Examining Associations between Early Language and Literacy Development and Home Literacy Environment for Young Children with Disabilities from Rural Appalachian Counties in West Virginia

Rationale for the Project

Young children from rural Appalachian communities generally have delays in language and literacy skills as compared to children from other parts of the United States (Curenton & Justice, 2008; Fish & Pinkerman, 2003), suggesting that increasing school readiness skills for young rural Appalachians is critical if we are to bridge the achievement gap for this population. Young children with identified disabilities, particularly those with language impairments, are also known to have later difficulties in reading (see Catts, Bridges, Little, & Tomblin, 2004). Thus, children from Appalachian communities with identified disabilities have multiple risk factors for later problems with reading acquisition.

In 2013, only 41% of students in West Virginia with low socioeconomic status and 17% of students receiving special education were proficient in reading on the Westtest (West Virginia Department of Education, 2013). When considering all students in the state who were not proficient in reading (50%), 68% were not making sufficient growth to catch up to their peers (West Virginia Department of Education, 2013). Clearly, new strategies are needed to increase the reading readiness of children who are living in poverty and children with disabilities in West Virginia.

One way to approach this problem is to intervene early (i.e., before children begin formal schooling) and to increase the amount and quality of time parents spend engaged in language and literacy-related activities with their children. Research suggests that the amount and quality of these early shared literacy activities are important for later reading success (Baroody & Diamond, 2012; Phillips & Lonigan, 2009). Increasing early literacy activities requires an understanding of what is currently happening in homes with regard to early literacy to help shape future intervention efforts. For this reason, researchers have sought to better understand home literacy environment (HLE). HLE is a complex construct made up of a number of variables including, “literacy artifacts, functional uses of literacy, verbal references to literacy, library use, parental encouragement and value of reading, parental teaching of skills, child interest, parental modeling of literacy behaviors, parental education, and parental attitudes toward education” (Phillips & Lonigan, 2009; p. 147).

Research indicates that HLE is an important predictor of early language and literacy development (Burgess, Hecht, & Lonigan, 2002; Senechal & LeFevre, 2014; Yeo, Ong, & Ng, 2014). Researchers have characterized HLE using at least three different models: family as educator, resilient family, and parent-child care partnership (see Bennett, Weigel, & Martin, 2002; Gonzalez et al., 2011). In this study we conceptualize HLE using the family as educator model. Yeo, Ong, and Ng (2014) describe this model as consisting of two key factors: what parents believe about early literacy and what they do to support the child’s early literacy development.

Few studies have examined HLE and language and literacy skills of young children from Appalachian communities. One exception is a longitudinal study by Fish and Pinkerman (2003)
that examined language skills in rural Appalachian children from West Virginia between 15 months of age and kindergarten. Researchers found that children with higher language scores at kindergarten had higher language scores in infancy, a secure attachment with a caregiver, and a greater number of children’s books in the home environment. The children in their sample (i.e., children from rural Appalachian West Virginia) were one full year behind same age peers in language skills when they reached kindergarten. **Despite the studies reviewed, we could find no existing studies that have examined the correlation between HLE and early literacy outcomes for children with disabilities living in rural Appalachia.**

Therefore, additional research is needed to better understand the needs of young children with disabilities and their families from rural Appalachian counties to improve language and literacy outcomes for children in West Virginia. By better understanding HLE in this population, and which components of HLE are associated with better early literacy skills, we will be able to pinpoint parent interventions that may increase reading readiness for young children at-risk for significant reading difficulties when they enter kindergarten.

**Thus, the overall goal of the project is to identify factors in the HLE of rural Appalachian families from West Virginia that are associated with language and literacy readiness for school and to ultimately inform research that will improve outcomes for this population.**

**Project Objectives, Actions, and Deliverables**

**Objectives**

This project will be carried out in collaboration with Drs. Christian Coogle (Department of Special Education, West Virginia University) and Jennifer Riggie Ottley (Crane Center for Early Childhood Research and Policy, The Ohio State University). Dr. Coogle has knowledge of services and systems serving children with special needs in West Virginia. She will assist with recruitment of families. Dr. Ottley has extensive experience with statistical analyses and will assist with data analysis for this study.

