

Hyperlexia: Therapy that Works

A Guide for Parents & Teachers

**The Center for
Speech and Language Disorders**



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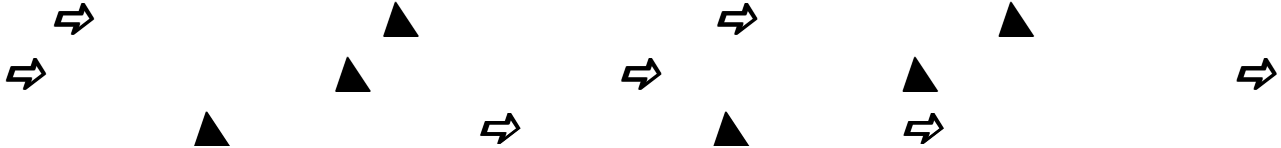
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Email: info@csls.org
ISBN # 0-9637921-1-3

Library of Congress Cataloging-in-Publication Data
Includes index.

1. hyperlexia: a guide to intervention strategies and resources
2. developmental disabilities – language disorders
3. autism: PDD

Printed in the United States of America
Second Edition

*This book is dedicated to the families and children
who inspire us.*



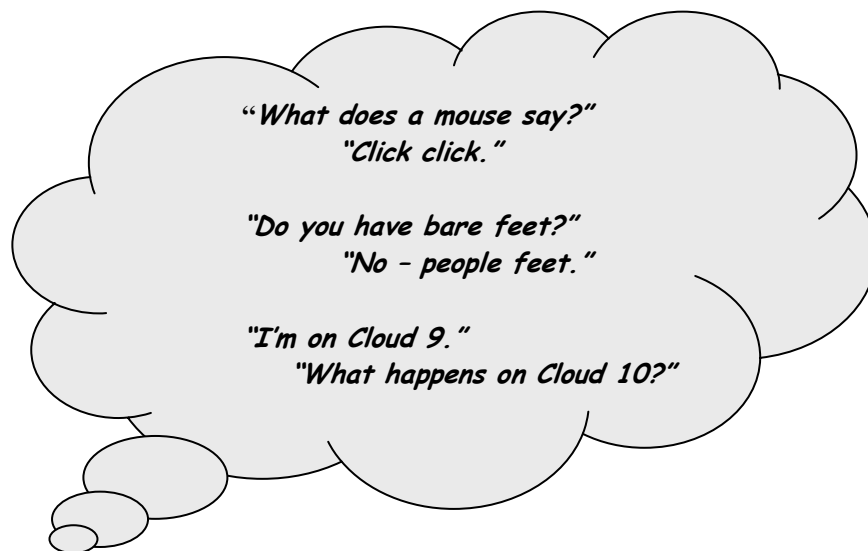
Special thanks to:

Sue Anish, whose idea it was to create this book.

*Carrie Rinker-Schaeffer, whose energy and enthusiasm as
President of the American Hyperlexia Association spurred us on.*

Ellen Ferguson, for her book design and computer skills.

Things we have heard in therapy . . .



Introduction to the Second Edition

It has been ten years since the staff of the Center for Speech and Language Disorders developed this guide to help parents and teachers better understand the learning style of children with hyperlexia. We are pleased that so many parents, teachers and therapists have found our suggestions helpful. My email suggests, however, that there are still many misconceptions about hyperlexia and its importance in learning and language development. Families still write, call, Skype and travel to CSLD for help in diagnosing hyperlexia and for help in convincing school programs to adapt strategies to include written language for these children in preschool, kindergarten and beyond.

In ten years the world has changed rapidly. We have new tools to understand how the brain works. We can see that children with hyperlexia have different neurological “wiring” than their typical peers. We are gaining a better understanding of Autism Spectrum Disorders and how we can use precocious reading to develop social skills and comprehension in those with hyperlexia and ASD. There are now helpful on-line resources, blogs and apps for smart phones, iPods, iPads, and other tablets. New articles and books have been written by parents and professionals. We have added many of these to our resource section, along with a selected bibliography of journal articles and other writings we have gathered over the years.

We still use the strategies and techniques outlined in this manual every day with children with hyperlexia. App technology has made its way into our sessions since, like computer programs, it is a wonderful, attractive medium that allows the children to teach themselves and to practice their skills. We do suggest time limits and schedules for using app technology, since it is easy for the children to become obsessed with particular programs. We also suggest making app use an interactive activity as well as an independent learning tool. Video game systems, such as the Wii or X-Box offer opportunities for social interaction within a visual context. We have found that children benefit from both low-tech and high-tech tactics used in creative and interactive ways.

Each child with hyperlexia is a unique individual, with special interests, challenges and skills. Use this manual and the suggested resources as jumping-off points to devise individualized programming for your funny, frustrating, surprising and wonderful child.

Phyllis Kupperman
Founder, Center for Speech and Language Disorders
2013

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I. INTRODUCTION

Why did we write this guide?

We, the clinical staff at the Center for Speech and Language Disorders, have more than 13 years of experience in identifying children with hyperlexia, as well as providing intervention for these children and support for their families. We diagnose and treat children from across the United States and beyond. One of the most frustrating parts of the process of diagnosing a child with hyperlexia is trying to send the child and his or her parents out on their own, with just a few strategies on how to proceed, given our time limitations.

We wrote this guide so that parents of children with hyperlexia, along with their teachers, caregivers and grandparents, would have something tangible to take along with them on their journey. The task of teaching the child with hyperlexia that his or her world can be understood, participated in and enjoyed can be overwhelming for the child's caregivers. We hope that the strategies we have collected will help make your job as a parent or teacher a smoother one.

What is hyperlexia?

Hyperlexia is a syndrome that is characterized by a child's precocious ability to read (far above what would be expected at their age), significant difficulty in understanding and using verbal language (or a profound nonverbal learning disability) and significant problems during social interactions.

The diagnosis of hyperlexia

Although hyperlexia may be the key symptom in describing the learning difference in a child, it is not a stand-alone diagnosis. Rather, it exists on a continuum with other disorders, such as autism spectrum disorders, language disorders and nonverbal learning disabilities. Children with hyperlexia may also exhibit other conditions, such as sensory integration dysfunction, attention deficit/hyperactivity disorder, motor dyspraxia, obsessive-compulsive disorder, depression and/or seizure disorder.

