



NYU Grossman School of Medicine
Department of Pediatrics
Division of Developmental Pediatrics

**StimQ2
Instructions for Administration
Updated 2023**

**Cates, C.B., Weisleder, A., Roby, E., Canfield, C.F., Raak, C.,
Johnson, M., Dreyer, B., & Mendelsohn**

**Infant: Page 2
Toddler: Page 22
Preschool: Page 43**

StimQ₂-Infant (StimQ₂-I)

Instructions for Administration

INTRODUCTION

In 2011 the StimQ instrument was revised and updated to allow for greater flexibility of administration and analysis. This revised version (StimQ₂) is largely comparable to the original instrument (StimQ), but has two important differences:

1. The elimination/addition of items based on IRT analyses, and
2. Restructuring of the Subscales into smaller Components can be administered and analyzed individually.

StimQ₂-I is a 42-point scale for measuring cognitive stimulation in the homes of infants ages 5 to 12 months. It is based on a questionnaire that is administered to the child's primary caregiver by trained interviewers in an office setting.

StimQ₂-I consists of 4 Subscales:

1. READ Subscale
2. Parental Involvement in Developmental Advance (PIDA) Subscale
3. Parental Verbal Responsivity (PVR) Subscale
4. Availability of Learning Materials (ALM) Subscale

Each of the Subscales includes a number of Components. Individual Subscales and Components can be administered and analyzed independently or in combination (see Scoring, below).

StimQ₂ Item Scoring

Three types of scores can be calculated using StimQ₂:

1. **Component** scores are noted by boxes with:



Component scores are calculated based on summing together clusters of items, in some cases followed by additional scaling. Component scores can be used individually in analyses.

2. **Subscale** scores are noted by boxes with:



Subscale scores are calculated based on summing together Component scores. Subscale scores can be used individually or in any combination for analyses.

3. **StimQ Total** scores are noted by boxes with:



StimQ Total scores are calculated based on summing together Subscale scores. There are two types of StimQ Total scores:

- a. StimQ Core score is calculated by adding together READ, PIDA and PVR.
- b. StimQ Total score is calculated by adding together READ, PIDA, PVR and ALM.

STIMQ₂ - INFANT	Possible Range
READ Subscale	0 – 15
Bookreading Quantity Component	0 – 9
Diversity of Bookreading Concepts/Content Component	0 – 2
Bookreading Quality Component	0 – 4
PIDA Subscale	0 – 5
PVR Subscale	0 – 16
Parental Verbal Responsivity During Everyday Routines Component	0 – 9
Parental Verbal Responsivity During Play and Pretend Component	0 – 7
TOTAL Core Score [READ + PIDA + PVR]	0 – 36
ALM Subscale	0 – 6
First Infant Toys Component	0 – 2
Activity/Manipulative Toys Component	0 – 2
Imagination Toys Component	0 – 2
TOTAL Score [READ + PIDA + PVR + ALM]	0 – 42

Score Interpretation

Specific cut off points are not available at this time. However, the StimQ₂ has primarily been used with low-income populations in large cities in the United States. Score interpretations have occurred in the context of treatment vs. intervention group associations and in analyses of effect sizes (e.g., Cohen’s d) between StimQ₂ and other characteristics or outcomes.

Suggested Citations

Cates, C. B., * Roby, E. *, Canfield, C. F., Johnson, M., Raak, C., Weisleder, A., Dreyer, B.P., & Mendelsohn, A. L. (in press, 2023). Parental report of the cognitive home environment: Validation of the StimQ2. *PLOS ONE*. *Denotes shared first author.

Dreyer, B.P., Mendelsohn, A.L., & Tamis-LeMonda, C.S. (1996). Assessing the child’s cognitive home environment through parental report: reliability and validity. *Early*

Development and Parenting: An International Journal of Research and Practice, 5(4), 271-287.

Mendelsohn, A.L., Brockmeyer, C.A., Tamis-LeMonda, C.S., Johnson, M.S., Berkule, S.B., White, L.J., & Dreyer, B.P. (2011, May). Assessment of the cognitive home environment through parent report: reliability and validity of StimQ (revised). Presented at Pediatric Academic Societies (PAS) and Asian Society for Pediatric Research (ASPR) Joint Meeting, Denver, CO.

ADMINISTRATION OF STIMQ₂

Identification of the primary caregiver

StimQ₂ measures only the role of the child's primary caregiver in providing cognitive stimulation for the child. Although many people (including other parents, relatives, friends, babysitters and siblings) may also play a very important part in the life of a child, the benefits provided by these individuals are not measured by this instrument.

The first step in administering the StimQ₂ is to determine the child's primary caregiver. The primary caregiver is the person who spends the most time interacting with the child in the child's home. The primary caregiver should spend most daytime hours with the child and see the care of the child during the day as their responsibility. A working parent is still usually the primary caregiver for the child, even if a babysitter or a grandparent regularly watches the child. For the purposes of StimQ₂ you are only interested in what the primary caregiver provides in the child's home for the child.

In the administration of StimQ₂, give credit only for those activities and learning materials provided by the primary caregiver. You must always be careful to distinguish between what is provided by the primary caregiver from what is provided by any other members of the household. For example, if the primary caregiver is the mother, do not give credit for those activities and learning materials that are provided by other people such as older siblings, the father, or a grandparent. However, it is important to support any of these activities, even if you cannot give credit for them. For example, you might say, *"It is very good that your husband does these things with your child. Right now, however, I'm mostly interested in the things that you do with your child."* Similarly, if the father is the primary caregiver, then give credit only for his activities with the child, and not those provided by the mother. Sometimes, both the mother and father jointly and equally share responsibility for the child's care. If both parents are present at the interview and they both state that they have equal responsibilities for the child, you may give credit to what both provide for the child. However, no other combinations can be accepted in this way. For example, for the purposes of this questionnaire, mother and grandmother cannot be considered to share equally in the care of the child; one must be identified as the primary caregiver. Finally, a babysitter can never be considered a primary caregiver.

General Guidelines

As the StimQ₂ is administered, “Yes” responses should be followed up with requests for more information, such as frequency or examples of the activity whenever possible. This is done to reduce social desirability bias by increasing the likelihood that “Yes” responses truly reflect performance of the activity, and to reinforce “No” responses when the activity is not performed, as additional information is then not requested. For many of the items, frequency needs to be addressed, a specific threshold (e.g., several days a week) is required to receive credit.

One of those thresholds is a doing an activity with the child on a “regular basis, not just once or twice.” This requirement is not necessarily attached to a specific number of days per week. Instead, it should be interpreted as “most of the time” whenever the caregiver is with the child. A working caregiver may only spend time with the child on Saturday and Sunday, but if they engage in the activity with the child on most of these days then they should receive credit for doing this on a “regular basis.”

Reliability in administering this scale requires following these instructions. All persons planning to administer the StimQ₂-Infant should practice its administration beforehand with non-study participants, on 3 to 5 occasions. We strongly encourage examiners/interviewers practice administering the instrument to someone who has previously successfully administered the StimQ₂ to participants and/or caregivers. Additionally, the experienced interviewer should also observe one of the practice administrations in order to provide feedback on questioning and reliability. We recognize this may not always be possible, and therefore this is not a requirement for training. Nonetheless, we strongly encourage new StimQ₂ interviewers obtain feedback from someone with experience administering the StimQ₂ before true data collection.

General Introduction

After introducing themselves by name and job title, the interviewer should provide a general introduction to the caregiver such as what is printed at the beginning of the questionnaire: *“This questionnaire is designed to find out about the different kinds of activities that you and your baby do together. We know that caregivers have lots to do, at work, in the home, and for the family, and that it is often hard to find time to play and read together. Many caregivers don’t do more than a few of these activities and some don’t have the time to do any. I know that many people (including relatives, teachers, friends, babysitters, and siblings) also may have the opportunity to play important roles for your baby. However, in this questionnaire, I am only interested in the kinds of activities that you provide for your baby.”*

SECTION 1.
STIMQ₂ CORE: READING, TEACHING, VERBAL RESPONSIVITY

READ Subscale [Range: 0-15]

The READ Subscale is comprised of three (3) Components looking at the quantity, the diversity in concepts, and the quality of shared book reading experiences between child and primary caregiver. Each item addresses a specific attribute of book reading; in order to receive credit, the caregiver must engage in these practices in the specified frequency and/or manner.

Before you begin asking individual questions, ask the caregiver: "*Do you ever read children's books to your infant or is she/he too young for that?*" If the caregiver answers "yes," ask each of the questions that follow. If the caregiver answers "no" (i.e., she/he does not read to the child), you should enter an "N" for this item and, skip all of the remaining reading questions and enter a zero for each individual item, each Component and the overall READ Subscale. As the interview progresses, should it become apparent that caregiver does engage in reading aloud with regularity, consider returning to the READ Subscale, confirming that the caregiver does read children's books, and, if appropriate, administering all items and Components.

A. Bookreading Quantity Component (Range 0-9)

This Component aims to quantify the infant's exposure to shared booking reading by documenting how many age-appropriate reading materials are in the home, and with what frequency those are read to the infant by a primary caregiver.

Question 1: *Name some children's books that you have at home and read to your baby.* After caregiver names some books, ask: *How many books altogether do you have at home that you read to your baby?* Enter # of books.
Scoring: 0= Enter 0, 1-9= Enter 1, 10-24= Enter 2, 25-49= Enter 3, 50+= Enter 4

The goal of this question is to determine the number of children's books appropriate for infants that the caregiver has available in the home and reads to the child. Books appropriate for infants are picture books, usually containing familiar objects and a few simple words, or a simple story or rhyme. It is important to converse with the caregiver about the reading activities and the individual books that are read. Have the caregiver name several of the books that are used; ask which ones are the child's favorites; talk about where and when these activities occur. In some cases, caregivers may not remember exact titles of books; descriptions of the books will suffice in this circumstance. You should continue conversing with the caregiver until you are sure that the intention of the question is understood. After this brief conversation, you may then ask: "*How many books altogether do you have at home that you read to your child?*" and enter the number in the space provided. Give credit for library books that are presently in the home, appropriate for infants, and that the caregiver can name or describe. Note that some

libraries may only carry a few infant books, and we would anticipate that library books would only rarely get credit. Each book in a set or series of books counts separately as one book. Magazines and comic books should generally not receive credit. However, if the caregiver can describe a magazine or comic book that is specifically designed to be read to infants under 12 months, they may receive credit for each issue they have available in the home and actively read to their baby. Although there are many child-friendly magazines/comic books, most are too advanced for infants and will therefore not receive credit. Examples of magazines known to be designed for infants are: Highlights' Hello Magazine and Babybug Magazine.

Some caregivers will have difficulty giving an exact number and instead give a range (e.g., 20-30 books). In this case, try probing further (e.g., "would you say closer to 20 or closer to 30", etc.), until you can establish an estimate within one of the scoring intervals. For example, if the caregiver ultimately estimates 25-30 books, that would be enough to categorize as 25-49 with a score of 3.

Other caregivers will not be able to estimate a number and instead say things like "a few" or "a lot" or "too many to count". In this case, it can be helpful to give them a starting point consistent with what they have reported, and probe from there (e.g., "so just 1 or 2" if they say "a few", or "more than 5 or 10" if they say "a lot".)

Regardless, make sure the final estimate is consistent with the preceding conversation that has taken place about names and numbers of books.

Question 2: *How many days each week do you read children's books to your baby?*

Enter # days from 0 to 7

Scoring: 0: Enter 0; 1-2: Enter 1; 3-4: Enter 2; 5+: Enter 3

This question is used to determine the number of days on an "average" or "usual" week that the caregiver reads children's books to their child. If the caregiver presents a significant variation in reading on different weeks, ask about a typical week in the past month. If the caregiver seems to have trouble determining an estimate on their own, you may probe by giving the caregiver a starting point and asking if they read more or less than that starting point (e.g., "*all seven days?*"). Unsuccessful attempts at reading do not receive credit. An example of a description of an unsuccessful attempt would be: "I try to read to him, but he won't sit still long enough." However, if the caregiver reads to the child despite uncertainty about the child's understanding of what is being read, credit should be given.

If the caregiver gives a range that straddles different scores (e.g., 3-6) try probing further (e.g., "*Would you say closer to 3 or closer to 6?*", etc.), until you can establish an estimate within one of the scoring intervals. Ideally, you will get the caregiver to land on a single number by asking several follow-up questions. For example, "*Would you say closer to 3 or closer to 6? ...Like 5 or 6? ...Which would you say, 5 or 6?*"

Question 3: *Do you read a book together with your baby at bedtime? If yes, ask: How many days per week? Enter # from 0 to 7.*
Scoring: 0-4: Enter 0; 5+: Enter 1

If the caregiver reports that they read at bedtime, ask how many days per week. Give credit for 4 or more days per week. Bedtime is defined as the time when the caregiver is preparing the child to go to sleep in the evening, not before a daytime nap.

Question 4: *Do you read books together with your baby at times of day other than bedtime? If yes, ask: How many days per week? Enter # from 0 to 7*
Scoring: 0-4: Enter 0; 5+: Enter 1

If the caregiver reports that they read at other times of day, ask how many days per week. Give credit for 5 or more days per week, including before daytime naps.

B. Diversity of Bookreading Concepts/Content Component (Range 0-2)

This Component is used to determine whether the caregiver reads books that are designed to focus on specific learning concepts such as shapes, animals, and common household items (e.g., pots and pans, bed). If the caregiver states that they teach these concepts but do not generally use books to teach these concepts, praise this activity and state that you will be asking questions about those teaching activities later; however, do not give credit for those items in this section. If caregiver reports reading one (1) book that teaches about several of these concepts, give credit for each item.

For questions #5-10, read the following instructions to the caregiver: *“I am now going to ask you about several different types of books that you may have read to your child. Most caregivers have only read some of these types of books to their children, so you should not feel that I expect you to have read all of these books to your child.”* Give credit only if the caregiver has the book in the home and has read the type of book described more than once or twice.

Question 5: *Do you read books to your baby especially made for infants that teach about simple shapes such as squares, circle, and triangles?*

Give credit for any book that has shapes. If the caregiver states that they teach shapes by pointing out the shape of the pictures in a book (e.g., round ball, or square table), praise the activity, but do not give credit for this question; (you CAN give credit for those examples under questions 6 and/or 7, where appropriate). Remember to follow up to determine whether the caregiver has read this type of book more than once or twice.

Question 6: *Do you read books to your baby especially made for infants that teach about things around the house (chair, table, bed, book, etc.)?*

Give credit for any book that has pictures of common household items (e.g., pots and pans, bed). Remember to follow up to determine whether the caregiver reads this type of book more than once or twice.

Question 7: *Do you read books to your baby that show toys and favorite things (for example: ball or rattle)?*

Give credit for any book that has pictures of the child's toys (e.g., ball, rattle) or other favorite things. Remember to follow up to determine whether the caregiver has read this type of book more than once or twice.

Question 8: *Do you read books to your baby about animals?*

Give credit for any book that has pictures of animals. Alphabet books that have pictures of animals (e.g., "D is for dog") would be acceptable here. Remember to follow up to determine whether the caregiver has read this type of book more than once or twice.

Question 9: *Do you read books to your baby that contain photographs of babies?*

Give credit for any book that has color photographs, not drawings, of babies. Remember to follow up to determine whether the caregiver has read this type of book more than once or twice.

Question 10: *Do you read nursery rhymes such as Mother Goose or other simple rhyming books to your baby?*

Give credit for any book that contains one or more nursery rhymes such as "Mother Goose" or other short and simple rhymes common in the culture of the caregiver. Remember to follow up to determine whether the caregiver has read this type of book more than once or twice.

C. Bookreading Quality Component (Range 0-4)

This Component is meant to capture the caregiver's regular efforts to engage and teach their child during shared bookreading. Therefore, in order to receive credit for the following items the caregiver must frequently do, or try to do, these activities when reading with their child.