Specifically, our objectives are to examine: (1) early literacy skills of preschoolers with disabilities in rural Appalachian West Virginia, (2), HLE (parent reading beliefs and family literacy activities) for rural Appalachian preschool children’s families, and (3) associations between HLE and children’s early literacy skills. **Data from this study will be used to inform future intervention studies (e.g., online or face-to-face parent training) and community outreach initiatives with families of preschoolers with disabilities in rural Appalachian communities in the state.** For example, if we find that parents believe they have little impact on preparing their child to read, we could design training activities that teach parents about the impact of their early reading interactions on children’s later reading skills. If we find that children whose parents take them to the library have higher scores on the early literacy screener we could partner with local libraries to increase parent participation with their local library. These future projects would promote the HLE of rural Appalachian families and mitigate some barriers identified through this study.
Actions

To complete this study, we will use a cross-sectional survey and an early literacy screener to collect data on rural Appalachian families’ HLE and children’s emergent literacy skills, respectively. From these data, we aim to answer the following descriptive and correlational research questions:

1. What are the characteristics of early literacy skills of preschool children with disabilities from distressed rural Appalachian West Virginia counties as measured by scores from an online parent-administered early literacy screening tool (Get Ready to Read!)?
2. How do the early literacy screener scores of rural Appalachian preschoolers with disabilities compare to those of normative populations (i.e., children from non-Appalachian communities)?
3. What are the characteristics of HLE (parent reading beliefs and family literacy activities) for parents of preschool children with disabilities from distressed rural Appalachian West Virginia counties as measured by a parent-completed questionnaire?
4. What is the relationship between parent reading beliefs (as measured by HLE questionnaire) and early literacy skills (as measured by Get Ready to Read!) for this population?
5. What is the relationship between family literacy activities (as measured by HLE questionnaire) and early literacy skills (as measured by Get Ready to Read!) for this population?
6. To what extent do parent reading beliefs predict rural Appalachian preschool children with disabilities’ early literacy skills (as measured by Get Ready to Read!)?
7. To what extent do family literacy activities predict rural Appalachian preschool children with disabilities’ early literacy skills (as measured by Get Ready to Read!)?

Pending IRB approval and approval from County Boards of Education, we will recruit 135 parents of children with special needs who are between 3-5 years of age from counties in West Virginia that are considered economically distressed: Calhoun, Clay, Gilmer, Lincoln, McDowell, Roane, Summers, and Webster (Appalachian Regional Commission, 2015). We will contact all County Boards Of Education to seek approval to distribute questionnaires to families receiving preschool special needs services (Target Date: September, 2015). Once we have approval, we will ask preschool special needs teachers to distribute and collect questionnaires from parents of children in their classrooms who have special needs (Target Date: October, 2015). Teachers will send home packets to each parent that include a consent letter, the HLE questionnaire, instructions for completing the Get Ready to Read! online screening tool, and an answer sheet for parents to record their child’s responses on Get Ready to Read! (Target Date: November, 2015). Parents will be instructed to return the envelope if they are not interested in participating. Teachers will return completed questionnaires to the researchers using a provided stamped envelope (Target Date: December, 2015).
Demographic and Home Literacy Environment Questionnaire. Parents will complete a questionnaire (Appendix A) that includes three types of questions: family demographics, parent beliefs about reading (Debaryshe & Binder, 1994), and family literacy activities (Wu & Honig, 2010). Questions on the measure have been successfully used in previous HLE research (Debaryshe & Binder, 1994; Rahn, Ottley, Coogle, in progress; Wu & Honig, 2010; Yeo, Ong, & Ng, 2014). (Target date: February 2016)

Get Ready to Read! Screening Tool. Parents will be asked to complete an online screening tool (see Appendix B for answer key) developed by the National Center on Learning Disabilities (NCLD). This online tool consists of 20 items that measure key early reading skills including print awareness, letter name and letter sound identification, and phonological awareness (e.g., rhyming). Scores of 16-20 indicate very strong skills, scores of 12-16 strong skills, scores of 9-12 average skills, scores of 6-9 weak skills, and scores of 0-6 very weak skills (Whitehurst, 2001). Several studies have investigated the psychometric properties of the tool and found medium to large correlations with other measures of language and early literacy (i.e., concurrent validity) and scores in fall and spring of the preschool year moderately to strongly correlated with measures of reading skill in kindergarten and first grade (i.e., predictive validity; NCLD, n.d.). (Target date: February 2016)

Parents will be compensated with a $20 gift card for completing the questionnaire and screening tool. Teachers will be compensated with $10 gift card for their assistance in distributing and collecting questionnaires.