We have often been asked why we identify children with hyperlexia if they have other diagnoses or conditions. The most important reason is that these children learn primarily through reading, so the therapeutic and educational programs that we devise for them must take their reading skills into account. **The reading skills of these children are their strength, and we use this strength to develop their weaker skills.**

Children with hyperlexia are delightful, interesting and challenging. They have taught us about learning, language and life. We have found that there are new concerns at each stage of development, and our work with these children is never done. The children we worked with in the early days were a capable group. Most of them did well academically, thanks to a lot of hard work by their parents; however, their social skills remained an issue and needed continued intervention.

As we treated many more children over the years, we realized that there is a spectrum of outcomes depending on the severity of the cognitive, language learning and/or social disorder associated with the hyperlexia.

Identification of hyperlexia is most important when children are young, because early intervention increases children's chances for success, and since reading is a powerful tool for learning language and social skills. Once a child begins to understand verbal language, written language can be gradually decreased and used only in certain situations when something new or confusing is introduced. Although symptoms tend to decrease over time, the characteristic learning style remains through adulthood.

Frequently asked questions

- **Is a child who is not yet reading, but is very interested in letters, considered hyperlexic?** Strictly speaking, these children are not hyperlexic because they are not reading. Some children who do not read at 2 or 3 years old may still develop reading decoding or sight-reading at 4 and 5 years old and may then be diagnosed with hyperlexia. Some children who are strong visual learners, though not readers, may still benefit from the intervention techniques developed for children with hyperlexia.
- **Do children with hyperlexia understand what they are reading?** They understand what they read about as well as they understand language in general. Many children with hyperlexia have difficulty processing what people say to them. They may have a difficult time using language for thinking and reasoning. They also usually understand concrete language better than abstractions or inferences. Reading supports language learning because it makes the language visual. Therefore, language learning improves, and reading comprehension also improves.
- **What causes hyperlexia in children?** The presence of hyperlexia within the context of another developmental disorder reflects a difference in the neurological organization of the brain. While a cause is not yet known, research in genetics and functional MRI studies may provide some information in the future.
- **Isn't hyperlexia just a savant skill or a "splinter skill"?** A savant or splinter skill is an isolated ability that appears within individuals with developmental disabilities. Generally, these skills have no relationship to other aspects of the individual's functioning. Hyperlexia is not an isolated skill, but a tool which can be used to develop language, to modify behavior and to help the individual make sense of the world.
- **Does the presence of hyperlexia mean that the children are "higher functioning"?** In working with a large number of children with hyperlexia, we have seen a spectrum of outcomes. Some children, though they may be excellent readers, may exhibit severe and persistent symptoms of autism. Other children have great difficulties developing verbal expressive language, though their written expressive language may exceed their verbal abilities. Some children may do well academically, but may have difficulties socially. It is hard to predict what a child with hyperlexia will be like as a young adult; however, we do know that using writing to supplement their learning leads to better progress.
- **Do children with hyperlexia get better?** Children with hyperlexia do improve in language and social skills. Some individuals improve to the point that they are able to go to college or live independently, although some will need special education and supervised living arrangements throughout their lives.

What we have learned

After identifying, working with and following several hundred children with hyperlexia over the past 13 years, we have learned the following:

- Children with hyperlexia have a difficult time processing what is said to them, but they are lucky because their language learning can be supported by written language. Once a child begins to understand verbal language, written language can be used less frequently, such as when something new or confusing is introduced.
- English is a difficult and confusing language. *Wh-* questions (*who, what, where, when* and *why*) need to be specifically taught using written and verbal prompts and scripts. Ask the question and give the answer. Teach how to create a narrative or tell a story. Frame experiences or behavioral patterns using written words.
- Rote learning is okay. Routine is good. Computers, videos and books are great teaching tools, since they are predictable.
- Although rote learning is good, a child with hyperlexia also needs to be taught about the flexibility of routine and language.
- Incorporate what each child is interested in into lessons (for example, maps, dinosaurs, cars, plumbing, cartoon characters).
- Punishment does not work. What does work is setting up a positive reinforcement system that will support the behavior you desire to teach.
- Children with hyperlexia have benefited from a variety of educational settings and therapeutic approaches **as long as their reading abilities are recognized and used to help them learn**. Educational programs need to be adapted to fit their language learning differences.
- Each year is different. Parents and professionals need to evaluate programs and interventions based on the child's needs that year.
- Medications, diets and nutritional supplements are not cures, but they may help particular symptoms, such as anxiety, obsessive/compulsive symptoms and attention deficits.
- It is important to script coping language for the child in an effort to decrease negative physical behavior.
- Occupational therapists have lots of good ideas. Consult an occupational therapist trained in sensory integration techniques.

- Social skills are important and need to be specifically taught and practiced. Boys and girls need different kinds of social language groups until the teen years, at which time trans-gender communication is the issue.
- Some people will never understand, and that is okay. Appreciate those who make the effort.
- "Write, write, write, because the child with hyperlexia will read, read, read." *Susan Martins Miller*
- "When in doubt, write it out. (If it isn't written, it may not exist.)" *Canadian Hyperlexia Association*

II. GENERAL PRINCIPLES: STRATEGIES FOR TEACHING CHILDREN WITH HYPERLEXIA

General principles for language intervention.¹ So, how do we teach children with hyperlexia? Because these children learn language via gestalt processing (learning language in chunks without necessarily attaching meaning to each word)², we have found it helpful to keep the following principles in mind. Remember that children with hyperlexia typically:

- **learn best visually**
- **seek patterns**
- **demonstrate significant difficulties processing what they hear**
- **learn expressive language in a peculiar way, echoing or memorizing sentence structure without understanding the meaning of the words they are saying (echolalia)**

- **have extraordinary verbal imitation skills**
- **have strong auditory and visual memory**
- **think in concrete, rigid and very literal terms**
- **demonstrate an intense need to keep routines**
- **have highly focused interests**
- **demonstrate difficulty with reciprocal interactions**

These characteristics have become the guidelines by which we teach children with hyperlexia. Rather than viewing these principles as deficits, we incorporate them into our teaching strategies. In this section, we will describe how we build upon the strengths of the child with hyperlexia so that the learning process is done at his or her level.