Question 11: *Do you read books to your baby that include simple stories for young babies? Give credit if caregiver reads this type of book on a regular basis, for example once or twice a week.*

This question seeks to determine if the caregiver reads books to the child that contain a simple storyline and involve more than just pictures and single words. These should contain at least one character and a sequence of actions, such as a simple plot.

Question 12: *While you read to your baby, do you point to pictures and name them or describe them, or is your baby too young or distractible for that? Give credit for “most of the time”.*

This question seeks to determine if the caregiver does more than simply read the text in the book to the child, using the reading experience to expand the child's vocabulary by naming and talking about pictures. Ask the caregiver to provide an example and about the frequency with which this happens. Give credit if the caregiver does this most of the time. One way to probe about the regularity in which the caregiver does this, without asking outright about frequency, is to use the caregiver's response for the number of days they read together. For example, you can say, “*You mentioned you read 4 days a week with your child, of those 4 days about how many days or how many times would you say you point to the pictures and name or described them to him/her?*”

Question 13: *Do you ask your baby questions about the pictures in books and try to have a conversation, for example, “What is that called?” or “What color is it?” Give credit for “most of the time”.*

As with Question 12, this question seeks to determine if the caregiver encourages the child to participate actively in the reading activity through questions and attempts at back-and-forth vocalization. Depending on the infant's age, the caregiver may reply “no” simply because the child does not yet produce words. You should clarify that it is not a question of whether they converse expecting a reply from the child, but rather if during bookreading, they ask questions *as if* they and their child were conversing. Ask the caregiver to provide an example and about the frequency with which this happens. Give credit if the caregiver does this most of the time.

Question 14: *Do you talk to your baby about feelings and emotions of characters in books? Must have done this more than once or twice.*

This question seeks to determine if the caregiver uses bookreading time as an opportunity to talk to the child about emotions, by relating them to the characters in a story. Ask the caregiver to provide an example and the frequency with which this happens. Give credit if the caregiver reports having done this more than just one or twice. Unlike questions 12

and 13, they do not need to do this frequently for credit, but it must be a purposeful effort on the caregiver's part.

PIDA Subscale: Parental Involvement in Developmental Advance [Range: 0-5]

This Subscale measures the number of different interactional activities occurring between the caregiver and the infant that promote cognitive development. Although the word "teach" is sometimes utilized, the questions seek to elicit information about "playing" one-on-one with the infant and helping the infant successfully master new skills.

It is important to note that any "yes" answer must be explored with the caregiver by asking how and how often the caregiver engages in each activity. In order to receive credit, the caregiver must give an example of a specific activity that demonstrates the teaching asked about in the question, with the frequency that is noted next to each individual item. If the caregiver has difficulty providing an example, you may prompt by providing an example, such as the examples listed with the questions. If the caregiver affirms doing an activity you provided, you must follow up by asking the caregiver to describe how they engage and carry out the activity. If the caregiver is unable to provide more details, then credit should not be given. For these questions, the activity must have happened more than once or twice, and not just coincidentally. Often it is helpful to differentiate between activities the child does by him/herself versus activities the caregiver does with the child or shows the child how to do.

Question 1: *Do you play with your baby and show her/him how to pile up baby blocks or use other toys that stack up in a tower, or has the baby learned to do this on her/his own?*

Give credit for any stacking activity that the caregiver does with the child involving blocks, stacking beakers, Duplo Legos/Mega Bloks, or other similar toys. To receive credit, the activity must have happened more than once or twice.

Question 2: *Do you teach your baby body parts by playing with him and touching parts of his body while saying the name of what you are touching? (For example: "Here is baby's nose." or "Here is baby's foot.")*

Give credit for any activity in which the caregiver teaches body parts using either the child's own body or visual cues, such as the caregiver's face or body, a picture, a doll, or a stuffed animal. Caregivers may report doing this sort of activity during bath time, diapering and/or clothes changing. To receive credit, the activity must have happened more than once or twice.

Question 3: *Do you teach your baby to press buttons or turn knobs, or has the baby learned to do this on her/his own?*

To receive credit, the caregiver must teach the child to push the button rather than simply pushing it themselves. In addition, the button or knob must be part of an appropriate toy requiring physical action to produce some response (e.g., a button that makes a squeak when the infant pushes it). Credit can be given for a Jack-in-the-Box toy only if the caregiver is teaching the child to turn the knob. Do not give credit for toys which teach the skill of "buttoning" clothing. To receive credit, the activity must have happened more than once or twice.

Question 4: *Do you play with your baby and show her/him how to put blocks and other things in a container such as a plastic box, beaker or can?*

In order to receive credit, the caregiver must help the infant place blocks or other objects into a container. The items needn't be part a commercial toy, like a shape sorter, for caregiver to receive credit. To receive credit, the activity must have happened more than once or twice.

Question 5: *Do you play roll-a-ball games with your baby while sitting on the floor or bed with her/him?*

Give credit if the caregiver sits with the child on the floor or in bed and tries to teach the child to play a game in which a ball is rolled back and forth. This is not about teaching a child to throw or catch; it is about a reciprocal activity using a ball (e.g., "I roll the ball to you, then you roll the ball to me"). To receive credit, the activity must have happened more than once or twice.

PVR Subscale: Parental Verbal Responsivity [Range: 0-16]

This section explores different types of verbal interaction initiated by the caregiver to enhance the child's language development. Any "yes" answer must be explored with the caregiver by asking how often the caregiver engages in each activity and requesting more information as noted. In order to receive credit for these items, the caregiver must engage in the interaction described on a regular basis (4+days a week), not just once or twice or occasionally.

A. Parental Verbal Responsivity During Everyday Routines Component (Range 0-9)

This Component is designed to capture the caregiver's verbal engagement with the child one an everyday basis, during their standard routines, days, and activities.

Question 1: *Some parents talk to their infants about their surroundings and what is happening around them. Have you started to talk to your baby in this way or is she too*

young for that? If yes, ask for examples. Ask: *How many days a week do you do this?*
If no, mark as 0 days. Enter # from 0 to 7
Scoring: 0-1: Enter 0; 2-4: Enter 1; 5+: Enter 2

This question is assessing whether the caregiver routinely talks to the infant about what the infant sees or experiences, above and beyond simple labeling. Ask for examples. To receive credit, there must be description or explanation, e.g., “the sun helps us to feel warm” or “the bus is taking us to grandma’s house”. This item does not refer to labeling objects. If the caregiver gives a range that straddles different scores (e.g., 3-5) try probing further (e.g., “*Would you say closer to 3 or closer to 5?*”), until you can establish an estimate within one of the scoring intervals. Ideally, you will get the caregiver to land on a single number by asking several follow-up questions. For example, “*Would you say closer to 3 or closer to 5? ... Would you say somewhere in the middle, like 4, is a good estimate?*”

Question 2: *Do you have the opportunity to point to things around the house and name them for your baby? Give credit if caregiver says this happens on most days.*

The purpose of this question is to determine whether or not the caregiver routinely incorporates naming objects as part of daily activities, inside and outside of the home. Give credit if the caregiver states that they do this every day or almost every day. Do not give credit if this is done "occasionally" or "sometimes".

Question 3: *Do you have the chance to point out the names, the colors or the sizes of items in the grocery store when taking your baby there, or are you too busy getting your shopping done? Give credit for “most of the time”.*

The caregiver must take the infant to the grocery store at least once a week as well as point to and name objects in the store. Give credit if the caregiver states that they do this every or almost every shopping trip. Do not give credit if this is done "occasionally" or "sometimes".

Question 4: *Do you usually talk to your baby while you are feeding her/him and tell her/him about what is going on, or is she/he too young to talk with yet? Do not give credit for coaxing the baby to eat or for telling the child to be careful, etc. Give credit for “most of the time”.*

In order to receive credit, the caregiver must talk to the child about their home or family, events of the day, plans for after the meal, etc. Do not give credit if caregiver says they talk about the food or its preparation. Do not give credit if caregiver describes labelling food components during their mealtime. As always, if the caregiver responds in the affirmative, ask them to give specific examples of their conversation, in order to determine

whether credit should be given. It is okay if the child is too young to respond, but caregiver must report doing the activity regardless in order to receive credit.

Question 5: *Do you talk to your baby while doing chores/housework? Give credit if caregiver says this happens on most days.*

“Chores/housework” refers to anything the caregiver does around the house to maintain it clean, organized, or decorated (e.g., washing dishes, sweeping, picking up after the child/ren). Give credit if the caregiver reports talking to the child while doing chores/housework on most days (i.e., ≥ 4 days). Do not give credit if caregiver is simply telling the child to be careful, move out of the way, or giving the child a directive to help with the chore.

Question 6: *When your baby practices making sounds, does she/he practice most of the time alone or with you? Give credit if caregiver says that the baby practices with caregiver on most days.*

In order to receive credit, the caregiver must make an active effort to participate in the infant’s sound-making, e.g., by repeating the sounds, or responding in some other verbal manner. Give credit only if the caregiver states that most days (≥ 4 days), when the infant makes sounds, they verbally respond to the child’s vocalizations. Do not give credit if most of the time, the child makes sounds either alone or without the caregiver responding.

Question 7: *Do you tell your baby stories (such as folktales, made up stories without using a book, or stories about activities you have done together in the past)? Give credit if this takes place on a regular basis (several days per week), not just once or twice, or occasionally.*

Give credit for storytelling that happens outside of bookreading only. Give credit for popular folktales (e.g., Three Little Pigs), made-up stories, and stories from caregiver’s life (e.g., childhood story). Give credit if caregiver reports doing this regularly, not just once in a while or occasionally.

Question 8: *Do you play with your baby with bath toys or with water play when she/he is in the bathtub? Give credit for “most of the time”.*

In order to receive credit, the caregiver must play with the child during the bath; it is not sufficient for the child to play with toys in the bathtub on their own. If the caregiver reports playing during the child’s bath time, you can ask the caregiver to describe how they play with the child. Give credit even if they do not use toys. Water play, like taking turns splashing the water, can receive credit, if they do it on a regular basis.

B. Parental Verbal Responsivity During Play and Pretend Component (Range 0-7)

This Component is designed to capture the caregiver's verbal engagement with the child specifically during the times they play together. Always ask the caregiver to provide examples of how they perform the described activities, in order to accurately assess whether to give them credit for the item.

Question 9: *Do you play peek-a-boo games with your infant such as by hiding your face and then revealing yourself?*

Give credit for games in which the caregiver hides their face or the infant's face, which is then revealed with a verbal statement of discovery or surprise.

Question 10: *Do you play games with your infant in which you and your baby look in the mirror and talk or make sounds together?*

In order to receive credit, a verbal interaction between caregiver and infant must occur while in front of a mirror large enough that both caregiver and child can see themselves and each other (e.g., who is in the mirror?). If the caregiver states that this is not common or purposefully avoided in their culture, let them know that you understand, but do not give credit. To receive credit, the activity must have happened more than once or twice.

Question 11: *Do you usually sing songs especially used with young children to your baby either during the day, or when you're putting the baby to sleep or to nap?*

Give credit if the caregiver sings songs with words, meant for children, not just humming, on a regular basis. Give credit if the caregiver sings a lullaby or other song at bedtime and naptime. If the caregiver states that they used to sing a lullaby when the infant was younger, but now they put the baby to sleep while he/she is still awake, you should still give credit.

Question 12: *Do you play pat-a-cake games while singing a rhyming song?*

In order to receive credit, the caregiver must be able to name or describe a hand-clapping game, such as pat-a-cake, that they try to play with the infant. The hand-clapping game must be potentially reciprocal, with a desired repetition of the activity by the child. However, the child need not have mastered the game for the caregiver to receive credit. To receive credit, caregiver and infant must play these kinds of games several days a week, not just once or twice.

Question 13: *Other than pat-a-cake, do you play finger games with your baby such as Eentsy Weentsy Spider? If yes, ask: Could you tell me the names of some of them? Other examples include "This Little Piggy" and "Where is Thumbkin". Give credit for one or more games*

In order to receive credit, the caregiver must be able to name or describe a finger game that they play with the child. Unlike pat-a-cake (Question 8), finger games are not typically reciprocal, but must involve a song or rhyme or story. Examples include: "Eeentsy Weentsy Spider", "This Little Piggy", "Where is Thumbkin", "Little Jack Horner", "I'm a Little Teapot", and "Pop Goes the Weasel". To receive credit, the caregiver must express that they have played these games activity more than once or twice.

Question 14: *Do you play pretend games using a stuffed animal or puppet to talk to your baby?*

Give credit if the caregiver uses hand puppets, marionettes, or stuffed animals to "talk" with the child. If the puppet is homemade, it must have a "face" to be credited. To receive credit, caregiver must use stuffed animals/puppets in play regularly, not just once in a while.

Question 15: *Do you ever pretend that you do not know where someone or something is? (For example: "Where's your ball? Here it is!")*

Give credit for games where the caregiver pretends not to know where something or someone, other than themselves, is; then acts surprised upon "finding" the person or item. The baby can turn or point to the person or item but does not have to in order to receive credit.

SECTION 2. STIMQ₂ AVAILABILITY OF LEARNING MATERIALS

Availability of Learning Materials (ALM) Subscale [Range 0-6]

This Subscale consists primarily of a list of toys and games appropriate for children between 5 and 12 months old. Before asking the caregiver about each toy, read the introduction to the caregiver: *“I am going to name some toys and games and ask you to tell me which ones your baby has for himself / herself in your home. Since this questionnaire is given to caregivers of young children with different ages, many of the toys will be either too simple or too advanced for your baby. If your baby had a toy at a younger age, please tell me about it. Most caregivers have only some of these toys in their homes, so I don’t expect you to have more than a few of these toys for your baby.”*

Next, ask the caregiver about each toy. Give credit only for those toys for which each of the following is true:

1. The toy must belong to the child.
2. The toy must be kept in the child's house.
3. The child must have free access to the toy.
4. The child must play with the toy.

Do not give credit if the toy actually belongs to a sibling, even if the child is allowed to play with it sometimes. Do not give credit if a sibling must give permission for the child to be able to play with the toy. Do not give credit if the toy is kept in a location other than the child's home (such as the home of a cousin or babysitter). Do not give credit for an "advanced" toy that the caregiver has never tried to use with the child.

Note, however, that if the child has now outgrown a toy that previously belonged to them and that they did in fact play with when they were younger, credit should be given even if the toy now belongs to a sibling. Alternatively, if the child has an advanced toy that the caregiver does attempt to help the child use, credit may be given even if the child refuses to play with it. If the caregiver has removed a toy because of convenience, safety concerns or because it is broken, do not give credit. Caregivers may report using items that would not ordinarily be considered toys but have been repurposed as toys for the child’s use during play time (e.g., an old flip phone). Due to safety and developmental considerations, this is expected to occur infrequently at this age and should NOT receive credit on this version of the StimQ₂ (Infant). Age-appropriate and safe *homemade* toys or play items may receive credit (e.g., a closed clear bottle filled with colorful objects like feathers or rattling pieces like beans, or a tissue box covered/painted with black and white images). Like all other toys receiving credit, these homemade items must: belong to the child, be kept in the child’s home, be accessible to the child, be used by the child, and only serve as a toy. Do NOT give credit if the caregiver reports the child plays with household items as if they were toys, but they are not really his/hers to play with. For instance, taking or banging real pots and pans that are generally used for cooking real meals, would NOT receive credit. Finally, in the case in which the caregiver insists that

the toy is completely shared by siblings (i.e., belonging to neither one), give credit only if the child has easy access to and plays with the toy.

In general, do not simply accept simple "yes" answers. Determine whether the caregiver understands the question and whether the toy is truly in the possession and use of the child by asking questions, such as: "*Which one do you have?*" "*Tell me more about that toy.*" "*Does your baby like playing with it?*" After asking these sorts of questions for the first few toys, most caregivers will realize what is being asked of them and you should be able to proceed more rapidly through the rest of the list.