Data Analysis. Data will be analyzed using descriptive statistics, Pearson correlations, and multiple regression analysis (Target Date: February, 2016). Specifically, we will use descriptive statistics (e.g., means, standard deviations) to analyze child data from Get Ready to Read! to address research questions one and three and to address assumptions for further statistical testing. We will compare children’s scores on Get Ready to Read! to normative data (contained in the tool’s technical report [Whitehurst, 2001]) via a t-test to address research question two. We will use Pearson product-moment correlation and multiple regression analyses to address research questions four through seven. We will use factors previously established by other researchers (Yeo, Ong, & Ng, 2014) in analyzing data for parent reading beliefs and family literacy activities.

Deliverables

This study will result in three specific deliverables:

1. We will submit a manuscript describing the study method and results to a peer-reviewed journal in special education (Target date: May, 2016).
2. We will propose to present results at one national or international conference (e.g., Council for Exceptional Children [CEC] in April 2016).
3. We will use results from this study as seed data for a proposal to a federal funding agency (e.g., National Institutes of Health [NIH]).
Connections to Professional Interests

My primary area of interest is language and literacy interventions for young children with disabilities. I am particularly interested in this potential opportunity to study a very real problem in West Virginia – increasing literacy for some of our state’s most vulnerable children. In addition, this study will contribute to my development as a scholar by increasing my skills in analyzing and interpreting correlational data. I have primarily used single-case design in my research and I look forward to this opportunity to expand my skill set. Results from this study will be used to inform my future research, including a larger scale proposal which will be submitted to a federal agency (e.g., NIH). Deliverables that will enhance my professional development include a manuscript, a presentation at a national or international conference, and submission of a grant based on these data.

Connections to WVU's Strategic Plan

This study aligns with goals 2 and 3 of WVU's Strategic Plan for 2020.

Goal 2: Excel in research, creativity, and innovation in all disciplines. This study will enhance my research agenda and allow me to excel in research by increasing my research skills while addressing an important problem. This study is innovative in that we will examine a topic that has not been investigated to date (i.e., HLE and early literacy skills in rural Appalachian preschool children with disabilities).

Goal 3: Enhance the well-being and quality of life of the people of West Virginia. Over 5,000 preschool children with disabilities are currently receiving special education services in the state (West Virginia Department of Education, 2012). The results of this study will be used to inform future research and outreach efforts aimed at ultimately improving outcomes for children with special needs in West Virginia by increasing reading readiness in this population. We are specifically gathering data from the counties most likely to have children with significant needs. Counties will be those identified as distressed (Calhoun, Clay, Gilmer, Lincoln, McDowell, Roane, Summers, Webster) by the Appalachian Regional Commission.

Connections to PERC's Mission

This study supports PERC's mission to engage in research that benefits the people of West Virginia by providing information that will support future research and outreach to improve early literacy and reading skills for children with disabilities in West Virginia. Results from this study will have national impacts as well through dissemination in a peer-reviewed journal and national conference presentation, thus supporting PERC's goal of regional and national impact.

The study also supports PERC's goal to increase research productivity in the College of Education and Human Services. Results will inform the design of at least one external federal grant proposal which supports PERC's goal of increasing external funding in the College. Finally, this study will lead to a publication in a peer-reviewed journal which supports PERC's goal to increase College faculty publications.
Budget

Please see attached budget worksheet and narrative.
References


Appendix A

Demographic and Home Literacy Environment Questionnaire
Home Demographic and Literacy Environment Survey*

This form should be completed by the child’s parent or guardian. This information will help us learn more about your child and family. Thank you for taking the time to complete the survey.