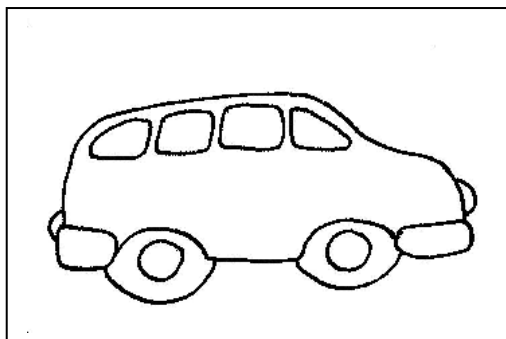
¹With thanks to Lynette Scaife.

²Prizant, B., (1982) Gestalt language and gestalt processing in autism, *Topics in Language Disorders*, 3: 16-23.

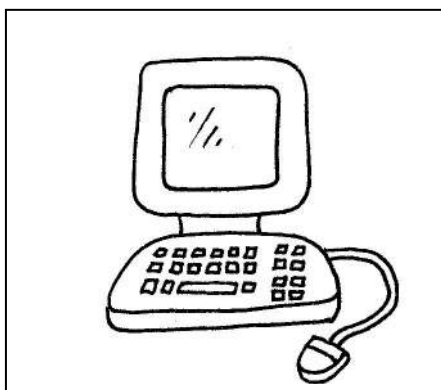
Use written and visual models.

The child with hyperlexia often finds it easier to understand visual material, since it is more concrete. Whether or not the child is reading, the written word provides a tangible representation of what he or she is being told or expected to say. In these instances, you may often see the child pointing to the words, as if he or she relies upon them.

- Use index cards or Post-It™ notes to help the child understand and/or talk.



It's time to go in the car.



I want the computer.

Use patterned language.

Children with pervasive developmental disorders and hyperlexia find it easier to remember phrases in patterns. They understand the meaning of a phrase by seeing the whole pattern, rather than from each individual word.

- When teaching the child to retrieve objects, pick one simple phrase, such as

Bring me the _____.

- The child may become confused if alternative phrases such as

Go get the _____.

May I have the _____?

Can you find the _____?

are used. After one pattern is established, another phrase may be introduced in order to expand and diversify comprehension and expression, but it should be specifically taught.

Use cloze sentence formats.

Basically, this means that the child can be shown how to change the patterns in the language he or she is learning by filling in blanks in sentences he or she has memorized. This is extremely useful in helping the child learn to answer questions and to manipulate language patterns.

- Use this method in memorized patterns.

Twinkle, twinkle, little _____.

- Use this method for making choices.

What do you want to drink? I want to drink _____.

- It is helpful to write these sentences for the child with hyperlexia, and to give written choices as well.

Use verbal imitation skills.

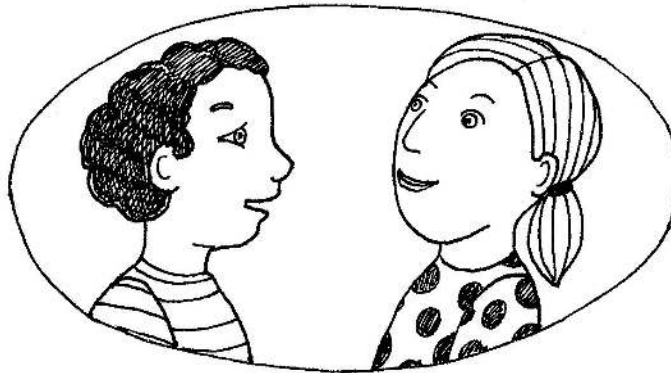
- Use scripts to tell the child exactly what to say.

When someone asks you "What is your name?" you say, "My name is Nate."

When someone says "Hi!" you need to answer "Hi," or "How are you?"

Generate rules.

- Concrete, positively stated rules show the child what to do and what behavior is expected.

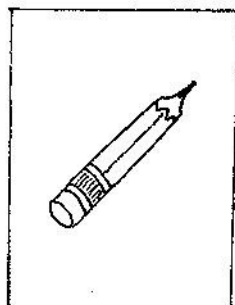
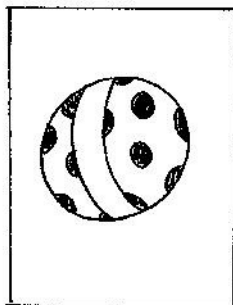


Always look at the person you're talking to.

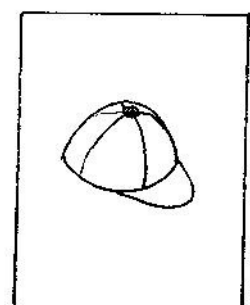
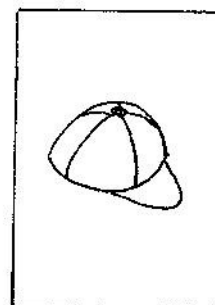
Use examples rather than explanations.

- Long verbal explanations will confuse the child who is having a hard time learning language. It is much more productive to give examples, so the pattern can be seen and heard.

When teaching a child how to play the Memory Game, rather than explaining the rules of the game to the child using spoken words, set up a small demonstration with a few cards. Pick two cards that do not match, show them to the child, and say "No match!" Then demonstrate how to turn the cards back over. Next, pick two that do match, and say "It's a match!" Demonstrate to the child that he or she now keeps the cards that match.



"No match!"

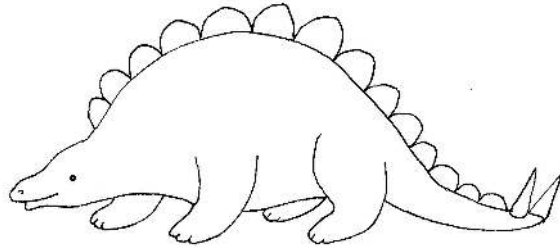


"It's a match!"

