and illustrations to support the understanding of settings and characters.
- R.NT.00.05** respond to individual and multiple texts by finding evidence, discussing, illustrating, and/or writing to reflect, make meaning, and make connections.
- R.IT.00.01** identify and describe the basic form and purpose of a variety of informational genre including environmental text, concept books, and picture books.
- R.IT.00.02** with teacher guidance, discuss informational text patterns including descriptive and sequential.
- R.IT.00.03** explain how authors use text features including pictures, illustrations, and icons to enhance the understanding of key ideas presented in descriptive (definitions, enumeration) and sequential (directions, steps, procedures) organizational patterns.
- R.IT.00.04** respond to individual and multiple texts by finding evidence, discussing, illustrating, and/or writing to reflect, make meaning, and make connections.
- R.CM.00.01** begin to make text-to-self and text-to-text connections and comparisons by activating prior knowledge and connecting personal knowledge and experience to ideas in text through oral and written responses.
- R.CM.00.02** retell up to three events from familiar text using their own words or phrasing.
- R.CM.00.03** begin to make connections across texts by making meaningful predictions based on illustrations or portions of texts.
- R.CM.00.04** apply significant knowledge from grade-level science, social studies, and mathematics texts.
- R.MT.00.01** self-monitor comprehension when reading or listening to familiar text by using simple strategies to increase comprehension including making credible predictions based on illustrations.
- R.MT.00.02** construct and convey meaning using strategies including story grammar to identify the author's perspective (e.g., first, second, and third person) and sorting and ordering information.
- R.CS.00.01** recognize how to assess personal writing and the writing of others with teacher supervision.
- R.AT.00.01** become enthusiastic about reading and learning how to read.
- R.AT.00.02** choose books, book activities, word play, and writing on their own during free time in school and at home.
- W. WGN.00.01** write a brief personal narrative using pictures, words, word-like clusters, and/or sentences as support.
- W. WGN.00.02** approximate poetry, using copy change and teacher guidance, based on reading a wide variety of grade-appropriate poetry.
- W. WGN.00.03** write a brief informational piece such as a page for a class book using drawings, words, word-like clusters, and/or sentences.
- W. WGN.00.04** contribute to a class research project by adding relevant information to a class book including gathering information from teacher-selected resources and using the writing process to develop the project.
- W. WPR.00.01** with teacher assistance, consider the audience's reaction as they plan narrative or informational writing.
- W.PR.00.02** brainstorm to generate and structure ideas for narrative or informational writing.
- W.PR.00.03** draft focused ideas using semi-phonetic spelling to represent narrative and informational text when writing, incorporating pictures, and drawings.
- W.PR.00.04** attempt to revise writing based on reading it aloud, requesting suggestions and clarifications that support meaning.
- W. WPS.00.01** develop originality in oral, written, and visual messages in both narrative (e.g., natural language, expressed sentiment, original ideas) and informational writing (e.g., listing, naming, describing).
- W. WSP.00.01** in the context of writing, correctly spell a small number (about 18) of frequently encountered and personally meaningful words.
- W.SP.00.02** in the context of writing, correctly spell less frequently encountered words, relying on structural cues (beginning and simpler ending sounds) and environmental sources (word wall, word lists).
- W. WHW.00.01** form upper and lowercase manuscript letters.
- W.HW.00.02** leave space between words and word-like clusters of letters.
- W.HW.00.03** write from left to right and top to bottom.
- W. WAT.00.01** be enthusiastic about writing and learning to write.
- S.CN.00.01** explore and use language to communicate with a variety of audiences and for different purposes including problem-solving, explaining, looking for solutions, constructing relationships, and expressing courtesies.
- S.CN.00.02** speak clearly and audibly in complete, coherent sentences and use sound effects or illustrations for dramatic effect in narrative and informational presentations.
- S.CN.00.03** present in standard American English if it is their first language. (Students whose first language is not English will present in their developing version of standard American English.)
- S.CN.00.04** understand, providing examples of how language differs from playground and classroom as a function of linguistic and cultural group membership.
- S.DS.00.01** engage in substantive conversations, remaining focused on subject matter, with interchanges beginning to build on prior responses in literature discussions, paired conversations, or other interactions.
- S.DS.00.02** briefly tell or retell about familiar experiences or interests focusing on basic story grammar or main ideas and key details.
- S.DS.00.03** respond to multiple text types by reflecting, making meaning, and making connections.
- S.DS.00.04** plan and deliver presentations using a descriptive informational organizational pattern providing several facts and details to make their point clearly and audibly.

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