Another general rule: toys attached to walkers, strollers and bouncy seats should not be counted. This is because we are specifically interested in toys that the child has access to generally, not just within these contexts. If the walker, stroller or bouncy seat has detachable toys and these toys are frequently made available to the child outside of these contexts, these toys can be counted.

INSTRUCTIONS FOR ADMINISTRATION OF INDIVIDUAL ITEMS

A. First Infant Toys Component (Range 0-2)

Many of these toys will be outgrown by the time the infant is at the upper age limit of the subscale. However, you should still give credit if the caregiver states that the toy was previously available and used but is now outgrown.

Soft clown or stuffed toy with human face on it placed in or near crib: Give credit if the toy is soft, has a human face and is either in or near the crib. Toys that have human-like facial features (e.g., “Elmo” or “Big Bird”) are also acceptable; toys with faces on a crib mobile may also receive credit.

Mirror: Give credit for any toy mirror that the child can use to look at him/herself. The mirror can either be attached to the inside of the crib or must be available for the infant or caregiver to hold. Do not give credit for ordinary room or wall mirrors.

Small cloth toys or card with bright black-and-white patterns: To receive credit, the toy must be highly contrasted, with only black and white (or sometimes red). An example of this is a soft clown. Cards with patterns (often faces) may also receive credit if they are hung in the crib or infant seat. Do not give credit for a sock rattle (see below).

Soft cloth animals that make noises when squeezed: These are soft cloth toys shaped like animals and are usually fairly small. They make a high-pitched sound when they are squeezed. Do not give credit for soft blocks with pictures of animals. Do not give credit for plastic animals that make noise when squeezed (e.g., rubber duck; these kinds of toys can receive credit under Component C).

Rattle: This is a toy that makes a noise when it is shaken. It must be small enough to be held by the infant. If yes, ask how many. Give credit only if there are two or more rattles. *Homemade* rattles made out of small transparent bottles can also receive credit.

Sock rattle: This is a sock that has a rattle attached, so that it makes noise when the infant moves his legs. Often, the sock and rattle are highly contrasted (black, white, and red), so that the infant fixates on them. This toy is typically used only by infants at the lowest end of the age range.

Plastic or wooden toys on a ring: These are small plastic or wooden figures that the child can hold on to, such as keys or cards on a ring (e.g., teether keys, rattle keys).

Activity playmat or gym with hanging toys: These include a soft, usually colorful mat for the child to lie on the back, attached to 1 or more overhanging arches with toys of various materials and colors for the baby to reach for and grasp.

B. Activity/Manipulation Toys Component (Range 0-2)

Toy in which button pushed or door opened causes something to move or turn or make noise: The most typical examples of this are the busy box or activity center. Usually, the toy contains between two and five activities. Activities must include physical action by the infant, such as a button that makes a squeak when the infant pushes it, a large colorful knob to spin, or a door that makes a noise when it is opened; a toy with only electronic push buttons that play music or light up would not count.

Toy musical instrument: Give credit for any toy musical instrument, such as a toy xylophone, toy drum, or toy piano/keyboard. Real musical instruments cannot receive credit, except in the unusual circumstance that the instrument is small enough to be independently accessible to the child and has been given over to the child for his/her exclusive use. For example, a small keyboard or maracas given to the child may qualify, whereas a family's real piano would not. While the instrument can be electronic (e.g., a working toy keyboard), electronic push button toys that make instrument sounds do not count. Toys that play music, like a guitar that plays whole songs when a single button is pressed, should not receive credit.

Large spinning toy: When the baby pushes down on a button at the top of this toy, something spins, or a carousel goes around. Sometimes, colorful balls spin and pop up and down at the same time.

Set of wooden or plastic blocks to bang or stack: Give credit for a set of at least 3 cubic blocks which are one inch or more in length and which the child can bang or stack.

Stacking toy with colored plastic rings on a pole: Give credit for any toy which requires the child to stack rings on a pole or cone. The rings are usually in different colors and graduated diameters. This toy may be made of wood or plastic. Occasionally the rings are rectangular, rather than circular. Fisher-Price's Rock-a-Stack is a commonly available version of this item.

Large plastic beads or links that snap together: Give credit for any toy involving large beads or links that snap together or interlock to form a chain or simple construction, and then may be pulled or popped apart by the child. Examples include snap-lock beads and kiddi-links.

Shape-sorter: Give credit for any toy that requires the child to pass simple three-dimensional shapes (e.g., disc or sphere, cube, and triangular solid) through an appropriately shaped opening. There should be at least three shapes.

Bright colored plush activity cube/triangle with different parts/activities, such as mirrors and/or sounds: These are soft toys shaped like cubes or triangles, with activities embedded in the surface walls. These toys have prominent colors and/or contrasts. However, they do not have a face or arms.

C. Imagination Toys Component (Range 0-2)

Rubber or plastic animal made for use as a bath toy: Any rubber or plastic floating animal (e.g., rubber ducky, whale, set of fish), or plastic animal that makes noise when squeezed gets credit.

Small car, truck, or train: Give credit for any toy vehicle with wheels, that is small enough to be pushed by the infant's hand while the child is sitting or crawling.

Toy telephone or cell phone: This can be a rotary, push-button, flip phone, or flat smart phone. The toy must be big enough so that it could conceivably be used as a phone for symbolic play. Do not give credit for tiny rattles shaped like phones. Do not give credit if the child is only allowed to play with a real, working phone, or with discarded phones.

Toys which say names, letters or sounds: Give credit for any toy (or "book") which says names of objects, or letters of the alphabet, or makes animals sounds when lever or string is pulled or button is pushed (e.g. See and Say or any similar toy). Do not give credit for stuffed animals or dolls that say words, make sounds or talk.

Stuffed animal: Any stuffed animal is okay. However, do not give credit for a squeaky toy (above), a black and white toy (above), a stuffed toy with a human face (above), or a doll with a human face (below).

Doll with human face: Be sure that the doll is at least as long as the width of a standard page (8 1/2"). You may use the questionnaire page to demonstrate this length to the caregiver. In addition, it has to be "human" in form. Stuffed animals, squeaky toys, "transformers", non-human characters such as Elmo, would not be credited.

Bright colored plush animal toy with a face in the middle and arms extending out from the face with different noises, patterns, and textures: Give credit for any of the large number of different toys that fit this description. Examples include a whoozit, caterpillar, or octopus with these characteristics. Do not give credit for any similar toys that are made of hard plastic or do not have a face.



StimQ₂-Toddler (StimQ₂-T) Instructions for Administration

INTRODUCTION

In 2011 the StimQ instrument was revised and updated to allow for greater flexibility of administration and analysis. This revised version (StimQ₂) is largely comparable to the original instrument (StimQ), but has two important differences:

3. The elimination/addition of items base on IRT analyses, and
4. Restructuring of the instrument into smaller components—Subscales and Components—which can be administered and analyzed.

StimQ₂-T is a 46-point scale for measuring cognitive stimulation in the homes of young children ages 12 to 36 months. It is based on a questionnaire that is administered to the child's primary caregiver by trained interviewers in an office setting.

StimQ₂-T consists of 4 Subscales:

1. READ Subscale
2. Parental Involvement in Developmental Advance (PIDA) Subscale
3. Parental Verbal Responsivity (PVR) Subscale
4. Availability of Learning Materials (ALM) Subscale

Each of the Subscales includes a number of Components. Individual Subscales and Components can be administered and analyzed independently or in combination (see Scoring, below).

StimQ₂ Item Scoring

Three types of scores can be calculated using StimQ₂:

1. **Component** scores are noted by boxes with:



Component scores are calculated based on summing together clusters of items, in some cases followed by additional scaling. Component scores can be used individually in analyses.

2. **Subscale** scores are noted by boxes with:



Subscale scores are calculated based on summing together Component scores. Subscale scores can be used individually or in any combination for analyses.

3. **StimQ Total** scores are noted by boxes with:



StimQ Total scores are calculated based on summing together Subscale scores. There are two types of StimQ Total scores:

- c. StimQ Core score is calculated by adding together READ, PIDA and PVR.
- d. StimQ Total score is calculated by adding together READ, PIDA, PVR and ALM.

STIMQ₂ - TODDLER	Possible Range
READ Subscale	0 – 19
Bookreading Quantity Component	0 – 9
Diversity of Bookreading Concepts/Content Component	0 – 6
Bookreading Quality Component	0 – 4
PIDA Subscale	0 – 5
PVR Subscale	0 – 15
Parental Verbal Responsivity During Everyday Routines Component	0 – 9
Parental Verbal Responsivity During Play and Pretend Component	0 – 6
TOTAL Core Score [READ + PIDA + PVR]	0 – 39
ALM Subscale	0 – 7
Symbolic Play Component	0 – 2
Art Component	0 – 1
Adaptive/Fine Motor Component	0 – 2
Language Component	0 – 1
Life-size Component	0 – 1
TOTAL Score [READ + PIDA + PVR + ALM]	0 – 46

Score Interpretation

Specific cut off points are not available at this time. However, the StimQ₂ has primarily been used with low-income populations in large cities in the United States. Score interpretations have occurred in the context of treatment vs. intervention group associations and in analyses of effect sizes (e.g., Cohen’s d) between StimQ₂ and other characteristics or outcomes.

Suggested Citations

Cates, C. B.,* Roby, E. *, Canfield, C. F., Johnson, M., Raak, C., Weisleder, A., Dreyer, B.P., & Mendelsohn, A. L. (in press, 2023). Parental report of the cognitive home environment: Validation of the StimQ₂. *PLOS ONE*. *Denotes shared first author.

Dreyer, B.P., Mendelsohn, A.L., & Tamis-LeMonda, C.S. (1996). Assessing the child’s cognitive home environment through parental report: reliability and validity. *Early*

Development and Parenting: An International Journal of Research and Practice, 5(4), 271-287.

Mendelsohn, A.L., Brockmeyer, C.A., Tamis-LeMonda, C.S., Johnson, M.S., Berkule, S.B., White, L.J., & Dreyer, B.P. (2011, May). Assessment of the cognitive home environment through parent report: reliability and validity of StimQ (revised). Presented at Pediatric Academic Societies (PAS) and Asian Society for Pediatric Research (ASPR) Joint Meeting, Denver, CO.

ADMINISTRATION OF STIMQ₂

Identification of the primary caregiver

StimQ₂ measures only the role of the child's primary caregiver in providing cognitive stimulation for the child. Although many people (including other parents, relatives, friends, babysitters and siblings) may also play a very important part in the life of a child, the benefits provided by these individuals are not measured by this instrument.

The first step in administering the StimQ₂ is to determine the child's primary caregiver. The primary caregiver is the person who spends the most time interacting with the child in the child's home. The primary caregiver should spend most daytime hours with the child and see the care of the child during the day as their responsibility. A working parent is still usually the primary caregiver for the child, even if a babysitter or a grandparent regularly watches the child. For the purposes of StimQ₂ you are only interested in what the primary caregiver provides in the child's home for the child.

In the administration of StimQ₂, give credit only for those activities and learning materials provided by the primary caregiver. You must always be careful to distinguish between what is provided by the primary caregiver from what is provided by any other members of the household. For example, if the primary caregiver is the mother, do not give credit for those activities and learning materials that are provided by other people such as older siblings, the father, or a grandparent. However, it is important to support any of these activities, even if you cannot give credit for them. For example, you might say, *"It is very good that your husband does these things with your child. Right now, however, I'm mostly interested in the things that you do with your child."* Similarly, if the father is the primary caregiver, then give credit only for his activities with the child, and not those provided by the mother. Sometimes, both the mother and father jointly and equally share responsibility for the child's care. If both parents are present at the interview and they both state that they have equal responsibilities for the child, you may give credit to what both provide for the child. However, no other combinations can be accepted in this way. For example, for the purposes of this questionnaire, mother and grandmother cannot be considered to share equally in the care of the child; one must be identified as the primary caregiver. Finally, a babysitter can never be considered a primary caregiver.

General Guidelines

As the StimQ₂ is administered, “Yes” responses should be followed up with requests for more information, such as frequency or examples of the activity whenever possible. This is done to reduce social desirability bias, by increasing the likelihood that “Yes” responses truly reflect performance of the activity and reinforce “No” responses when the activity is not performed, as additional information is then not requested. For many of the items, frequency needs to be addressed, as a specific threshold (e.g., several days a week) is required to receive credit.

One of those thresholds is a doing an activity with the child on a “regular basis, not just once or twice.” This requirement is not necessarily attached to a specific number of days per week. Instead, it should be interpreted as “most of the time” whenever the caregiver is with the child. A working caregiver may only spend time with the child on Saturday and Sunday, but if they engage in the activity with the child on most of these days then they should receive credit for doing this on a “regular basis.”

Reliability in administering this scale requires following these instructions. All persons planning to administer the StimQ₂-Toddle should practice its administration beforehand with non-study participants, on 3 to 5 occasions. We strongly encourage examiners/interviewers practice administering the instrument to someone who has previously successfully administered the StimQ₂ to participants and/or caregivers. Additionally, the experienced interviewer should also observe one of the practice administrations in order to provide feedback on questioning and reliability. We recognize this may not always be possible, and therefore this is not a requirement for training. Nonetheless, we strongly encourage new StimQ₂ interviewers obtain feedback from someone with experience administering the StimQ₂ before true data collection.

General Introduction

After introducing herself/himself by name and job title, the interviewer should provide a general introduction to the caregiver such as what is printed at the beginning of the questionnaire: *“This questionnaire is designed to find out about the different kinds of activities that you and your child do together. We know that caregivers have lots to do, at work, in the home, and for the family, and that it is often hard to find time to play and read together. Many caregivers don’t do more than a few of these activities and some don’t have the time to do any. I know that many people (including relatives, teachers, friends, babysitters, and siblings) also may have the opportunity to play important roles for your child. However, in this questionnaire, I am only interested in the kinds of activities that you provide for your child.”*

SECTION 1.
STIMQ₂ CORE: READING, TEACHING, VERBAL RESPONSIVITY

READ Subscale [Range: 0-19]

The READ Subscale is comprised of three (3) Components looking at the quantity, the diversity in concepts/content, and the quality of shared book reading experiences between child and primary caregiver. Each item addresses a specific attribute of book reading; in order to receive credit, the caregiver must engage in these practices in the specified frequency and/or manner.

Before you begin asking individual questions, ask the caregiver: *"Do you ever read children's books to your child or is she/he too young for that?"* If the caregiver answers "yes", ask each of the questions that follow. If the caregiver answers "no" (i.e., she/he does not read to the child), you should enter an "N" for this item and, skip all of the remaining reading questions and enter a zero for each individual item, each Component and the overall READ Subscale. As the interview progresses, should it become apparent that caregiver does engage in reading aloud with regularity, consider returning to the READ Subscale, confirming that the caregiver does read children's books, and, if appropriate, administering all items and Components.

A. Bookreading Quantity Component (Range 0-9)

This Component aims to quantify the toddler's exposure to shared booking reading by documenting how many age-appropriate reading materials are in the home, and with what frequency those are read to the toddler by a primary caregiver.

Question 1: *Name some children's books that you have at home and read to your child.* After caregiver names some books, ask: *How many books altogether do you have at home that you read to your child?* Enter # books
Scoring: 0= Enter 0, 1-9= Enter 1, 10-24= Enter 2, 25-49= Enter 3, 50+= Enter 4

The goal of this question is to determine the number of children's books appropriate for toddlers that the caregiver has available in the home and reads to the child. Books appropriate for toddlers are picture books, usually containing familiar objects and a few simple words, or a simple story or rhyme. It is important to converse with the caregiver about the reading activities and the individual books that are read. Have the caregiver name several of the books that are used; ask which ones are the child's favorites; talk about where and when these activities occur. In some cases, caregivers may not remember exact titles of books; descriptions of the books will suffice in this circumstance. You should continue conversing with the caregiver until you are sure that the intention of the question is understood. After this brief conversation, you may then ask: *"How many books altogether do you have at home that you read to your child?"* and enter the number in the space provided. Give credit for library books that are presently in the home, appropriate for toddlers, and that the caregiver can name or describe. Each book in a set

or series of books counts separately as one book. Magazines and comic books should generally not receive credit. However, if the caregiver can describe a magazine or comic book that is specifically designed to be read to toddlers under 36 months, they may receive credit for each issue they have available in the home and actively read to their child. Although there are many child-friendly magazines/comic books, most are too advanced for toddlers and will therefore not receive credit. Examples of magazines known to be designed for toddlers are: Highlights' High Five Magazine and Ladybug Magazine.