Use rote learning.

- The child with hyperlexia often finds it easy to memorize rote facts, names or math problems. The child should be encouraged to learn everything that is interesting to him or her. Later, he or she can be shown how to apply this knowledge.

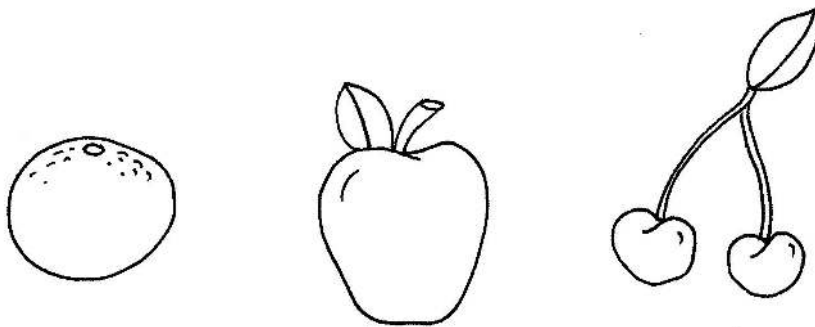
Some children know all the names of states or countries and their capitals; some know sports teams and their cities, while others are experts on every kind of dinosaur, or all of the Thomas the Tank Engine™ characters. This information can be used as the basis for teaching the child map skills, classifications or pretend play.



Teach one way, then reverse the process.

- Children who learn language via Gestalt processing may not be able to automatically manipulate learned concepts. A question asked a new way might seem like an entirely different question to this child.

A child may learn an orange is a fruit and an apple is a fruit and a cherry is a fruit. He or she may have difficulty when asked to "name some fruits," and this task may need to be specifically taught. "Orange, apple and cherry are all fruits."



Teach specific pragmatic rules.

- Social interactions should be studied (appropriate, non-violent videos and t.v. shows work well for this). Rules and scripts for interactions should be created. Since it is difficult for the child to think of what to say, he or she will plug in these scripts and rules in appropriate settings.
- For asking and answering questions or taking turns in a game, scripts can be written on a piece of paper that is folded in half like a tent. On one side of the paper, write a question, leaving a blank that the child will fill in:

Do you have a _____ fish?

- On the other side of the folded paper, write the possible answers, again using blanks that the child will fill in verbally:

Yes, I have a _____ fish.

No, I don't have a _____ fish. Go fish.

- The folded paper can be turned around so that each child faces the appropriate written cues.
- Another example of a social rule is:

People are more important than things! When you come into a room, greet the people before looking at the things.

Use written schedules.

- Whether or not the child can read them, written schedules are invaluable tools, serving as visual, concrete reminders. Children often enjoy crossing out the activities as they accomplish them.

Speech Schedule

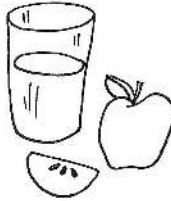
- 1. Go Fish*
- 2. Question Game*
- 3. Look at picture*
- 4. Computer*
- 5. Time to go*

Plan ahead.

- ▶ Prepare the child for transitions and changes in routine. Modify the written schedule or use a picture system to help the child understand the sequence of events.
- ▶ To prepare a child for a change in his or her schedule, show how the schedule will be changed.

Schedule

1. circle time
2. make a paper snowman
3. snack time
- ~~4. story~~
5. dance to music
6. go home



- ▶ Show the amended schedule to the child, and use simple written or verbal phrases to explain. "No story today. We're dancing."
- ▶ Install a card with a question mark on it to handle unexpected events (i.e., a trip to the grocery store or a different route home from the store). Provide positive reinforcement for handling the situation appropriately.
- ▶ Some children like to frame the change in routine with a big word. "It's *unexpected*."

Use high-interest activities.

- ▶ Take advantage of the child's interests or obsessions by using them as the basis for teaching activities and as motivators.
- ▶ When making a schedule, place high-interest activities either between or following activities you want the child to do.

Schedule

1. picture cards
2. read a book
3. computer

(with computer being the high interest activity)

OR

Schedule

1. picture cards
2. letters
3. play a game
4. letters
5. picture book
6. letters

(with letters being the high-interest activity)

- ▶ Also, high-interest activities such as letters can be used to teach new skills. When teaching new vocabulary words, categorize them according to the letter they start with.

A is for _____.

- ▶ If the child's interest is spelling, teach the language to request letters by verbal or written scripting. If the child wants to spell Chicago, script a way to request each letter, such as

I want C. I want H. I want I.

OR

Write a "C", then an "H", then an "I", then a "C", etc.

- ▶ Another method is to use a high-interest game, such as Hangman, to create interest in completing a difficult task. Each time the child performs correctly, a letter in a familiar phrase can be filled in. The child will be highly motivated to complete the phrase.

J a m e s G o e s B u z z B u z z

Offer choices.

- ▶ Help the child understand his or her own wants and needs. This allows the child to take responsibility in the learning process. This can be done when creating a list of

tasks for the day or a schedule for a therapy session. Give the child a choice of two things you would like to do.

Do you want to read a book or play a game?

- ▶ The child can also be given choices throughout an activity. Allow the child to choose such variables as *color, size and food type*.

Do you want a blue train or a green train?

Do you want crackers or pretzels?

- ▶ Then help them by giving them the pattern of language to request the item.

I want _____.

Use a positive reward system.

- ▶ Give the child stars or tokens for cooperating and participating. This guarantees his or her success by rewarding positive changes. The child can then work toward a predetermined number of stars for a reward at the end of an activity or session. In this way, appropriate behavior is reinforced, and the child can actually see what is still expected (a certain number of stars) before the reward is delivered.

Homemade movie and train tickets (worth a specific number of minutes) can be earned by the child for positive behavior. The child can use the earned tickets to watch a movie for X minutes or to play with trains for X minutes. This can also be helpful when introducing time concepts (visual timers are helpful).

Note: In order for this to be a positive experience for the child, the number of chances given to earn the set number of stars or tokens can be changed at the discretion of the adult. We emphasize positive rewards because negative reinforcement--taking away stars or tokens--makes the child anxious and less able to succeed.