<table>
<thead>
<tr>
<th>Child ID:</th>
<th>(Please leave blank for research staff)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Today’s Date:</td>
<td>M  D  Y</td>
</tr>
<tr>
<td>Child’s birthdate:</td>
<td>M  D  Y</td>
</tr>
<tr>
<td>Child’s Gender:</td>
<td>☐ Male  ☐ Female</td>
</tr>
</tbody>
</table>

What is your relationship to this child?  
☐ Mother  ☐ Father  ☐ Grandmother  
☐ Grandfather  ☐ Aunt  ☐ Uncle  ☐ Other (specify): _________________

1. What is your child’s race?  
☐ African American/Black  ☐ Caucasian/White  
☐ American Indian or Alaskan Native  ☐ Hawaiian or Pacific Islander  
☐ Asian  ☐ Multiple races (specify): ______________________________

2. Is your child Hispanic or Latino?  
☐ Yes  ☐ No

3. Is English your child’s primary language?  
☐ Yes  ☐ No

4. Does your child have an Individualized Education Program (IEP)?  
☐ Yes  ☐ No  
If no, skip to Question 6  
If yes, please indicate the category under which your child receives services.  
☐ Diagnosed physical or mental condition (specify): ______________________________

☐ Developmental Delay (specify):  
☐ Adaptive  ☐ Cognitive  ☐ Physical (including vision and hearing)  ☐ Social-emotional

☐ Communication

5. Please rate the severity of your child’s developmental delay or disability.  
☐ High functioning (little impact on the child’s ability to learn and participate in activities)  
☐ Moderate functioning (some impact on the child’s ability to learn and participate in activities)  
☐ Low functioning (great impact on the child’s ability to learn and participate in activities)

*Survey adapted from a version created by Jennifer Riggie Ottley (2014). Questions 12-55 are from the Parent Reading Belief Inventory (Debaryshe & Binder, 1994) and the Home Literacy Practices Inventory (Wu & Honig, 2010).
6. What is the highest level of education you have completed?
- Eighth grade or less
- Some high school, but no diploma
- High school with a diploma or GED
- High school plus a professional certification
- Associate’s degree (2 year)
- Bachelor’s degree
- Master’s degree
- Doctoral degree

7. How many adults are in your household?  
   How many children?

8. In what year were you born?

9. What is your household’s annual income?
- $5,000 or less
- $5,001 - $10,000
- $10,001 - $15,000
- $15,001 - $20,000
- $20,001 - $25,000
- $25,001 - $30,000
- $30,001 - $35,000
- $35,001 - $40,000
- $40,001 – 45,000
- $45,001 - $55,000
- $55,001 - $75,000
- $75,001 or greater

11. How well do you read?
- Excellent
- Good
- Fair
- Poor
- Unable to read

Please respond to the following statements using a 4 point scale where:
(1) = strongly disagree
(2) = disagree
(3) = agree
(4) = strongly agree

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>12. There is little I can do to help my child get ready to do well in school.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>13. My child learns many important things from me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>14. I would like to help my child learn, but I don’t know how.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>15. I play the most important role in my child’s learning.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>16. Parents need to be involved in their children’s education.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Thank you for completing this survey!
Please put this survey in the envelope with the consent form and return it to your child’s teacher.
<table>
<thead>
<tr>
<th>Question</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>17. Children do better in school when their parents also teach them things at home.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>18. I find it boring or difficult to read to my child.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>19. I enjoy reading to my child.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>20. I have good memories of being read to when I was a child.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>21. My child does not like to be read to.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>22. I have to scold or discipline my child when we try to read.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>23. I don’t read to my child because he or she will not sit still.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>24. I read to my child whenever he or she wants.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>25. Children learn new words, colors, names, etc. from books.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>26. Reading helps children be better talkers and better listeners.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>27. When we read, I want my child to help me tell the story.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>28. I ask my child a lot of questions when we read.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>29. When we read, I want my child to ask questions about the book.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>30. When we read, we talk about the pictures as much as we read the story.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>31. When we read, I have my child point out different letters or numbers that are printed in the book.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>32. I try to make the story more real to my child by relating the story to his or her life.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>33. Stories help build my child’s imagination.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>34. My child learns lessons and morals from the stories we read.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>35. Reading helps children learn about things they never see in real life (e.g., Eskimos and polar bears).</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>36. My child learns important life skills from books (e.g., how to follow a cooking recipe, how to protect themselves from strangers).</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>37. Some children enjoy reading and some don’t. Parents do not have much influence over this.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>38. Children inherit their language ability from their parents. It’s in their genes.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
For the final section of this survey, please respond to the following statements using a 4 point scale where:

1 = never – not done this at all,
2 = seldom – about once a month,
3 = sometimes – about 2 to 3 times a month, and
4 = often – 4 or more times a month.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Never</th>
<th>Seldom</th>
<th>Sometimes</th>
<th>Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>39. I take my child to the library.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>40. I take my child to the bookstore.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>41. I buy books for myself.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>42. I buy books for my child.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>43. I read for leisure in the child’s presence.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>44. I read a magazine or newspaper in the child’s presence.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>45. I read a textbook or report for myself in the child’s presence.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>46. I do sustained writing on paper for at least 10 minutes in my child’s presence.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>47. I do sustained writing on electronic devices for at least 10 minutes in my child’s presence.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>48. My child and I look at or read picture books/storybooks/magazines together.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>49. My child and I read informational material (e.g., menus, signboards, advertisements) together.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>50. I teach my child how to read words.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>51. I teach my child how to write words, such as his or her name, or simple words like dog or cat.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>52. My child asks to go to the library.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>53. My child asks to be read to or look at books.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>54. My child looks at books or magazines by himself or herself.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>55. My child is scribbling, attempting to write or pretending to write.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Thank you for completing this survey!
Please put this survey in the envelope with the consent form and return it to your child’s teacher.
Appendix B

Get Ready to Read! Screening Tool Answer Sheet
Get Ready to Read! Answer Sheet
Duplicate the answer sheet for each screening.
Child’s Name:

☐ male ☐ Female
Child’s Age: years ___ months ___ D.O.B.: ___/___/___

Item 1
These are pictures of a book. Find the one that shows the back of the book.

Item 2
Find the picture that has letters in it.

Item 3
Find the picture that has letters in it.

Item 4
Find the picture that has a word in it.

Item 5
These are pictures of a cereal box. Find the one that tells you the name of the cereal.

Item 6
Find the letter R.

Item 7
Find the letter G.

Item 8
Find the letter that makes a sss sound.

Item 9
Find the letter that makes a ttt sound.

Item 10
Find the letter that makes a bbb sound.

Item 11
Some children wrote the letter F. Find the one that is written the best.

Item 12
Some children wrote their names. Find the one that is written the best.

Item 13
Some children wrote stories. Find the longest story.

Item 14
These pictures are: ball, skate, apple, star. Find the one that starts with the sss sound.

Item 15
These pictures are: dog, kite, fan, snake. Find the one that starts with the sss sound.

Item 16
This is ball, and these pictures are: zebra, shoe, wall, leaf. Does ball sound like zebra, shoe, wall, or leaf? Find the one that rhymes with ball.

Item 17
These pictures are: saucer, rocket, shoe, chimney. Find what you get when you put SEA and SHELL together. Find sea (pause) shell.

Item 18
These pictures are: penguin, moon, carousel, dragon. Find what you get when you put PEN and GUN together. Find pen (pause) gun.

Item 19
These pictures are: mouse, cloud, cow, moon. Find what you get when you put MMM and OON together. Find mmm (pause) oon.

Item 20
These pictures are: sun, key, frag, mop. Find turkey without tus.

Instructions: This answer sheet shows a reduced version of each question on the screening tool. Read each question to the child. Mark on this answer sheet the child’s answer. For example, if the child points to the car in response to the sample question, then make a pencil mark on the car on this sheet. When the child has finished taking the screening tool, there should be a mark indicating the child’s answer on each of the 20 questions.

The correct answer for each question is shaded on the answer sheet. For example, the correct answer for Item 10 is the letter B.

Add up the number of correct responses made by the child. (Don’t count the sample question.) The total number correct is the child’s score. Enter that number in the box below:

Number correct: ___