Some caregivers will have difficulty giving an exact number and instead give a range (e.g., 20-30 books). In this case, try probing further (e.g., "would you say closer to 20 or closer to 30", etc.), until you can establish an estimate within one of the scoring intervals. For example, if the caregiver ultimately estimates 25-30 books, that would be enough to categorize as 25-49 with a score of 3.

Other caregivers will not be able to estimate a number and instead say things like "a few" or "a lot" or "too many to count". In this case, it can be helpful to give them a starting point consistent with what they have reported, and probe from there (e.g., "so just 1 or 2" if they say "a few", or "more than 5 or 10" if they say "a lot".)

Regardless, make sure the final estimate is consistent with the preceding conversation that has taken place about names and numbers of books.

Question 2: *How many days each week do you read children's books to your child?*

Enter # days from 0 to 7

Scoring: 0: Enter 0; 1-2: Enter 1; 3-4: Enter 2; 5+: Enter 3

This question is used to determine the number of days on an "average" or "usual" week that the caregiver reads children's books to their child. If the caregiver presents a significant variation in reading on different weeks, ask about a typical week in the past month. If the caregiver seems to have trouble determining an estimate on their own, you may probe by giving caregiver a starting point and asking if they read more or less than that starting point (e.g., "*all seven days?*"). Unsuccessful attempts at reading do not receive credit. An example of a description of an unsuccessful attempt would be: "I try to read to him, but he won't sit still long enough." However, if the caregiver reads to the child despite uncertainty about the child's understanding of what is being read, credit should be given. If the caregiver gives a range that straddles different scores (e.g., 3-6) try probing further (e.g., "would you say closer to 3 or closer to 6", etc.), until you can establish an estimate within one of the scoring intervals. Ideally, you will get the caregiver to land on a single number by asking several follow-up questions. For example, "Would you say closer to 3 or closer to 6? ...Like 5 or 6? ...Which would you say, 5 or 6?"

Question 3: *Do you read a book together with your child at bedtime? If yes, ask: How*

many days per week? Enter # from 0 to 7
Scoring: 0-4: Enter 0; 5+: Enter 1

If the caregiver reports that they read at bedtime, ask how many days per week. Give credit for 4 or more days per week. Bedtime is defined as the time the caregiver is preparing the child to go to sleep in the evening; before a daytime nap does not count.

Question 4: Do you read books together with your child at times of day other than bedtime? If yes, ask: *How many days per week?* Enter # from 0 to 7
Scoring: 0-4: Enter 0; 5+: Enter 1

If the caregiver reports that they read at other times of the day, ask how many days per week. Give credit for 5 or more days per week, including before daytime naps.

B. Diversity of Bookreading Concepts/Content Component (Range 0-6)

This Component is used to determine whether the caregiver reads books that are designed to focus on specific learning concepts such as counting, colors, shapes, letters, and daily activities (e.g., eating, sleeping, playing and toilet training). If the caregiver states that they teach these concepts but does not generally use books to teach these concepts, praise this activity and state that you will be asking questions about those teaching activities later; however, do not give credit for such items in this section. If the caregiver reports reading one (1) book that teaches about several of these concepts, give credit for each item.

For questions #5-10, read the following instructions to the caregiver: *“I am now going to ask you about several different types of books that you may have read to your child. Most caregivers have only read some of these types of books to their children, so you should not feel that I expect you to have read all of these books to your child. For each of the following types of books, please tell me whether you have one in your home and whether you have read it more than once or twice.”* Give credit only if the caregiver has the book in the home and has read the type of book described more than once or twice.

Question 5: *Do you read books to your child especially made for young children that teach about counting numbers 1 to 10?*

Give credit for any book that specifically teaches about counting numbers 1 to 10. If the caregiver states counting items or counting pictures in a storybook, praise the activity, but do not give credit on this question—you can give credit for this on Question 2 of the PIDA Subscale. Remember, you are encouraged to ask follow-up questions to help determine

credit (e.g., “Does the book have numbers? Or do you count the pictures out loud to teach your child about the numbers?). Do not forget to ask if the caregiver has read this type of book more than once or twice.

Question 6: *Do you read books to your child especially made for young children that teach about simple colors, such as red, blue, green, and yellow?*

Give credit for any book that teaches about simple colors, like red, blue, green, and yellow. Remember to ask a follow-up question to determine whether the caregiver has read this type of book more than once or twice.

Question 7: *Do you read books to your child especially made for young children that teach about simple shapes such as squares, circles, and triangles?*

Give credit for any book that has shapes. If the caregiver states that they teach shapes by pointing out the shape of the pictures in a book (e.g., round ball, or square table), praise the activity, but do not give credit on this question—you can give credit for this on Question 12. Remember to ask a follow-up question to determine whether the caregiver has read this type of book more than once or twice.

Question 8: *Do you read books to your child especially made for young children that teach about the letters of the alphabet?*

Give credit for any book that teaches the letters of the alphabet. Again, if the caregiver states that they teach the child letters by pointing to letters in text, praise the activity, but do not give credit on this question. Remember to ask a follow-up question to determine whether the caregiver has read this type of book more than once or twice.

Question 9: *Do you read books to your child about: activities of a toddler’s day (such as mealtime, bath time, bedtime, playtime, going places, getting dressed)?*

Give credit for any children’s book that includes one or more examples of a toddler’s typical everyday activities. Note that the book does not need to “teach” about these activities. It can be a story that simply includes one or more of these activities taking place (e.g., *Please, baby, please*). Remember to ask a follow-up question to determine whether the caregiver has read this type of book more than once or twice.

Question 10: *Do you read nursery rhymes (such as “Mother Goose”) or other rhyming books to your child?*

Give credit for any book that contains one or more nursery rhymes, such as "Mother Goose" or other short and simple rhymes. Remember to ask a follow-up question to determine whether the caregiver has read this type of book or stories more than once or twice.

C. Bookreading Quality Component (Range 0-4)

This Component is meant to capture the caregiver's regular efforts to engage and teach their child during shared bookreading. Therefore, in order to receive credit for the following items the caregiver must generally do, or try to do, these activities when reading with their child.

Question 11: *Do you read books to your child that include simple stories for young babies? Give credit if caregiver reads this type of book on a regular basis, for example one or twice a week.*

This question seeks to determine if the caregiver reads books to the child that contain simple storyline and involve more than just pictures and single words. These should contain at least one character and a sequence of actions.

Question 12: *While you read to your child, do you point to pictures and name them or describe them, or is your child too young or distractible for that? Give credit for "most of the time".*

This question seeks to determine if the caregiver does more than simply read the text in the book to the child, using the reading experience to expand the child's vocabulary by naming and talking about pictures. Give credit if the caregiver does this most of the time. One way to probe about the regularity in which the caregiver does this, without outright asking about frequency, is to use the caregiver's response for the number of days they read together. For example, you can say, "*You mentioned you read 4 days a week with your child, of those 4 days about how many days or how many times would you say you point to the pictures and name or described them to him/her?*"

Question 13: *Do you ask your child questions about the pictures in books and try to have a conversation, for example, "What is that called?" or "What color is it?" Give credit for "most of the time".*

As with Question 12, this question seeks to determine if the caregiver encourages the child to participate actively in the reading activity through questions and attempts at back-

and-forth vocalization. Depending on the child's age, the caregiver may reply "no" simply because the child does not yet produce words. You should clarify that it is not a question of whether they converse expecting a reply from the child, but rather of them talking during bookreading as *if* they were conversing. Give credit if the caregiver does this most of the time.

Question 14: *Do you talk to your child about feelings and emotions of characters in books? Must have done this more than once or twice.*

This question seeks to determine if the caregiver uses bookreading time as an opportunity to talk to the child about emotions by relating them to the characters in a story. Give credit if the caregiver reports having done this more than just once or twice. Unlike questions 12 and 13, they do not need to do this frequently for credit, but it must be a purposeful effort on the caregiver's part.

PIDA Subscale: Parental Involvement in Developmental Advance [Range: 0-5]

This Subscale measures the number of different interactional activities occurring between the caregiver and the child that promote cognitive development. Although the word "teach" is sometimes utilized, the questions seek to elicit information about "playing" one-on-one with the toddler and helping the toddler successfully master new skills.

It is important to note that any "yes" answer must be explored with the caregiver by asking how and how often the caregiver engages in each activity. In order to receive credit, the caregiver must give an example of a specific activity that demonstrates the teaching asked about in the question, with the frequency that is noted next to each individual item. If the caregiver has difficulty providing an example, you may prompt by providing an example, such as the examples listed with the questions. If the caregiver affirms doing an activity you provided, you must follow up by asking the caregiver to describe how they engage and carry out the activity. If the caregiver is unable to provide more details, then credit should not be given. It is helpful to differentiate between activities the toddler does on their own versus activities the caregiver does with the toddler or shows them how to do. Note also that if the caregiver **spontaneously** states that they had previously engaged in an activity, but that the child is now too old or already knows how to perform the activity without assistance (e.g., a 36-month-old who can easily push buttons or turn knobs), credit should be given.

Question 1: *Do you teach your child letters? Must have done this more than once or twice, use visual representation (at least 1 inch in size).*

In order to receive credit, the caregiver must use visual representations of letters of the alphabet. Letters that the caregiver draws may receive credit. Alphabet letters that are used for this activity must be at least one inch long. It is not necessary for the caregiver to be teaching the child the complete alphabet. Do not give credit for oral teaching of letters unaccompanied by visual reinforcement, such as the singing of alphabet songs.

Question 2: *Do you teach your child counting?* Must have done this more than once or twice, count item or pictures, NOT fingers.

Give credit if the caregiver teaches counting in any of the following ways: with a set of toys, such as blocks; with a set of real objects, such as cups or plates; or with books that have pictures that can be counted. Do not give credit for counting with fingers, counting intangible/abstract things (e.g., stars, bedtime sheep), or for counting aloud without any specific toys or teaching materials.

Question 3: *Do you play with your child and show her/him how to pile up baby blocks or use other toys that stack up in a tower?* Must have done this more than once or twice, not child doing it on his/her own.

Give credit for any stacking activity that the caregiver does with the child involving blocks, stacking beakers, or other similar toys.

Question 4: *Do you teach your child colors?* Must have done this more than once or twice, at least 3 different colors.

Give credit if the caregiver teaches the concept of color by using sets of toys or objects, or by using children's books. The caregiver must try to teach at least three different colors. Rather than asking directly, "How many colors have you taught your child?" you can ask the caregiver to list for you the colors they remember teaching their child. If they mention at least three colors you may give credit, even if they're not all basic colors (i.e., red, blue, and yellow). Do not give credit for pointing to objects in the street, or store and labeling those objects with colors. The goal of this item is to determine whether the caregiver purposefully and intentionally teaches their child different colors, rather than simply label colors for their child if/when an opportunity presents itself.

Question 5: *Do you teach your child body parts?* Give credit if done "usually" or "often," not "occasionally" or "sometimes" and use a visual cue, such as caregiver's face or body, a doll, or stuffed animal.

Give credit for any activity in which the caregiver teaches body parts using either the child's own body or visual cues, such as the caregiver's face or body, a picture, a doll, or a stuffed animal.

PVR Subscale: Parental Verbal Responsivity [Range: 0-15]

This Subscale explores different types of verbal interaction initiated by the caregiver to enhance the child's language development. Any "yes" answer must be explored with the caregiver by asking how often the caregiver engages in each activity and requesting more information as noted. In order to receive credit, the caregiver must engage in the interaction described on a regular basis (4+days a week), not just once or twice or occasionally.

A. Parental Verbal Responsivity During Everyday Routines Component (Range 0 – 9)

This Component is designed to capture the caregiver's verbal engagement with the child on an everyday basis, during their standard routines, days, and activities.

Question 1: *Some parents talk to their children about their surroundings and what is happening around them. Have you started to talk to your child in this way or is he/she too young for that? If yes, ask for examples. Ask: How many days a week do you do this? If no, mark as 0 days. Enter # from 0 to 7*
Scoring: 0-1: Enter 0; 2-4: Enter 1; 5+: Enter 2

This question is assessing whether the caregiver routinely talks to the child about what the child sees or experiences, above and beyond simple labeling. Ask for examples. To receive credit, there must be description or explanation, e.g., "the sun helps us to feel warm" or "the bus is taking us to grandma's house". This item does not refer to labeling objects. If the caregiver gives a range that straddles different scores (e.g., 3-5) try probing further (e.g., "would you say closer to 3 or closer to 5", etc.), until you can establish an estimate within one of the scoring intervals. Ideally, you will get the caregiver to land on a single number by asking several follow-up questions. For example, "*Would you say closer to 3 or closer to 5? ... Would you say somewhere in the middle, like 4, is a good estimate?*"

Question 2: *Do you have the opportunity to point to things around the house and name them for your child? Give credit if parent says this happens on most days.*

The purpose of this question is to determine whether or not the caregiver routinely incorporates naming objects as part of daily activities, inside and outside of the home. Give credit if the caregiver states that they do this every day or almost every day. Do not give credit if this is done "occasionally" or "sometimes".

Question 3: *Do you have the chance to point out the names, the colors or the sizes of items in the grocery store when taking your child there, or are you too busy getting your shopping done? Give credit for "most of the time".*

The caregiver must take the child to the grocery store at least once a week as well as point to and name objects in the store. Give credit if the caregiver states that they do this every or almost every shopping trip. Do not give credit if this is done "occasionally" or "sometimes".

Question 4: *Do you have conversation with your child that involve back-and-forth vocalizations and talking? Give credit if caregiver says this happens on most days.*

Give credit if the caregiver engages the child in conversation, even if the child has not yet fully developed his/her language. If the caregiver attempts to engage the child in conversation and encourages the child to speak, but the child is not yet speaking, still give credit for the attempt made. Do not give credit if this is only done "occasionally" or "sometimes".

Question 5: *Do you usually talk to your child while you are feeding her/him and tell her/him about what is going on, or is she/he too young to talk with yet? Do not give credit for coaxing the child to eat or for telling the child to be careful, etc. Give credit for "most of the time".*

In order to receive credit, the caregiver must talk to the child about their home or family, events of the day, plans for after the meal, etc. Ask the caregiver to give you an example of a typical mealtime conversation with their toddler. Do not give credit if the caregiver only talks about the food or meal; this could include talking about the preparation of the food/meal, the flavoring or taste of the food, descriptions of the food (e.g., "*This has green mushy peas!*") These types of conversations during mealtimes should not receive credit. The purpose of this question is to gauge whether the caregiver uses mealtimes as an opportunity to engage in everyday talk with their child. The toddler does not need to respond with words or sounds in order to receive credit.

Question 6: *Do you talk to your child while doing chores/housework? Give credit if caregiver says this happens on most days.*

"Chores/housework" refers to anything the caregiver does around the house to maintain it clean, organized, or decorated (e.g., washing dishes, sweeping, picking up after the child/ren). Give credit if the caregiver reports talking to the child while doing chores/housework on most days (i.e., ≥ 4 days). Do not give credit if caregiver is simply telling their child to be careful, move out of the way, or giving the child a directive to help with the chore.

Question 7: *Do you tell your child stories (such as folktales, made up stories without using a book, or stories about activities you have done together in the past)? Give*

credit if this takes place on a regular basis (several days per week), not just once or twice, or occasionally.