Parents: Become your child's co-therapist!

- Parents are a child's best resource. Parents often understand best what the child is referring to in a situation, as well as what particular expressions mean to the child.

A child came into a therapy session and requested “astronaut training.” The therapist was puzzled, until the child's father explained that, because of the child’s love of planets and outer space, at home they referred to swinging and jumping as astronaut training.

If the parent tells the therapist what a particular expression means to their child, the therapist will be able to help script (written and/or verbal) more appropriate language for the child at that time.

Since the child may not be able to express a variety of things to the therapist, the parent’s role in communication becomes extremely important. The parent can tell the therapist what best motivates the child, and what bothers the child. This creates a much more productive learning environment.

When parents participate in or observe a therapy session, they learn to use the scripts and techniques used by the therapist, so that they can apply them in the home setting. When the child learns a behavior consistently in therapy and at home, it becomes part of their repertoire more quickly. Consistency is crucial!

Use lists.

- Lists can help the child with hyperlexia to develop better narration techniques. Use lists as story-telling aids. Convert a list into a simple narration.

1. *Eat breakfast.*
2. *Go to school.*
3. *Come home.*
4. *Swimming lesson.*
5. *Eat dinner.*
6. *Take a bath.*
7. *Go to bed.*

Joey’s day: First, I eat breakfast. Then, I go to school. After school, I come home. Then, I go to swimming lessons. Then, I eat dinner. After dinner, I take a bath and go to bed.

- After the list has been converted to a simple narration and the child is comfortable with it, topic sentences and closing sentences can be added. In the following example, the topic and closing sentences are underlined.

Tuesday is a busy day. First, I eat breakfast...etc. ...and go to bed. I have fun on Tuesdays. (Remember to include feelings and emotions, not just facts!)

Use journal writing.

- ▶ Journaling helps children practice rote patterns. It is acceptable for the child to produce the same journal entry time after time. The child is rehearsing these journaling skills. Use rote beginnings to sentences for the child to fill-in, remembering that it is fine to fill-in the same thing every day. It will help the child learn to talk about him or herself, others and what happened during the day. Furthermore, it will help the child to understand the importance of sharing information with others.

Journal writing is one way to help the child develop a better sense of self, as well as develop a “theory of mind” (that is, an understanding of how the child’s thoughts are different from other peoples’ thoughts).

- ▶ Encourage the child to begin journaling by providing sentences with blanks left for the child to fill-in.

Today I _____.
My favorite _____.

- ▶ As these sentences become familiar and established, more sentences can be added, with the goal of encouraging the child to write a main idea and details.

Expand use of communication to a variety of contexts.

Many times, we are focused on improving the child’s ability to tell what he or she wants or needs, and while this may initially be the most important function of language, the child needs to be directly taught other functions of language.

These functions include protesting (“I don’t like it!”), answering questions, asking questions (“Where is...?”), showing and labeling (“Look, Mom, it’s Big Bird!”), making comments (“Wow!”), greeting, taking turns, requesting (“I want _____, please.” “Can I have _____, please?”) and negotiating (“It’s my turn next!”).

Much of this language will need to be scripted (verbally and/or written) for the child. In this way, the child can see both the power and the outcome of his or her words.

III. GOALS AND SPECIFIC LANGUAGE OBJECTIVES

Applying language learning principles to specific language objectives.

In this section, we will outline some common language skills that may need to be addressed with the child with hyperlexia. Keep in mind that while we see similar characteristics in many children with hyperlexia, the severity of language deficits varies greatly from child to child. Each child must be viewed individually in order to determine his or her specific language learning needs.

The following list provides areas of language skills that may need to be addressed. Each item will then be addressed in detail, with specific examples of learning techniques given.

- 1. Gaining attention.**
- 2. Labeling.**
- 3. Vocabulary.**
- 4. Communicating basic wants and needs.**
- 5. Requesting.**
- 6. Protesting.**
- 7. Making choices.**
- 8. Following directions.**
- 9. Giving directions.**
- 10. Language concepts.**
- 11. Associations (including categorization, opposites, analogies).**
- 12. Answering questions.**
- 13. Asking questions.**
- 14. Sequencing.**
- 15. Attributes and descriptors.**
- 16. Explaining and describing.**
- 17. Narratives and dialogues.**
- 18. Grammar skills.**
- 19. Using social rules.**
- 20. Time concepts.**

1. Gaining Attention

Children with hyperlexia may have the intent to communicate, but they have difficulty gaining someone's attention before they speak. This important function can serve as a means to initiate an interaction. It can also help maintain an interaction when a breakdown in communication occurs.

What we do:

- ▶ Teach the child to call attention by providing an appropriate script.

Look! or Look at this!
Excuse me!
Hey, guys!
What's this?

- ▶ Use proper names in the beginning to help the child focus in on a particular person:

Mom, look!

- ▶ Write words or phrases on index cards and hold them up as visual cues when a child appears to struggle with initiating an interaction. Keep written prompts available until the child has a reliable way of establishing someone's attention in a variety of settings.

2. Labeling.

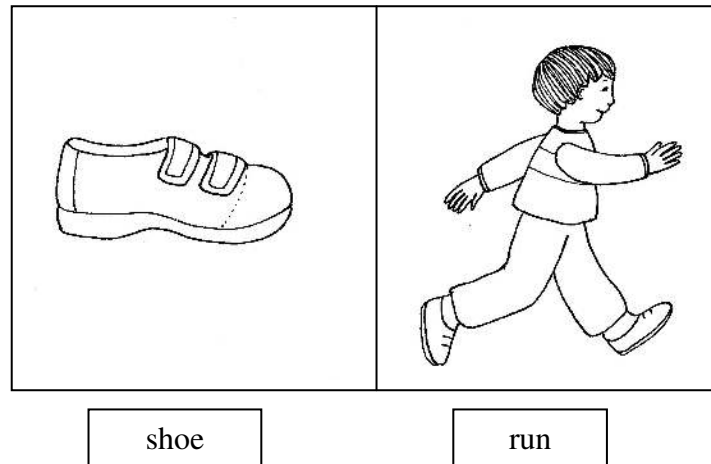
We teach the child with hyperlexia to label items to increase his or her vocabulary. This adds to the child's level of comfort with language. We try to accomplish this in a fun, playful manner, using games and familiar rhymes or passages.