Give credit for storytelling that happens outside of bookreading only. Give credit for popular folktales (e.g., Three Little Pigs), made-up stories, and stories from caregiver's life (e.g., childhood story). Give credit if caregiver reports doing this regularly, not just once in a while or occasionally.

Question 8: *Do you play with your child with bath toys or with water play when she/he is in the bathtub? Give credit for "most of the time".*

In order to receive credit, the caregiver must play with the child during the bath; it is not sufficient for the child to play with toys in the bathtub on his/her own. If the caregiver reports playing during the child's bath time, you can ask the caregiver to describe how they play with the child. Give credit even if they do not use toys. Water play, like taking turns splashing the water, can receive credit, if they do it on a regular basis.

B. Parental Verbal Responsivity During Play and Pretend Component (Range 0-6)

This Component is designed to capture the caregiver's verbal engagement with the child specifically during the times they play together. Always ask the caregiver to provide examples of how they perform the described activities, in order to accurately assess whether to give them credit for the item.

Question 9: *When your child is playing with toys, do you mostly play along or do you prefer to watch?*

The purpose of this question is to determine whether the caregiver routinely plays along and engages with the child during playtime. This includes a verbal interaction of some sort during the time of play. Do not give credit if the caregiver states that they usually just keep an eye on the child during playtime (i.e., observe), or if they state that another family member, like an older sibling primarily plays with the toddler.

Question 10: *Do you play peek-a-boo games with your child such as by hiding your face and then revealing yourself?*

This activity is usually done with children at the younger end of the age group addressed in this subscale. Therefore, you may give credit if the caregiver spontaneously states that they had previously played peek-a-boo games together, but that the child is now too old for this activity. You may also give credit for hide-and-seek games.

Question 11: *Do you play pat-a-cake games while singing a rhyming song, or do you play finger games with your child such as Eentsy Weentsy Spider? If yes, ask: Could you tell me the names of them?*

In order to receive credit, the caregiver must be able to name or describe the game that they play with the child. Examples include: "Eeentsy Weentsy Spider", "This Little Piggy", "Where is Thumbkin", "Little Jack Horner", "I'm a Little Teapot", and "Pop Goes the Weasel".

Question 12: *Do you play make-believe games with your child in which you sit at the table or on the floor and pretend to serve food, or feed stuffed animals or toys, or is our child too young for that?*

Give credit if the caregiver sits with the child and pretends to serve food or feed dolls, toy people, or stuffed animals. You may give credit if caregiver does this with no toys (e.g., pretending to cut an imaginary cake and serving imaginary pieces), or with real items, including real food (e.g., apple slices) or other toys being used to represent food (e.g., blocks representing cake).

Question 13: *Do you play pretend games using a stuffed animal or puppet to talk to your child?*

Give credit if the caregiver uses hand puppets or marionettes to "talk" with the child. If puppet is homemade, it must have a "face" to be credited.

Question 14: *Do you ever pretend that you do not know where someone or something is? (E.g., "Where's your ball? Here it is!")*

Give credit for games where the caregiver pretends not to know where something or someone, other than themselves, is; then acts surprised upon "finding" the person or item. The child can turn or point to the person or item but does not have to in order to receive credit.

SECTION 2. STIMQ₂ AVAILABILITY OF LEARNING MATERIALS

Availability of Learning Materials (ALM) Subscale [Range 0-6]

This Subscale consists primarily of a list of toys and games appropriate for children between 12 and 36 months old. Before asking the caregiver about each toy, read the introduction to the caregiver: *“I am going to name some toys and games and ask you to tell me which ones your child has for himself / herself in your home. Since this questionnaire is given to caregivers of young children with different ages, many of the toys will be either too simple or too advanced for your child. If your child had a toy at a younger age, please tell me about it. Most caregivers have only some of these toys in their homes, so I don’t expect you to have more than a few of these toys for your child.”*

Next, ask the caregiver about each toy. Give credit only for those toys for which each of the following is true:

1. The toy must belong to the child.
2. The toy must be kept in the child's house.
3. The child must have free access to the toy.
4. The child must play with the toy.

Do not give credit if the toy actually belongs to a sibling, even if the child is allowed to play with it sometimes. Do not give credit if a sibling must give permission for the child to be able to play with the toy. Do not give credit if the toy is kept in a location other than the child's home (such as the home of a cousin or babysitter). Do not give credit for an "advanced" toy that the caregiver has never tried to use with the child.

Note, however, that if the child has now outgrown a toy that previously belonged to them and that they did in fact play with when they were younger, credit should be given even if the toy now belongs to a sibling. Alternatively, if the child has an advanced toy that the caregiver does attempt to help the child use, credit may be given even if the child refuses to play with it. If the caregiver has removed a toy because of convenience, safety concerns or because it is broken, do not give credit. You may give credit for items that would not ordinarily be considered toys but have been repurposed as toys or play item for the child’s exclusive use during play time. For example, a make-up brush or sponge that is now used only by the child for arts and crafts; or Band-Aids that are used during a pretend doctor’s visit. Age-appropriate and safe *homemade* toys or play items may receive credit (e.g., a tissue box stuffed with colorful scarves or socks that the child pulls out, or a decorated paper towel roll used as a pretend telescope). Like all other toys receiving credit, these homemade items must: belong to the child, be kept in the child’s home, be accessible to the child, be used by the child, and only serve as a toy. Do NOT give credit if the caregiver reports the child plays with household items as if they were toys, but they are not really his/hers to play with. For instance, taking or banging real pots and pans that are generally used for cooking real meals, would NOT receive credit; using an old cell phone kept as an in-case-of-emergency replacement to play pretend would

NOT receive credit. Finally, in the rare case in which the caregiver insists that the toy is completely shared by siblings (i.e., belonging to neither one), give credit only if the child has easy access to and plays with the toy.

In general, do not simply accept simple "yes" answers. Determine whether the caregiver understands the question and whether the toy is truly in the possession and use of the child by asking questions, such as: "*Which one do you have?*" "*Tell me more about that toy.*" "*Does your child like playing with it?*" After asking these sorts of questions for the first few toys, most caregivers will realize what is being asked of them and you should be able to proceed more rapidly through the rest of the list.

INSTRUCTIONS FOR ADMINISTRATION OF INDIVIDUAL ITEMS

A. Symbolic Play Component (Range 0 – 2)

Doll or action figure (must have a human face- no credit for robots or stuffed animals): Be sure that the doll or action figure is at least as long as the width of a standard page (8 1/2"). You may use the questionnaire page to demonstrate this length to the caregiver. In addition, it has to be "human" in form. Stuffed animals and "transformers" would not be credited.

Puppets (hand puppet or marionette): Give credits for hand puppets or marionettes used by caregiver in interactive play with the child. If puppet is homemade, it must have a "face" to be credited.

Costumes for child to dress up in (no credit for Halloween costumes): Give credit for old adult clothing repurposed for pretend play for this child, for costumes bought specifically for dress-up play, sets of occupational hats (e.g., police officer, firefighter, construction worker, etc.) Do not give credit for "Halloween" costumes unless they are used throughout the year.

Small housekeeping toys (e.g., broom, vacuum, lawnmower): Give credit for toy versions of brooms, vacuums, carpet sweepers, etc. Do not give credit for discarded real housekeeping equipment that are now used as toys by the child.

Toy pots, pans, or dishes, or teach set (must be child's toy, not discarded kitchen utensils): Do not give credit for discarded kitchen utensils because these items are not generally used for symbolic play.

Small car, truck, or train: Give credit for any toy vehicle with wheels that is small enough to be pushed by the child's hand.

Imaginary play activity set (such as Fisher-Price barn garage, house, dollhouse): Give credit for any miniature play environment which includes the appropriate figures and props (people, animals, furniture, vehicles).

Toy food such as fruits, vegetables, hamburgers, sandwiches, & pizzas made of plastic or wood: Give credit for any toy food.

Toy school bus or other vehicle with “little people” that fit into it: The toy must contain "little people" that can be easily placed into and removed from a vehicle. If caregiver says "yes" to this question, then also give credit for item 6 (small car, truck, or train).

Set of small toy animals made for young children to play with (not stuffed animals): Give credit for a set of related animals such as farm animals, zoo animals, animal families, etc. Do not give credit for stuffed animals.

B. Art Component (Range 0 - 1)

Crayons: Give credit for a set of at least five crayons.

Coloring book: Give credit for a book with simple pictures appropriate for young children. Do not give credit if the child does not have materials for coloring the books (e.g., crayons, markers, colored pencils). Do not give credit for adult coloring books, unless they truly belong and are used exclusively by the child. Give credit for printed coloring pages, if these are printed in advance and readily available for the child to use.

Chalkboard with chalk or dry-erase board with markers that can be erased: Give credit for a chalkboard that is hand-held or on an easel that child is able to reach. Give credit for dry-erase boards with markers that can be erased.

Colorful clay that can be molded into different shapes (such as Play-Doh): Give credit for soft pliable colorful clay such as Playdoh. Also give credit for homemade "Playdoh". Modeling clay or plasticine may also be given credit. Do not give credit for "silly putty".

Magic marker set or colored pencil set specifically set aside for child to use on paper: Give credit for a set of differently colored felt-tip markers or a set of colored pencils.

Finger paints or water paints with large brush that the child can easily hold: For water paints, give credit only if the child can easily hold a brush with bristles 1- 2 inches wide. Do not give credit for small thin (watercolor) brushes, even if the caregiver says that the child can hold them. You may give credit for watercolor paints if the child uses

them as finger paint. Thick (1-2 inches wide) make-up brushes that have been repurposed for the child's use during playtime may receive credit.

C. Adaptive / Fine Motor Component (Range 0 – 2)

Wood Puzzles with 1 to 7 pieces made especially for young children. These often have little knobs on the pieces for child to pick them up with. *(Also give credit for formboards or for rubber puzzles if caregiver spontaneously tells you about them):* Give credit only for puzzles made out of wood, thick plastic, or rubber. The puzzles should be specifically made for very young children, and therefore have large pieces, few in number (no more than seven). These may or may not have knobs on the pieces to assist the child in picking them up. A form board may also be given credit.

Shape-sorter (toy container which has openings to fit different shaped blocks such as cube, sphere-circle, and triangle): Give credit for any toy that requires the child to pass simple three-dimensional shapes (e.g., disc or sphere, cube, and triangular solid) through an appropriately shaped opening. There should be at least three shapes, although older children may have shape sorters with more complex shapes as well.

Colored plastic rings of different sizes that stack on pole (such as Rock-a-Stack): Give credit for any toy which requires the child to stack rings on a pole or cone. The rings are usually in different colors and graduated diameters. This toy may be made of wood or plastic. Occasionally the rings are rectangular, rather than circular. Fisher-Price Rock-a-Stack is a commonly available version of this item.

Nesting / Stacking toys (toys of different sizes that fit into or on top of each other, such as interlocking cups/beakers): Give credit for cups or beakers of graduated sizes that stack on top of each other to make a tower, or nest inside each other. These should be made of plastic. If the caregiver states that they give a set of plastic measuring cups or beakers to the child for this purpose, only give credit if this set of cups has been given over to the child as a full-time toy, is no longer used for its original purpose, and contains at least three graduated sizes.

Plastic or wooden beads for stringing: Give credit for a toy that includes jumbo wood or plastic beads at least one inch in diameter, with a central hole allowing the child to string them with a rope or shoelace.

Set of wooden or plastic blocks made for young child: Give credit for a set of at least 8 cubic blocks which are one inch or more in length.

Pop-up toy (child presses or moves knob, and Sesame Street characters or other little people or animals pop up): Give credit for any toy which requires the child to turn or press a knob or button in order to make an object (such as a "little person", animal,

Sesame Street or Disney character) pop out. Do not give credit for traditional jack-in-the-box toys with cranks unless you can determine that the toddler can manipulate it successfully on her own.

Pail and shovel: In order to receive credit for this item, the child must have both a pail and a shovel. In addition, the shovel cannot be a spoon or other kitchen utensil, but a child-sized play shovel. Do not give credit for an adult-sized pail or backyard shovel that the family allows the child to play with.

Large colorful building blocks of varied shapes that fit together to build various structures (such as Duplo): Give credit for interlocking plastic building blocks (Duplo or other similar blocks, which are large Lego). Do not give credit for regular Lego blocks, since these are too small for a child less than three years old.

Toy cash register that has numbers that pop-up when pressed or plastic coins that drop-in slots: Give credit for any toy cash register that has buttons to press, plastic coins that drop-in slots, numbers that pop-up when buttons are pressed, etc. While this toy may be used in symbolic play by the caregiver (e.g., supermarket pretend play), the manipulative aspects of this toy are important enough for us to include it under adaptive/ fine motor learning materials. Some toy cash registers may also qualify as pop-up toy.

Large plastic beads or links that snap together to form a chain and then pull or pop apart (such as snap-lock beads): Give credit for any toy involving large beads or links that snap together or interlock to form a chain or simple construction, and then may be pulled or popped apart by the child. Examples include snap-lock beads and Kiddi-links.

Toy musical instrument such as toy xylophone, toy drum or toy piano/keyboard: Give credit for any toy musical instrument, such as a toy xylophone, toy drum, or toy piano/keyboard. Real musical instruments cannot receive credit, except in the unusual circumstance that the instrument is small enough to be independently accessible to the child and has been given over to the child for his exclusive use. For example, a small keyboard, maracas, or tambourine given to the child may qualify, whereas a family's real piano would not. While the instrument can be electronic (e.g., a working toy keyboard), electronic push button toys that make instrument sounds do not count.

D. Language Component (Range 0 - 1)

Set of toy letters (complete alphabet) made of plastic or wood (*must allow for individual manipulation*): Give credit only if there is a complete set of 26 letters. The letters must be made of plastic, wood, rubber, or foam and allow individual manipulation by the child. A set of alphabet blocks or alphabet puzzles are acceptable. Do not give credit for posters, blankets, or wall-hangings with the alphabet on them.

Set of toy numbers (at least 1 - 9) made of plastic or wood (*must allow for individual manipulation*): Give credit only if there are at least the numbers 1-9, they are made of plastic, wood, rubber or foam, and they may be separately manipulated by the child.

Children's card game (to name or match pictures, shapes, colors, words, letters, or numbers): Give credit for a set of cards made for young children involving activities such as matching or naming pictures, or identifying or matching shapes, colors, letters, or numbers. Playing cards designed specifically for toddlers such as Memory may also receive credit. Do not give credit for games played with a standard deck of playing cards (e.g., War). Do not give credit for flash cards with activities too advanced for a toddler (e.g., mathematical problems).

Toys which say name of object or letter of alphabet or makes animal sounds when string is pulled, lever is pulled, or button is pushed (e.g., See & Say, or any similar toy): Give credit for any toy (or "book") which says names of objects, or letters of the alphabet, or makes animals sounds when lever or string is pulled or button is pushed (e.g. See and Say or any similar toy). Do not give credit for stuffed animals or dolls that say words, make sounds or talk.

E. Life-size Component (Range 0 – 1)

Tricycle: Give credit for any three-wheeler with pedals that is small enough for the child to ride.

Big toy car or animal: Give credit for any big toy car or animal that child can sit on and ride or rock.

Life-size toy play area such as toy kitchen, washer/dryer, workshop, tool bench (e.g., Little Tykes): Give credit for child-sized play environment in which child can pretend to perform household tasks (e.g., Little Tykes Kitchen, Workshop, Tool bench, Laundry Center, etc.). Do not give credit for playpens or other fenced-in play areas.

Child-size table and chair: Give credit only if child has both a table and a chair. Do not give credit for an adult table and chair that the child uses for play.

Large toy that child can push around to carry things (such as shopping cart, wheelbarrow, or stroller for dolls): Give credit for any large toy with wheels that has a place to carry objects and that the child can push around. Examples include a toy shopping car, toy wheelbarrow, toy wagon or toy stroller.