What we do:

FILL-IN-THE-BLANK

Old Macdonald had a _____ e-i-e-i-o
And on his _____ he had a _____ e-i-e-i-o
With a _____ here and a _____ there
Here a _____ there a _____ everywhere
A _____.
Old Macdonald had a farm e-i-_____.

We also use written words to support growth in the child's labeling vocabulary. It is helpful to have the child match a written word to a picture, or to use Post-It™ notes to match written labels to actual objects.



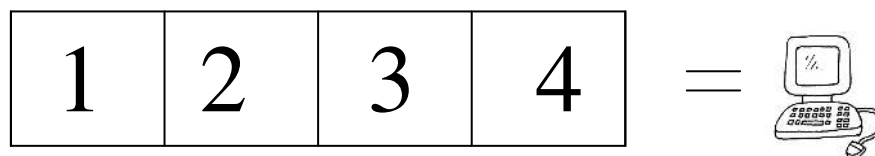
3. Vocabulary.

It is extremely important to teach vocabulary to the child with hyperlexia. Our goal is to improve both receptive and expressive vocabularies for nouns, actions, categories and descriptors.

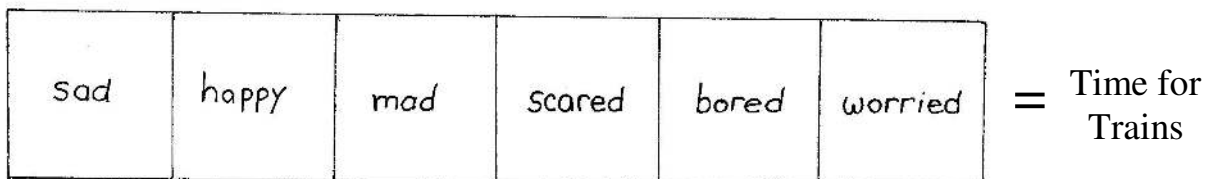
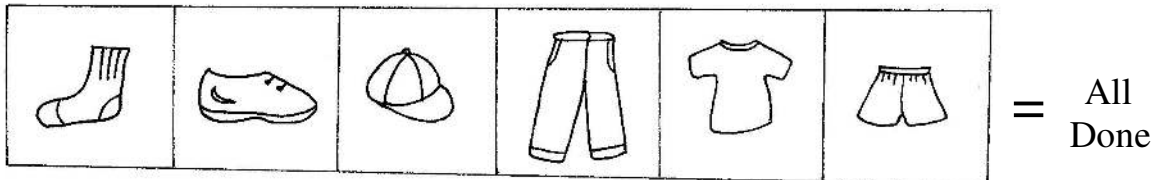
We use the following activity as part of a lesson and/or as reinforcement. As reinforcement, the chart serves as a timeframe for alerting the child as to when an activity will be completed and when the child will receive a prize or get to choose a game.

What we do:

- ▶ Think of a set of numbers, letters or words to use in a chart. Use a smaller number for children with shorter attention spans (i.e., 3-5) and a larger chart for children who are able to sustain their focus more easily (i.e., 8-10).
- ▶ Write or draw a picture of the reinforcement the child will be working toward (i.e., trains, lollipop, computer or swing). Put the picture of the reinforcement at the end of the list (see the examples below). Make the appropriate number of boxes for the chart.



- ▶ Tell the child “we’re going to make a letter chart. I want you to help me name some letters.” Children with higher language skills may be able to negotiate what type of chart to make (e.g., “Let’s make a clothing chart.” “Let’s make a feelings chart.”). Fill in each box. As the child answers a question or performs the targeted task, cross off each box. Often, the child will enjoy being “in charge” of crossing off the boxes and saying how many are left (“I have _____ more pictures.”). After all of the boxes have been crossed off, the child receives his or her reward. If the child does not cross off all the boxes, the reward is not given. That is one reason that starting with a small list, until the concept is learned, is so important.



- ▶ We often use pictures of single objects paired with the written words for the objects in order to teach understanding and use of single word vocabulary. It is important to teach the child names of objects (i.e., dog, bus, coat, etc.), actions (i.e., eating, sleeping, playing, etc.), descriptions (i.e., big, little, hot, etc.) and categories (i.e., food, vehicles, animals, etc.) to further expand his or her vocabulary skills.
- ▶ In order to have the child label objects, actions and so forth using complete sentences, we write out

It's a train.
or
The boy is jumping.

for the child to use.

- ▶ Answering “*What*” and “*What Doing*” questions can also be targeted when working on vocabulary. Write out the question and answer together when completing this task.

What is it? It's a dog.
or
What is the boy doing? The boy is walking.

4. Communicating basic wants and needs.

Obviously, this is a topic of importance and it is often one of the most frustrating pieces of the child's life.

What we do:

- We begin teaching the expression of basic wants and needs by first utilizing a variety of objects, toys and food that the child is most motivated by and prefers to play with or desires the most. Written scripts are used with the verbal script, providing the child with such basic phrases as:

I want a drink.

Can I have a cookie, please?

or

I have to go to the bathroom.

- It is also important to teach the child to be able to verbalize the things he or she does not want and need. This is taught by having a written script such as:

No, I don't want a cookie.

or

No, thanks.

- The child uses the written script with a verbal model.

5. Requesting.

A child can be taught to communicate requests by using highly motivating games, toys or food. Often, children with hyperlexia prefer to play with activities or objects that involve letters, numbers or written words.

What we do:

- While the child is involved in a motivating activity, he or she is presented with a written script or prompt of

_____ *please*

or

I want _____ please.

or

Can I have _____ please?

The child is encouraged to request a specific toy, object, etc. Food is often very motivating when first teaching the child language to request.

6. Protesting.

Teaching appropriate methods of protesting tends to improve the child's behavior and may decrease frustrating moments. It is just as important to teach the child how to protest, as it is to request. It is hoped that providing the child with the words and language to protest or refuse will help to ease frustration, increase the child's flexibility and improve his or her negotiation skills.