StimQ₂-Preschool (StimQ₂-P) Instructions for Administration

INTRODUCTION

In 2011 the StimQ instrument was revised and updated to allow for greater flexibility of administration and analysis. This revised version (StimQ₂) is largely comparable to the original instrument (StimQ), but has two important differences:

5. The elimination/addition of items base on IRT analyses, and
6. Restructuring of the instrument into smaller components—Subscales and Subdimensions—which can be administered and analyzed.

StimQ₂-P is a 60-point scale for measuring cognitive stimulation in the homes of young children ages 36 to 72 months. It is based on a questionnaire that is administered to the child's primary caregiver by trained interviewers in an office setting.

StimQ₂-P consists of 4 Subscales:

5. READ Subscale
6. Parental Involvement in Developmental Advance (PIDA) Subscale
7. Parental Verbal Responsivity (PVR) Subscale
8. Availability of Learning Materials (ALM) Subscale

Each of the Subscales includes a number of Subdimensions. Individual Subscales and Subdimensions can be administered and analyzed independently or in combination (see Scoring, below).

StimQ₂ Item Scoring

Three types of scores can be calculated using StimQ₂:

1. **Subdimension** scores are noted by boxes with:



Subdimension scores are calculated based on summing together clusters of items, in some cases followed by additional scaling. Subdimension scores can be used individually in analyses.

2. **Subscale** scores are noted by boxes with:



Subscale scores are calculated based on summing together Subdimension scores. Subscale scores can be used individually or in any combination for analyses.

3. **StimQ Total** scores are noted by boxes with:



StimQ Total scores are calculated based on summing together Subscale scores. There are two types of StimQ Total scores:

- e. StimQ Core score is calculated by adding together READ, PIDA and PVR.
- f. StimQ Total score is calculated by adding together READ, PIDA, PVR and ALM.

STIMQ₂ - PRESCHOOL		Possible Range
READ Subscale		0 – 18
Bookreading Quantity Subdimension		0 – 9
Diversity of Bookreading Concepts Subdimension		0 – 2
Diversity of Bookreading Content Subdimension		0 – 2
Bookreading Quality Subdimension		0 – 5
PIDA Subscale		0 – 15
PIDA of Emergent Literacy		0 – 7
PIDA of Math and Spatial Orientation		0 – 8
PVR Subscale		0 – 19
Parental Verbal Responsivity During Everyday Routines Subdimension		0 – 9
Parental Verbal Responsivity During Play, Pretend, Imagination Subdimension		0 – 6
Parental Verbal Responsivity During Activities that Promote Regulation Subdimension		0 – 4
TOTAL Core Score		0 – 52
ALM Subscale		0 – 8
Symbolic Play Subdimension		0 – 2
Art Subdimension		0 – 2
Adaptive/Fine Motor Subdimension		0 – 2
Language/Concepts Subdimension		0 – 2
TOTAL Core + Supplemental Score		0 – 60

Score Interpretation

Specific cut off points are not available at this time. However, the StimQ₂ has primarily been used with low-income populations in large cities in the United States. Score interpretations have occurred in the context of treatment vs. intervention group associations and in analyses of effect sizes (e.g., Cohen’s d) between StimQ₂ and other characteristics or outcomes.

Suggested Citations

Cates, C. B., *Roby, E. *, Canfield, C. F., Johnson, M., Raak, C., Weisleder, A., Dreyer, B.P., & Mendelsohn, A. L. (in press, 2023). Parental report of the cognitive home

environment: Validation of the StimQ2. *PLOS ONE*. *Denotes shared first author.

Dreyer, B.P., Mendelsohn, A.L., & Tamis-LeMonda, C.S. (1996). Assessing the child's cognitive home environment through parental report: reliability and validity. *Early Development and Parenting: An International Journal of Research and Practice*, 5(4), 271-287.

Mendelsohn, A.L., Brockmeyer, C.A., Tamis-LeMonda, C.S., Johnson, M.S., Berkule, S.B., White, L.J., & Dreyer, B.P. (2011, May). Assessment of the cognitive home environment through parent report: reliability and validity of StimQ (revised). Presented at Pediatric Academic Societies (PAS) and Asian Society for Pediatric Research (ASPR) Joint Meeting, Denver, CO.

ADMINISTRATION OF STIMQ₂

Identification of the primary caregiver

StimQ₂ measures only the role of the child's primary caregiver in providing cognitive stimulation for the child. Although many people (including other parents, relatives, friends, babysitters and siblings) may also play a very important part in the life of a child, the benefits provided by these individuals are not measured by this instrument.

The first step in administering the StimQ₂ is to determine the child's primary caregiver. The primary caregiver is the person who spends the most time interacting with the child in the child's home. The primary caregiver should spend most daytime hours with the child and see the care of the child during the day as their responsibility. A working parent is still usually the primary caregiver for the child, even if a babysitter or a grandparent regularly watches the child. For the purposes of StimQ₂ you are only interested in what the primary caregiver provides in the child's home for the child.

In the administration of StimQ₂, give credit only for those activities and learning materials provided by the primary caregiver. You must always be careful to distinguish between what is provided by the primary caregiver from what is provided by any other members of the household. For example, if the primary caregiver is the mother, do not give credit for those activities and learning materials that are provided by other people such as older siblings, the father, or a grandparent. However, it is important to support any of these activities, even if you cannot give credit for them. For example, you might say, "*It is very good that your husband does these things with your child. Right now, however, I'm mostly interested in the things that you do with your child.*" Similarly, if the father is the primary caregiver, then give credit only for his activities with the child, and not those provided by the mother. Sometimes, both the mother and father jointly and equally share responsibility for the child's care. If both parents are present at the interview and they both state that they have equal responsibilities for the child, you may give credit to what both provide for the child. However, no other combinations can be accepted in

this way. For example, for the purposes of this questionnaire, mother and grandmother cannot be considered to share equally in the care of the child; one must be identified as the primary caregiver. Finally, a babysitter can never be considered a primary caregiver.

General Guidelines

As the StimQ₂ is administered, “Yes” responses should be followed up with requests for more information, such as frequency or examples of the activity whenever possible. This is done to reduce social desirability bias, by increasing the likelihood that “Yes” responses truly reflect performance of the activity and reinforce “No” responses when the activity is not performed, as additional information is then not requested. For many of the items frequency needs to be addressed, as a specific threshold (e.g., several days a week) is required to receive credit.

One of those thresholds is a doing an activity with the child on a “regular basis, not just once or twice.” This requirement is not necessarily attached to a specific number of days per week. Instead, it should be interpreted as “most of the time” whenever the caregiver is with the child. A working caregiver may only spend time with the child on Saturday and Sunday, but if they engage in the activity with the child on most of these days then they should receive credit for doing this on a “regular basis.”

Reliability in administering this scale requires following these instructions. All persons planning to administer the StimQ₂-Preschool should practice its administration beforehand with non-study participants, on 3 to 5 occasions. We strongly encourage examiners/interviewers practice administering the instrument to someone who has previously successfully administered the StimQ₂ to participants and/or caregivers. Additionally, the experienced interviewer should also observe one of the practice administrations in order to provide feedback on questioning and reliability. We recognize this may not always be possible, and therefore this is not a requirement for training. Nonetheless, we strongly encourage new StimQ₂ interviewers obtain feedback from someone with experience administering the StimQ₂ before true data collection.

General Introduction

After introducing herself/himself by name and job title, the interviewer should provide a general introduction to the caregiver such as what is printed at the beginning of the questionnaire: *“This questionnaire is designed to find out about the different kinds of activities that you and your child do together. We know that caregivers have lots to do, at work, in the home, and for the family, and that it is often hard to find time to play and read together. Many caregivers don’t do more than a few of these activities and some don’t have the time to do any. I know that many people (including relatives, teachers, friends, babysitters, and siblings) also may have the opportunity to play important roles for your child. However, in this questionnaire, I am only interested in the kinds of activities that you provide for your child.”*

SECTION 1.
STIMQ₂ CORE: READING, TEACHING, VERBAL RESPONSIVITY

READ Subscale [Range: 0-18]

The READ Subscale is comprised of four (4) Subdimensions looking at the quantity, the diversity in concepts and content, and the quality of shared book reading experiences between child and primary caregiver. Each item addresses a specific attribute of book reading; in order to receive credit, the caregiver must engage in these practices in the specified frequency and/or manner.

Before you begin asking individual questions, ask the caregiver: "*Do you ever read children's books to your child or is she/he too young for that?*" If the caregiver answers "yes", ask each of the questions that follow. If the caregiver answers "no" (i.e., she/he does not read to the child), you should enter an "N" for this item and, skip all of the remaining reading questions and enter a zero for each individual item, each Subdimension and the overall READ Subscale. As the interview progresses, should it become apparent that caregiver does engage in reading aloud with regularity, consider returning to the READ Subscale, confirming that the caregiver does read children's books, and, if appropriate, administering all items and Subdimensions.

A. Bookreading Quantity Subdimension (Range 0-9)

This Subdimension aims to quantify the child's exposure to shared booking reading by documenting how many age-appropriate reading materials are in the home, and with what frequency those are read to the child by a primary caregiver.

Question 1: *Name some children's books that you have at home and read to your child. After caregiver names some books, ask: How many books altogether do you have at home that you read to your child? Enter # books*
Scoring: 0= Enter 0, 1-9= Enter 1, 10-24= Enter 2, 25-49= Enter 3, 50+= Enter 4

The goal of this question is to determine the number of children's books appropriate for young children that the caregiver has available in the home and reads to the child. Books appropriate for young children are picture books, which can be either simple or relatively complex. It is important to converse with the caregiver about the reading activities and the individual books that are read. Have the caregiver name several of the books that are used; ask which ones are the child's favorites; talk about where and when these activities occur. You should continue conversing with the caregiver until you are sure that the intention of the question is understood. After this brief conversation, you may then ask: "How many books altogether do you have at home that you read to your child?" and enter the number in the space provided. Give credit for library books that are presently in the home, appropriate for young children, and that the caregiver can name or describe. Each book in a set or series of books counts separately as one book. Magazines and comic books should generally not receive credit. However, if the caregiver can describe

a magazine or comic book that is specifically designed to be read to young children between 3 and 6 years of age, they may receive credit for each issue they have available in the home and actively read to their child. Although there are many child-friendly magazines/comic books, most are too advanced for preschoolers and will therefore not receive credit. Examples of magazines known to be designed for 3 to 6-year-olds are: National Geographic's Little Kids and Ranger Rick Jr.'s National Wildlife Federation.

Some caregivers will have difficulty giving an exact number and instead give a range (e.g., 20-30 books). In this case, try probing further (e.g., "would you say closer to 20 or closer to 30", etc.), until you can establish an estimate within one of the scoring intervals. For example, if the caregiver ultimately estimates 25-30 books, that would be enough to categorize as 25-49 with a score of 3.

Other caregivers will not be able to estimate a number and instead say things like "a few" or "a lot" or "too many to count". In this case, it can be helpful to give them a starting point consistent with what they have reported, and probe from there (e.g., "so just 1 or 2" if they say "a few", or "more than 5 or 10" if they say, "a lot".)

Regardless, make sure the final estimate is consistent with the preceding conversation that has taken place about names and numbers of books.

Question 2: *How many days each week do you read children's books to your child?*

Enter # days from 0 to 7

Scoring: 0: Enter 0; 1-2: Enter 1; 3-4: Enter 2; 5+: Enter 3

This question is used to determine the number of days on an "average" or "usual" week that the caregiver reads children's books to their child. If the caregiver presents a significant variation in reading on different weeks, ask about a typical week in the past month. If the caregiver seems to have trouble determining an estimate on their own, you may probe by giving caregiver a starting point and asking if they read more or less than that starting point (e.g., "*all seven days?*"). Unsuccessful attempts at reading do not receive credit. An example of a description of an unsuccessful attempt would be: "I try to read to him, but he won't sit still long enough." However, if the caregiver reads to the child despite uncertainty about the child's understanding of what is being read, credit should be given. If the caregiver gives a range that straddles scoring ranges (e.g., 3-6) try probing further (e.g., "*Would you say closer to 3 or closer to 6?*", etc.), until you can establish an estimate within one of the scoring intervals. Ideally, you will get the caregiver to land on a single number by asking several follow-up questions. For example, "*Would you say closer to 3 or closer to 6? ...Like 5 or 6? ...Which would you say, 5 or 6?*"

Question 3: *Do you read a book together with your child at bedtime? If yes, ask: How many days per week? Enter # from 0 to 7*

Scoring: 0-4: Enter 0; 5+: Enter 1

If the caregiver reports that they read at bedtime, ask how many days per week. Give credit for 4 or more days per week. Bedtime is defined as the time the caregiver is preparing the child to go to sleep in the evening; before a daytime nap does not count.

Question 4: Do you read books together with your child at times of day other than bedtime? If yes, ask: *How many days per week?* Enter # from 0 to 7

Scoring: 0-4: Enter 0; 5+: Enter 1

If the caregiver reports that they read at other times of the day, ask how many days per week. Give credit for 5 or more days per week, including before daytime naps.

B. Diversity of Bookreading Concepts Subdimension (Range 0 – 2)

This Subdimension is used to determine whether the caregiver reads books that are designed to focus on specific learning concepts such as counting, colors, shapes, and letters. If the caregiver states that they teach these concepts but do not generally use books to teach these concepts, praise this activity and state that you will be asking questions about those teaching activities later; however, do not give credit for such items in this section. If the caregiver reports reading one (1) book that teaches about several of these concepts, give credit for each item.

For questions # 5 - 8, read the following instructions to the caregiver: *“I am now going to ask you about several different types of books that you may have read to your child. Most caregivers have only read some of these types of books to their children, so you should not feel that I expect you to have read all of these books to your child. For each of the following types of books, please tell me whether you have one in your home and whether you have read it more than once or twice.”* Give credit only if the caregiver has the book in the home and has read the type of book described more than once or twice.

Question 5: *Do you read books to your child especially made for young children that teach about counting numbers 1 to 10?*

Give credit for any book that specifically teaches about counting numbers 1 to 10. If the caregiver states counting items or counting pictures in a storybook, praise the activity, but do not give credit on this question. Remember, you are encouraged to ask follow-up questions to help determine credit (e.g., *“Does the book have numbers? Or do you count the pictures out loud to teach your child about the numbers?”*). Do not forget to ask if the caregiver has read this type of book more than once or twice.

Question 6: *Do you read books to your child especially made for young children that teach about simple colors, such as red, blue, green and yellow?*

Give credit for any book that teaches about simple colors, like red, blue, green, and yellow. Remember to ask a follow-up question to determine whether the caregiver has read this type of book more than once or twice.

Question 7: *Do you read books to your child especially made for young children that teach about simple shapes such as squares, circles, and triangles?*

Give credit for any book that has shapes. If the caregiver states that they teach shapes by pointing out the shape of the pictures in a book (e.g., round ball, or square table), praise the activity, but do not give credit on this question—you can give credit for this on Question 13 of the PIDA of Math and Spatial Orientation Subdimension. Remember to ask a follow-up question to determine whether the caregiver has read this type of book more than once or twice.

Question 8: *Do you read books to your child especially made for young children that teach about the letters of the alphabet?*

Give credit for any book that teaches the letters of the alphabet. Again, if the caregiver states that they teach the child letters by pointing to letters in text, praise the activity, but do not give credit on this question. You may give credit if the caregiver specifies teaching the child a non-Roman alphabet (e.g., Chinese characters or Hebrew letters). Remember to ask a follow-up question to determine whether the caregiver has read this type of book more than once or twice.

C. Diversity of Bookreading *Content* Subdimension (Range 0 – 2)

This Subdimension is used to determine whether the caregiver is beginnings to read more substantive, but still age-appropriate books with their preschooler. If the caregiver states that they talk about these topics with the child, but do not generally use books, praise this activity and state that you will be asking questions about those interactions later; however, do not give credit in this section.