What we do:

- The child is taught to protest through the use of written and verbal scripts.

No, thank you.

No, I don't want _____.

No, thanks.

I don't want to _____.

- Pictures may also be used for further visual support.



No, thanks.

No, I don't want the apple.

- When the child is frustrated or upset and it is clear that the child does not want something, provide the written/visual and/or verbal script for the child to imitate and use effectively, even if he or she cannot get his or her way.

Adult: Say, I don't want to go home.

Child: I don't want to go home.

Adult: I know you don't want to go home. Let's put the (favorite music) tape on in the car.

It is important to give the child the same opportunity as any other child to protest. In addition, it is also important to validate what the child has said ("I know you don't want to, but...").

7. Making choices.

While the child with hyperlexia may have strong opinions about choices, it is often difficult for him or her to put these opinions into words. We teach the child how to verbalize his or her choices by using a variety of methods. This task, like others in this section, is most successfully taught using objects that are strongly desired by the child, such as Thomas the Tank Engine™ trains, books, puzzles or food.

What we do:

- First, an object that the child wants is selected, as well as an object that the child is not particularly fond of, thus setting up a situation in which the child's choice will be fairly obvious. Present the two objects to the child, asking

Do you want the _____ or the _____?

- Verbally script for the child to say

I want the _____, please.

- If the child does not imitate or use the verbal script, write the sentence out for the child to use. At times, it is also helpful to shorten the request or choice with a varied written and verbal script, such as

_____, please.

8. Following directions.

This is an important part of day-to-day life for any child. Success in school, personal safety, as well as many other situations depend upon the child's ability to follow directions. Specific instruction on the meaning of prepositions used in directions is needed.

What we do:

- Teach:

Put your shoes under the bed.

Put your laundry in the hamper.

- Increase the complexity:

Get the blue cup from the cabinet over the sink.

- Also, the child with hyperlexia can be taught to follow directions using the following teaching method:

- Write out rules to follow in a numbered fashion. For a bathroom routine, write:

1. *Turn the water on.*
2. *Get soap.*

- Or, for going to school, write:

1. *Take your coat off.*
2. *Put your coat on the hook.*

This method can be applied to learning rules, routines and schedules.

Teach Me Language (see Resources) has excellent examples of routines to use for children who are visual learners.

9. Giving directions.

- The child can be taught to give directions in much the same way as following directions was taught.

What we do:

- Use written prompts. Have the child ask or direct a person to:
 - Look to the left of the _____.
 - or**
 - Look between the _____ and the _____.
 - or**
 - First, _____, then, _____ (used with motor activities, such as "First, jump, then, touch your toes.)."

This specific activity, however, can be used only after the child has adequate knowledge of the rather sophisticated concepts involved.

Great activities for this goal also include games such as *Secret Square* and *Chip-O*, or using a deck of cards.



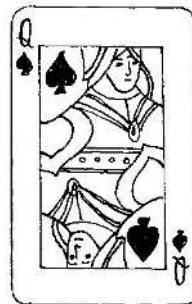
10. Language concepts.

Specific language concepts can be taught by providing visual and written cues.

What we do:

- Address one concept at a time. Repetition is the key to learning language concepts. It may take a number of repetitions to get the concept into a child's long-term memory. Computer programs are helpful here because a child can repeat the examples over and over. Ask the child

What's above the queen?



- Verbally remind the child that above means up, while directing the child's attention to the written cue. Again, cards, *Secret Square* and *Chip-O* are effective tools for addressing this goal.

11. Associations (including categorization, opposites and analogies).

We want the child with hyperlexia to be able to talk about the associations between objects.

What we do:

- ▶ We begin by working on improving the child's ability to talk about objects that do not belong, and why they do not belong.
- ▶ Use a series of three or four pictures of objects, each one labeled, and provide the child with the following script:

The _____ does not belong.

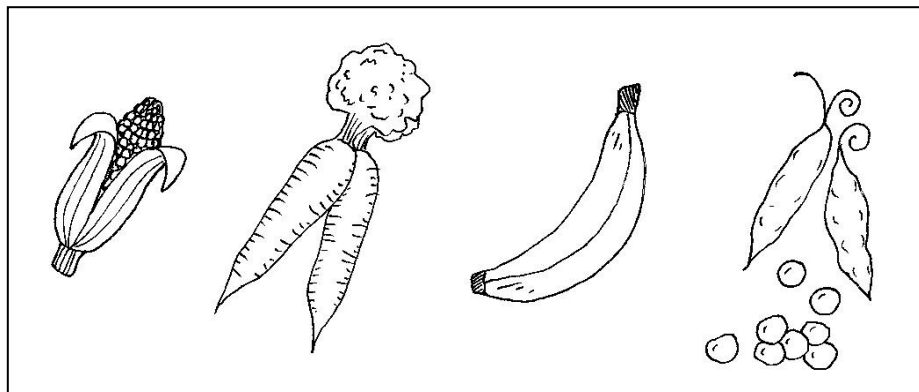
or

The _____ does not belong because it is not a _____.

_____ and _____ and _____ are all _____.

A _____ is a _____.

(The **banana** does not belong because it is not a **vegetable**. **Corn, carrot,** and **peas** are all **vegetables**. A **banana** is a **fruit**.)



- ▶ Another script we use to teach the child to talk about what does not belong is this:

Which one does not belong?

The _____ does not belong.

Why?

Because it is not a _____.

12. Answering questions.

Answering questions, especially *wh*- questions (*who*, *what*, *where*, *when* and *why*), is an extremely difficult concept for the child with hyperlexia to master. To improve the child's ability to answer *wh*- questions we use a number of methods.

What we do:

- **Answering *wh*- questions.** When teaching *wh*- questions, give the child a written pattern or script that can be used for that type of question. Each question type has a particular kind of answer that goes with it. Examples of these patterns include:

Where _____?

In the _____.

On the _____.

Under the _____.

At the _____.