Question 9: *Do you read books to your child especially made for young children that are about your religious or cultural beliefs, including holidays?*

Give credit for any children's book related to cultural or religious beliefs, including holidays. Do not give credit for a book that is written for adults, such as a standard, adult Bible or Quran.

Question 10: *Do you read books to your child especially made for young children that are about activities of a preschooler's day (such as dress up, birthday party, take a walk, go to the park)?*

Give credit for any children's book that includes one or more examples of a preschooler's typical everyday activities. Stories with animals as the main characters may receive credit *if* they are anthropomorphic characters (i.e., behaving as humans) (e.g., Five Little Monkeys Jumping on the Bed).

Question 11: *Do you read books to your child especially made for young children that are about family relationships or friendships?*

Give credit for any book that deals with family relationships or friendships, in a storybook format.

Question 12: *Do you read books to your child especially made for young children that are simple fairy tales or folk tales (such as Little Red Hen, Goldilocks, 3 Little Pigs, Peter Rabbit, folk tales from other cultures)?*

Give credit for any story of the "Once upon a time..." format, or folk tale, or classic tale written for children. Examples include "Goldilocks", "Hansel and Gretel", "Cinderella", "The Three Little Pigs", etc.

D. Bookreading Quality Subdimension (Range 0 – 5)

This Subdimension is meant to capture the caregiver's regular efforts to engage and teach their child during shared bookreading. Therefore, in order to receive credit for the following items the caregiver must generally do, or try to do, these activities when reading with the child.

Question 13: *Do you read books to your child with simple stories about characters for young children? Give credit if caregiver reads this type of book on a regular basis, for example once or twice a week.*

Give credit for this item if the caregiver reads books that contain a simple storyline, and characters understood and/or enjoyed by young children. You can follow up by asking, “*about how many days a week would you say you read her/him this kind of book?*”

Question 14 *Do you ask your child questions about the pictures in books and try to have a conversation, e.g., what is that called? What color is it? Give credit for most of the time.*

This question seeks to determine if the caregiver encourages the child to participate actively in the reading activity through questions and attempts at back-and-forth. Typically developing 3 to 6-year-old children should be actively engaging in conversation with their caregiver. Nonetheless, if the caregiver explains that they try, but the child will not stay seated or engaged, or that the child is not typically developing and therefore does not engage in conversation, give credit for the caregiver’s frequent attempts. Give credit if the caregiver does this most of the time.

Question 15: *Do you ask your child to tell you about what happened in a story that you have read together? Must have done this more than once or twice.*

This question seeks to determine if the caregiver habitually asks the child to recall a story they read together. This can be done immediately after reading (e.g., a summary) or at a different moment (e.g., “remember when we read...”). Give credit if the caregiver reports having done this more than just once or twice.

Question 16: *Do you talk to your child about feelings and emotions of characters in books? Must have done this more than once or twice.*

This question seeks to determine if the caregiver uses bookreading time as an opportunity to talk to the child about emotions by relating them to the characters in a story. Give credit if the caregiver reports having done this more than just once or twice. This activity does not need to happen frequently for caregiver to receive credit, but it must be a purposeful effort on the caregiver’s part.

Question 17: *Do you match pictures with written words while you read with your child? Must have done this more than once or twice.*

This question seeks to determine if the caregiver makes a purposeful effort to match pictures to the corresponding words in books during shared bookreading with their child. Give credit if the caregiver reports having done this more than once or twice.

PIDA Subscale: Parental Involvement in Developmental Advance [Range: 0 -15]

This Subscale measures a number of different interactional activities occurring between the caregiver and the child that promote cognitive development. Although the word "teach" is utilized, the questions seek to elicit information about "playing" one-on-one with the child and helping the child successfully master new skills.

It is important to note that any "yes" answer must be explored with the caregiver by asking how and how often the caregiver engages in each activity. In order to receive credit, the caregiver must give an example of a specific activity that demonstrates the teaching asked about in the question, with the frequency that is noted next to each individual item. If the caregiver has difficulty providing an example, you may prompt by providing an example, such as the examples listed with the questions. If the caregiver affirms doing an activity you provided, you must follow up by asking the caregiver to describe how they engage and carry out the activity. If the caregiver is unable to provide more details, then credit should not be given. It is helpful to differentiate between activities the child does on their own versus activities the caregiver does with the child or shows them how to do. Note also that if the caregiver **spontaneously** states that they had previously engaged in an activity, but that the child is now too old or already knows how to perform the activity without assistance (e.g., a 72-month-old connecting dots), credit should be given.

A. PIDA of Emergent Literacy (Range 0 – 7)

This Subdimension is meant to capture the caregiver's regular efforts to teach the child skills related to emergent literacy.

Question 1: *Do you teach your child to write letters of the alphabet?*

In order to receive credit, the caregiver must teach the child to write letters. Ways in which caregivers do this include teaching the child to "connect the dots", tracing or copying letters that the caregiver writes, or sitting with the child and doing workbooks together. Capital or small letters both receive credit. The caregiver does not need to teach the child all of the letters of the alphabet to receive credit.

Question 2: *Do you teach your child to write his/her name or other words?*

In order to receive credit, the caregiver must teach the child to write his or her name or other words. Ways in which the caregiver might do this include teaching the child to

“connect the dots”, tracing or copying words that the caregiver writes, or sitting with the child and doing workbooks together.

Question 3: *Do you teach your child about the difference between upper- and lower-case letters?*

Give credit if the caregiver teaches the upper- and lower-case forms of at least one letter. This must be done using either visual or toy representations of the letter(s). Some languages/alphabets do not distinguish between upper- and lower-case letters. If there is an equivalent or comparable distinction in the language/alphabet the caregiver teaches their child, they may receive credit on this item. However, if you are administering the StimQ2-P in the United States, it is expected that a caregiver would teach their child upper- and lower-case letters for school (in English). Therefore, even if the item does not appear to apply to the home language they teach their child, score as zero (0) and do not give credit.

Question 4: *Do you play games in which your child matches written letters with sounds?*

Give credit if the caregiver uses a visual or toy representation of the letter, and then demonstrates the sound for the child.

Question 5: *Do you play games in which your child matches written words with pictures?*

Give credit if the caregiver points to a written word and then explains that this is the word for an adjoining picture. Caregivers will typically do this using books or flashcards with pictures and words.

Question 6: *Do you encourage your child to write during pretend play? (e.g., letters, words, shopping lists, recipes, menus, invitations) Give me an example _____*

Give credit if the caregiver can provide examples of ways in which they encourage the child to write during their pretend play. Give credit even if the caregiver reports that the letters and words do not look like letters, or spell out a word (i.e., scribble). Do not give credit if the caregiver reports that child mainly draws (pictures).

Question 7: *Does your child pretend to read, or otherwise use materials with letters or words on them, during pretend play? (e.g., letters, words, shopping lists, recipes, menus, invitations) Give credit if child incorporates use of materials with letters or words into play,*

regardless of whether or not the child wrote or pretended to write them; *Give me an example:* _____

Give credit if the caregiver provides examples of written materials used by the child during their pretend play. You may provide some of the examples provided in the question if the caregiver needs clarification or asks for an example, but the caregiver must elaborate and describe what specific materials are used, and how they are used by their child in the play scene in order to receive credit.

B. PIDA of Math and Spatial Orientation (Range 0 – 8)

This Subdimension is meant to capture the caregiver's regular efforts to teach the child skills related to numbers, shapes, spatial orientation, and simple mathematic operations.

Question 8: *Do you teach your child to tell time?*

Give credit only if the caregiver teaches the child to tell time using a clockface or a visual representation of a clockface on some regular basis. Do not give credit if the caregiver reports using a digital clock. In order to receive credit, the caregiver must, on a regular basis, sit with the child and explain how to read the clock and tell time. Do not give credit if this is only done intermittently, for example by telling the child what time it is when walking past a clock, or when it is time to do something.

Question 9: *Do you teach your child to use a scissor to cut out shapes for paper?*

In order to receive credit, the caregiver must actually sit with the child and work *together* cutting out shapes. Do not give credit if the child does this on his/her own.

Question 10: *Do you teach your child to add, such as $1 + 1$ or $1 \text{ apple} + 1 \text{ apple}$?*

Give credit if the caregiver teaches addition using visual representations or flashcards or objects such as coins or blocks. The caregiver must teach this with numbers, and not just with concepts such as more and less.

Question 11: *Do you teach your child simple subtraction?*

Give credit if the caregiver teaches subtraction using visual representations or flashcards or objects such as coins or blocks. The caregiver must teach this with numbers, and not just with concepts such as more and less.

Question 12: *Do you teach your child to read numbers?*

Give credit if the caregiver teaches the child to read written numbers on paper, in books or on flashcards. Do not give credit if the caregiver only teaches numbers verbally or counting on their fingers.

Question 13: *Do you teach your child to recognize shapes?*

Give credit if the caregiver teaches the child to recognize shapes using visual representations on paper, in books, in workbooks or on flashcards, or with toy shapes, such as blocks.

Question 14: *Do you teach your child to do connect the dots?*

Give credit if the caregiver teaches the child to connect the dots using paper and a writing utensil, or workbooks.

Question 15: *Do you teach your child about sizes?*

Give credit if the caregiver uses visual representations (including foods, or other household items) or toys or objects that are of differing size and compares them.

PVR Subscale: Parental Verbal Responsivity [Range 0 – 19]

This Subscale explores different types of verbal interactions initiated by the caregiver to enhance the child's language development. Any "yes" answer must be explored with the caregiver by asking how often the caregiver engages in each activity and requesting more information as noted. In order to receive credit for these items, the caregiver must engage in the interaction described on a regular basis (4+days a week), not just once or twice or occasionally.

A. Parental Verbal Responsivity during Everyday Routines Subdimension (Range 0 – 9)

This Subdimension is meant to capture the caregiver's verbal engagement with the child on an everyday basis, during their everyday routines and activities.

Question 1: *Some caregivers talk to their children about their surroundings and what is happening around them. Have you started to talk to your child in this way or is he/she too young for that?*

If yes, ask for examples. Ask: *How many days a week do you do this?* If no, mark as 0 days. Enter # from 0 to 7; Scoring: 0-1: Enter 0; 2-4: Enter 1; 5+: Enter 2

This question is assessing whether the caregiver routinely talks to the child about what the child sees or experiences, above and beyond labeling or giving directives. Ask for examples. To receive credit, there must be description or explanation. For example, "*The sun helps us feel warm,*" or "*the bus is taking us to grandma's house.*" If the caregiver gives a range that straddles different scores (e.g., 3-5) try probing further (e.g., "*Would you say closer to 3 or closer to 5*", etc.), until you can establish an estimate within one of the scoring intervals. Ideally, you will get the caregiver to land on a single number by asking several follow-up questions. For example, "*Would you say closer to 3 or closer to 5? ... Would you say somewhere in the middle, like 4, is a good estimate?*"

Question 2: *Do you have the opportunity to point to things around the house and name them for your child?* Give credit if caregiver says this happens on most days.

The purpose of this question is to determine whether or not the caregiver routinely incorporates naming objects as part of daily activities, inside and outside of the home. Give credit if the caregiver states that they do this every day or almost every day. Do not give credit if this is done "occasionally" or "sometimes".

Question 3: *Do you have conversations with your child that involve back-and-forth vocalizations and talking?* Give credit if caregiver says this happens on most days.

Give credit if the caregiver engages the child in conversation, even if the child has not yet fully developed his/her language. If the caregiver attempts to engage the child in conversation and encourages the child to speak, but the child is not yet speaking, still give credit for the attempt made. Do not give credit if this is only done "occasionally" or "sometimes".

Question 4: *Do you usually talk to your child while you are feeding her/him and tell her/him about what is going on?*

Do not give credit for coaxing the child to eat or for telling the child to be careful, etc. Give credit for "most of the time".

Ask the caregiver if mealtimes are a time to be quiet or a time to talk. In order to receive credit, the caregiver must be engaging the child in conversation. It is not sufficient for the caregiver to state that the child is always talking. In order to receive credit, the caregiver

must talk to the child about events of the day, plans for after the meal, etc. Ask the caregiver to give you an example of a typical mealtime conversation with their child. Do not give credit if the caregiver only talks about the food or meal; this could include talking about the preparation of the food/meal or the taste of the food. These types of conversations during mealtimes should not receive credit. The purpose of this questions is gauge whether the caregiver uses mealtimes as an opportunity to engage in everyday talk with their child. If the caregiver is unclear about the frequency of these activities, ask the caregiver to choose between "most of the time" and "some of the time". Give credit for "most of the time"; do not give credit for "some of the time".

Question 5: *Do you talk to your child while doing daily chores/housework.*

Give credit if caregiver says this happens on most days.

“Chores/housework” refers to anything the caregiver does around the house to maintain it clean, organized, or decorated (e.g., washing dishes, , picking up after the child/ren). Give credit if the caregiver reports talking to the child while doing chores/housework on most days (i.e., ≥ 4 days). Do not give credit if caregiver is simply telling child to be careful, move out of the way, or giving the child a directive to help with the chore.

Question 6: *When your child is playing with his/her toys, do you usually talk to your child or does your child usually play on his/her own? Give credit for “most of the time”.*

Give credit only if the caregiver sits with the child and talks with the child while the child is playing with toys. In order to receive credit, the caregiver must initiate conversation with the child. Talking here will usually relate to the play that is occurring, such as “*What is Barbie doing?*” Do not give credit if the caregiver is not actually involved with the child’s play, or if it is the child that is primarily engaging in conversation with the caregiver. Give credit only if the caregiver states that they do this “usually,” or “most of the time”. Do not give credit if this is done "occasionally" or "sometimes", or for unsuccessful attempts.

Question 7: *Do you tell your child stories (such as folktales, made up stories without using a book, or stories about activities you have done together in the past)? Give credit if caregiver says this happens on most days.*

Give credit for storytelling that happens outside of bookreading only. Give credit for popular folktales (e.g., Three Little Pigs), made-up stories, and stories from caregiver’s life (e.g., childhood story). Give credit if caregiver reports doing this regularly, not just once in a while or occasionally.

Question 8: *Do you talk to your child about their own feelings and emotions? Give credit if caregiver says this happens on most days.*

Give credit if the caregiver says they talk with the child about the child's own feelings and emotions throughout the day. Give credit is the caregiver reports doing this on most days (≥ 4 days/week).

B. Parental Verbal Responsivity During Play, Pretend and Imagination Subdimension (Range 0 – 6)

This Subdimension is meant to capture the caregiver's verbal engagement with the child specifically during the times they play together. Always ask caregiver to provide examples in order to accurately assess whether to give him/her credit for the activity.

Question 9: *Do you ever encourage your child to tell you or others about events or experiences?*

Give credit if caregiver gives specific examples of events or experiences they ask the child to retell. The event/experience can be unique, such as a trip or an outing, but can also refer to an everyday experience, such as the child's day in school. Give credit if the caregiver reports asking and encouraging the child regularly.

Question 10: *Do you engage in pretend play with your child by role-playing (where you and your child pretend that you are different characters such as mommy/baby or superheroes)?*

Give credit if caregiver engages in pretend play with child on a regular basis. May use props, such as capes or food sets. If caregiver reports using dolls as additional characters give credit for question 12 as well. If caregiver describes doing this with their child and other children, such as siblings, at the same time, give credit. However, if the caregiver states that the child mostly plays in this fashion with other children only, do not give credit. Caregiver must be actively engaged in the pretend play, and not just in a supervisory role.

Question 11: *Do you engage in pretend play with your child by using toy figures or dolls as characters (where you and your child pretend that toy figures or dolls are different characters such as mommy/baby or superheroes)?*

Give credit if caregiver engages in pretends play with child using action figures, dolls, or stuffed animals as additional characters in their play scenarios.

Question 12: *Do you ever make up stories that you and your child can pretend together as you play?*

Give credit if the caregiver is coming up with the story, or part of the story, used while playing pretend with the child Give credit if caregiver says this occurs regularly, not just one in a while, or occasionally.

Question 13: *Do you ever encourage your child to come up with their own ideas for pretending during play?*

Give credit if caregivers reports encouraging child to come up with the ideas, play scenarios for them to act out during pretend play. It does not need to be enthusiastic encouragement to receive credit. Mild encouragement such as asking for further instructions (e.g., “*And what should we do after that?*”) is considered encouragement and should receive credit. Do not give credit if caregiver says child comes up with ideas independently and tells caregiver what to do and/or say. The point of this question is to gauge whether the caregiver engages in and encourages planning with his/her child.

Question 14: *Do you ever use ideas or themes from story books in pretend play with your child?*

Give credit if caregiver reports using characters, scenes, or ideas/themes from a storybook during pretend play with the child. Often, children have books with fictional characters originally from TV shows and/or movies. In this case, caregiver may only receive credit if the idea or scenario is one borrowed from the storybook version, not a scene that has only been depicted in action (i.e., TV or movie). This can be proposed or initiated by either the caregiver or the child.

C. Parental Verbal Responsivity During Activities that Promote Regulation Subdimension (Range 0 – 4)

This subdimension is meant to capture the caregiver’s efforts to teach the child and participate in games that require the child to follow a set of rules, or a specific process.

Question 15: *When your child is playing with toys, do you mostly play along or do you prefer to watch?* Give credit if caregiver says this happens on most days.

The purpose of this question is to determine whether the caregiver routinely plays along and engages with the child during playtime. This includes a verbal interaction of some sort during the time of play. Do not give credit if the caregiver is not actually involved in the child’s play (e.g., sitting/being near the child to supervise his/her play), and states that they usually just keep an eye on the child during playtime. Do not give credit if this is done “occasionally” or “sometimes”, for unsuccessful attempts, or if caregivers states that another family member, like a sibling or the other caregiver, primarily plays with child. Give credit if the caregiver reports playing with the child on “most days” (≥ 4 days/week).

Question 16: *Do you teach your child to play games that have rules?* Give credit if caregiver does this on a regular basis, not just once or twice, or occasionally.

Ask the caregiver if they play games together with the child. If the caregiver does play games, ask the name of the game and what are the rules. Give credit if the caregiver *both* plays together with the child *and* teaches the child the rules on a regular basis. Examples of rules include counting to ten before looking in Hide-and-Seek, or not running during red light in “Red Light Green Light, One, Two, Three”, or performing an action only when allowed during “Simon Says” or “Mother May I”. Board games may be counted if the board game is at a low enough level for a preschool child, *and* if the caregiver teaches the child the rules. The child does not have to successfully play the game and understand or follow the rules in order to receive credit.

Question 17: *Do you play games with your child that have songs with specific rules related to walking, jumping or dancing? Examples: Ring Around the Rosie, Hokie Pokie* Give credit if caregiver does this on a regular basis, not just once or twice, or occasionally.

Give credit only if the caregiver engages in an activity with the child while singing a song. Examples might include “Ring Around the Rosie” or “Hokie Pokie” or “Miss Mary Mack”. Remember to ask caregiver to name or describe the game, as well as its rules before giving them credit.

Question 18: *Do you and your child make plans for what you need to do to accomplish a goal or plan a real-life activity? (e.g., what is needed to prepare for an outing, supplies needed to complete an art project, the design for a building made of blocks, ingredients for recipe).* If yes, say: *Please give an example:* _____
Give credit if caregiver does this on a regular basis, not just once or twice, or occasionally.

Give credit if caregiver can provide an example of planning to accomplish a concrete goal. The description should include multiple (more than one) steps, and the goal should be an attainable short or long-term goal. The goal of this item is to determine whether the caregiver practices planning with his/her child for concrete and specific events/activities. Do not give credit for planning of potential future goals, like doing well in school in order to become a doctor.

SECTION 2. STIMQ₂ AVAILABILITY OF LEARNING MATERIALS

Availability of Learning Materials (ALM) Subscale [Range 0 – 8]

This Subscale consists primarily of a list of toys and games appropriate for children between 36 and 72 months old. Before asking the caregiver about each toy, read the introduction to the caregiver: *“I am going to name some toys and games and ask you to tell me which ones your child has for himself / herself in your home. Since this questionnaire is given to caregivers of young children with different ages, many of the toys will be either too simple or too advanced for your child. If your child had a toy at a younger age, please tell me about it. Most caregivers have only some of these toys in their homes, so I don’t expect you to have more than a few of these toys for your child.”*

Next, ask the caregiver about each toy. Give credit only for those toys for which each of the following is true:

1. The toy must belong to the child.
2. The toy must be kept in the child's house.
3. The child must have free access to the toy.
4. The child must play with the toy.

Do not give credit if the toy actually belongs to a sibling, even if the child is allowed to play with it sometimes. Do not give credit if a sibling must give permission if the child is to be able to play with the toy. Do not give credit if the toy is kept in a location other than the child's home (such as the home of a cousin or babysitter). Do not give credit for an "advanced" toy that the caregiver has never tried to use with the child.

Give credit if the toy is made available to the child, but the child chooses not to play with it. Give credit if the toy is kept out of reach of the child, particularly if the toys/items are messy or require parental supervision (e.g., a paint set), but the child plays with the toy regularly.

Note, however, that if the caregiver spontaneously states that the child has now outgrown a toy that previously belonged to them and that they did in fact play with when they was younger, credit should be given even if the toy now belongs to a sibling. Alternatively, if the child has an advanced toy that the caregiver does attempt to help the child use, credit may be given even if the child refuses to play with it. If the caregiver has removed a toy because of convenience, safety concerns or because it is broken, do not give credit. You may also give credit for items that would not ordinarily be considered toys but have been fully repurposed as toys or play items for the child’s exclusive use during play time. For example, a make-up brush or sponge that is now used only by the child for arts and crafts; or an ACE elastic bandage that is used during a pretend play doctor’s visit

or surgery. Age-appropriate and safe *homemade* toys or play items may also receive credit (e.g., homemade play dough, or molded crayons). Like all other toys receiving credit, these repurposed items must: belong to the child, be kept in the child's home, be accessible to the child, and be used by the child. Do NOT give credit if the caregiver reports the child plays with household items as if they were toys, but they are not really his/hers to play with. For instance, taking or banging real pots and pans that are generally used for cooking real meals, would NOT receive credit; using an old cell phone kept as an in-case-of-emergency replacement to play pretend would NOT receive credit. Finally, in the rare case in which the caregiver insists that the toy is completely shared by siblings (i.e., belonging to neither one), give credit only if the child has easy access to and plays with the toy.

In general, do not simply accept simple "yes" answers. Determine whether the caregiver understands the question and whether the toy is truly in the possession and use of the child by asking questions, such as: "*Which one do you have?*" "*Tell me more about that toy.*" "*Does your child like playing with it?*" After asking these sorts of questions for the first few toys, most caregivers will realize what is being asked of them and you should be able to proceed more rapidly through the rest of the list.

INSTRUCTIONS FOR ADMINISTRATION OF INDIVIDUAL ITEMS

A. Symbolic Play Subdimension (Range 0 – 2)

Doll or action figure (must have a human face: credit can be given for superheroes, no credit given for robots, stuffed animals): In order to receive credit, the doll or action figure is at least as long as the width of a standard page (8½"). You may use the questionnaire page to demonstrate this length to the respondent. In addition, it has to be "human" in form. "Superheroes" can be given credit. However, stuffed animals and "transformers" would not be credited.

Puppets (hand puppet or marionette): Give credits for hand puppets or marionettes used by caregivers in interactive play with the child. If puppet is homemade, it must have a "face" to be credited.

Costumes for child to dress up in (no credit for Halloween costumes): Give credit for old adult clothing repurposed for pretend play for this child, for costumes bought specifically for dress-up play, sets of occupational hats (e.g., police officer, firefighter, construction worker, etc.). Do not give credit for "Halloween" costumes unless they are used throughout the year.

Small housekeeping toy (e.g., broom, vacuum, lawnmower): Give credit for toy versions of appliances and tools related to cleaning, such as brooms, vacuums, carpet sweepers, lawn mowers, etc. You may give credit for certain household items that have been given to the child for their playtime. However, the item must be age-appropriate and *safe* for the child to use alone during his/her play. For example, a very old and used broom would NOT receive credit because the broom would be too big and too unsanitary for the child. An old dustpan that has been disinfected and is now used as a shovel/spade in the child's sandbox would be acceptable and can receive credit. It is important to ask the caregiver follow-up questions, such as "how does your child use it," "do you still use it for its intended purpose," "when/why did you decide to give it to your child to use as a toy", to determine if they should receive credit..

Toy pots, pans or dishes, or tea set (*must be child's toy, not discarded kitchen utensils*): Do not give credit for discarded kitchen utensils because these items are not generally used for symbolic play.

Imaginary play activity set (such as Fisher-Price barn, garage, house, dollhouse): Give credit for any miniature play environment which includes the appropriate figures and props (people, animals, furniture, vehicles). Examples of toys that would receive credit include Fisher Price barn, house or garage, or a dollhouse.

Toy Telephone/Toy cell phone: Toy must have buttons or rotary that can be manipulated. Give credit for a discarded phone only if it now belongs to the child and is used for symbolic play.

Toy foods such as fruits, vegetables, hamburgers, sandwiches & pizza made of plastic: Give credit for any toy food. Examples of toy foods are plastic or wooden fruits and vegetables.

Toy doctor kit: The kit must have a toy stethoscope and at least 2 more toy medical items (such as syringe, thermometer, blood pressure cuff). You may give credit for nurses' or veterinarian kits instead of doctor kits, as long as they have at least 3 medical tools/items). You may also give credit for a homemade kit consisting of real medical-like supplies, such as gauze, bandages, band-aids, old stethoscopes, as long as these materials are meant for the child's exclusive use during playtime.

Set of small toy animals made for young children to play with (*not stuffed animals*): Give credit for plastic toy animals between 1.5 to 6 inches tall. Examples of toy animal sets include marine animals, jungle animals, farm animals, dinosaurs.

B. Art Subdimension (Range 0 – 2)

Crayons: Give credit for a set of at least five crayons.

Coloring book: Give credit for a book with simple pictures appropriate for young children. Do not give credit if the child does not have materials for coloring the books (e.g., crayons, markers, colored pencils). Do not give credit for adult coloring books unless they truly belong and are used exclusively by the child. Give credit for printed coloring pages, if these are printed in advance and readily available for the child to use.

Colorful clay that can be molded into different shapes (such as Play-Doh): Give credit for soft pliable colorful clay such as Playdoh. Also give credit for homemade "Playdoh". Modeling clay or plasticine may also be given credit. Do not give credit for "silly putty".

Set of tools for use with colorful clay to create different shapes and forms: Give credit for toy plastic tools that can be used for molding or shaping clay. You can also give credit for cookie cutters if they are not sharp and are available for the child's use as a toy.

Magic marker/colored pencil set: specifically set aside for child to use on paper: Give credit for a set of differently colored felt-tip markers or a set of colored pencils. Do not give credit on this item for markers shaped like pictures, stars, letters, etc. (Credit for these can be given under stamps / inkpads below).

Finger paints or water paints with large brush that child can easily hold: Paints must be children's nontoxic, washable paints. Brushes must be at least 1/4" thick. If the caregiver says that the child can hold and use a small thin (watercolor brush) you may give credit. If the child uses watercolor paints as finger paint you can give credit.

Children's scissors: Scissors with dull edges that cannot hurt the child. Do not give credit for real scissors.

C. Adaptive/Fine Motor Subdimension (Range 0 – 2)

Puzzles made especially for young children (*with 2 to 25 pieces that combine to make a picture*): Give credit only for puzzles made for young children with approximately two through twenty-five pieces that combine to make a picture. The puzzle must be complete (i.e., no pieces missing), in order to receive credit.

Nesting / Stacking toy (toys of different sizes that fit into or on top of each other, such as interlocking cups/beakers): Give credit for cups or beakers of graduated sizes that stack on top of each other to make a tower, or nest inside each other. These should be made of plastic. If the caregiver states that she gives a set of plastic measuring cups or beakers to the child for this purpose, only give credit if this set of cups has been given over to the child as a full-time toy, is no longer used for its original purpose, and contains at least three graduated sizes.

Plastic or wooden beads for stringing: Give credit for a toy that includes jumbo wood or plastic beads at least one inch in diameter, with a central hole allowing the child to string them with a rope or shoelace.

Buttoning or lacing toys: Give credit for a toy that enables the child to learn to button or lace, including dolls or clothing for dolls or boards or books with laces. Do not give credit for actual clothing.

Set of wooden or plastic blocks made for young child: Give credit for a set of at least 8 cubic blocks which are one inch or more in length.

Interlocking colorful building blocks of varied shapes that fit together (such as Duplo or Lego): Give credit for simple interlocking plastic building blocks, such as Duplo, Lego or Mega Blocks. Magnet tiles may also receive credit under this item. Do not give credit for magnet tiles on both this item and ALM Subdimension D "Set of toy magnets."

Toy musical instruments: Give credit for any toy musical instrument, such as a toy xylophone, toy drum, or toy piano / keyboard. Real musical instruments cannot receive

credit, except in the unusual circumstance that the instrument is small enough to be independently accessible to the child and has been given over to the child for his exclusive use. For example, a small keyboard, maracas, or tambourine given to the child may qualify, whereas a family piano would not. While musical instruments may provide actual music instruction, the major learning activity for a preschooler is adaptive (learning how to make the instrument produce the sound) and manipulative, and we have therefore included it under adaptive / fine motor learning materials.

D. Language/Concepts Subdimension (Range 0 – 2)

Set of toy letters and/or numbers (complete alphabet) &/or numbers (at least 1-9): Give credit only if there is either a complete set of 26 letters, or a complete set of the numbers 1-9. These must be made of plastic, wood, rubber, or foam and allow individual manipulation by the child. A set of alphabet/number blocks or puzzles are acceptable. A complete set of magnetized letters, if it is intended for the child to play with, is also acceptable. A toy with a similar set of all the letters or numbers attached to push-buttons is also acceptable. Computer games that teach all of the letters of the alphabet or all of the numbers can also receive credit here. Do not give credit for posters, blankets or wall-hangings with the alphabet on them.

Children's Card Game (to name or match pictures, shapes, colors, words, letters or numbers): Give credit for a set of cards made for young children involving activities such as matching or naming pictures, or identifying or matching shapes, colors, letters, numbers, addition, subtraction, etc. Flash cards that are designed to teach preschoolers concepts such as shapes, numbers, letters, arithmetic may receive credit. Playing cards designed specifically for children, such as Go Fish, Old Maid, or Blink may also receive credit. Do not give credit for games played with a standard deck of playing cards (e.g., War).

First board games: Give credit for any simple board game made for young children, such as Chutes and Ladders, Candyland, etc.

Workbooks made for preschoolers teaching simple shapes, numbers, matching or other concepts (*made for child to write in*): Give credit only for books that are designed to teach preschoolers concepts such as shapes, numbers, letters, colors, matching. Give credit only for books that the child can write in.

Toys that teach number concepts: Give credit for 10 x 10 pegboard, beads that fit on rods or in counting frame, Cuisenaire rods, computer games that teach counting or addition or subtraction.

Toy clock that child can manipulate and helps child learn the time of day: Give credit only for a toy clock with hands that the child can manipulate. Do not give credit for a real clock.

Set of toy magnets (individual magnets to play with; *not* magnetic numbers, letters): Give credit for individual, manipulatable magnets, such as horseshoe or bar magnets, that are designed to teach children about magnetism. Do not give credit for magnet tiles, refrigerator magnets, or for toys in which the magnets are secondary, such as train cars that attach by magnet.