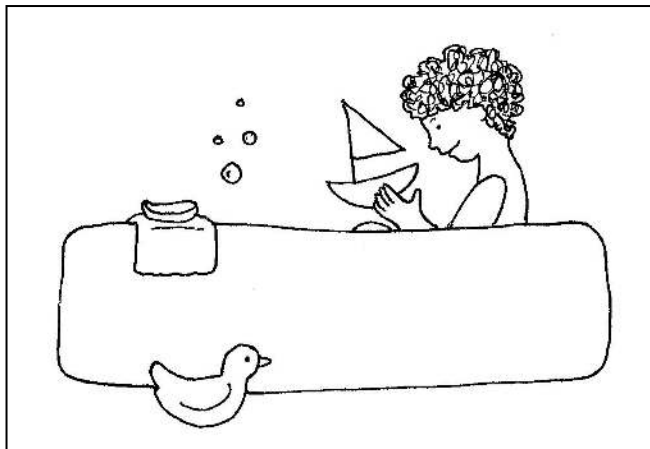
(Where is your pillow? On the bed.)

Why _____?

Because _____.

To _____.

(Why do you take a bath? Because you are dirty.)



Why do you take a bath? To get clean.

There is a variety of question cards we use to help the child improve his or her receptive and expressive language for answering questions, especially *wh-* questions. These are readily available from the sources listed in the Resource section of this manual. The most useful cards feature a picture paired with a written sentence for both the question and the answer.



Why do you go to bed?

Because you are tired.

- When first using these cards, present both the question and the answer to the child. Have the child read or verbally repeat the question and answer after your model. Practice this until the child is comfortably able to pair the appropriate answer with the matching question. We suggest using a fun matching game or *Go Fish* to practice pairing the cards.
- Using the same questions, practice until the child is able to verbally give you the correct answer for the question you ask, or for the card you pick. You may want to cover the written answer with a Post-It™ note. If the child has a hard time with this, simply uncover the written answer for the child to use.
- It is just as important to teach and script the child to say, “I don’t know” when he or she does not know the answer. This can be written on a Post-It™ note so that the child can be cued when he or she does not give an answer:

I don’t know.

Give me a clue.

- **Answering frequently asked questions.** The child with hyperlexia needs to be taught the correct language to answer certain frequently asked questions, such as:

What’s your name?

How old are you?

Where do you live?

What’s your phone number?

When is your birthday?

This also targets providing functional information. Here are some exercises that are extremely useful for teaching the child how to answer these questions.

- Write out the question and answer in their entirety. Review this information repeatedly with the child. Practice until the child is able to give the answer verbally using the written model.

What is your name?
*My name is **Greg**.*
Where do you live?
*I live in **Schaumburg**.*

- Using the same questions, write out the sentences, leaving blanks for the child to complete. Practice until the child is able to fill in the information appropriately.

What is your name?
My name is _____.
Where do you live?
I live in _____.

- With the same questions, write out the question by itself and see if the child is able to answer verbally. If not, provide a verbal prompt (i.e., “I live...”) for the child to use, or use the written example given above.

What is your name?
Where do you live?

Following are more examples of the same principle.

My birthday is _____.
My address is _____.
My phone number is _____.
I want _____ for my birthday, please.

13. Asking questions.

The child with hyperlexia can be taught to ask questions in much the same way as he or she is taught to answer questions.

What we do:

- ▶ **Asking frequently used questions.** The child with hyperlexia needs to be taught the appropriate language for asking questions such as:

Can I have _____ ?
Will you give me _____ ?
What's your name?
Do you want _____ ?
Where is the _____ ?
or
When can I _____ ?

- ▶ **Asking for clarification.** Often, children do not understand a particular vocabulary word or idiomatic expression. They need to be taught to ask, "What does that mean?"

14. Sequencing.

The child with hyperlexia can be taught to sequence pictures, sentences and events as a means of developing comprehension and storytelling skills that relate to life events.

Sequencing skills should be developed using a variety of methods to increase the probability of generalization.

What we do:

- ▶ Use picture cards only and have the child put the cards in order. Label each Post-It™

First, Next, Last
or
First, Second, Third

(It is best to start with a series of three pictures and progress to four, five, six, etc. as the child masters each level). This is a receptive task. The child should first simply place the cards in order, without requiring any language from the child.

- Now the task becomes more of an expressive language task. The child will place the pictures in order, listen to the therapist say three sentences (in order) that go along with the three pictures:

First, John picked up the bat. Next, John hit the ball. Last, he ran around the bases.

Then the child is asked to repeat those sentences while he or she points to each picture. At first, the sentences can be entirely written out on Post-It™ notes attached to the pictures. Eventually, use of the written sentences can be extinguished, and only minimal written cues will remain:

First _____ . Next _____ . Last _____ .

The child will, ideally, be able to fill in the blanks.

- Now the task can involve presenting a short paragraph of information. This way, the child has to process more information and then sequence the events. See if the child can sequence three written out sentences from the short paragraph. As before, eventually the written sentences should be phased out and only minimal visual cues will remain:

First _____ . Second _____ . Last _____ .

- Eventually, the therapist or parent may read short books with the child. Write out some sentences (the number of sentences will vary depending on the skill level of the child) that relate to events in the book. Have the child attempt to place the sentences in order on the paper that contains the written cues:

First _____ . Second _____ . Last _____ .

With practice, the child should be able to begin to verbally sequence events in short stories without using written sentences, by simply referring to the written cues.

Since children with hyperlexia often have difficulty being flexible with their language, it is important to reuse the same picture cards and short stories, while varying the language used. For example, the original script was: First, John picked up the bat. Next John hit the ball. Last, he ran around the bases. It can be changed to:

1. *First, John grabbed the bat.*
2. *Then, he swung the bat.*
3. *Finally, he crossed home plate.*

The importance of this variation is that the child learns that there are alternate, equally meaningful ways to say something.

Sequencing skills can be practiced in other situations throughout the day. For instance, making a craft, putting together a snack, cooking a meal, playing a game, scheduling morning

events, riding a bike and getting dressed all provide the opportunity to practice sequencing with the child. First, the child is asked “How do you _____?” The child is then given a written cue to help answer the question.

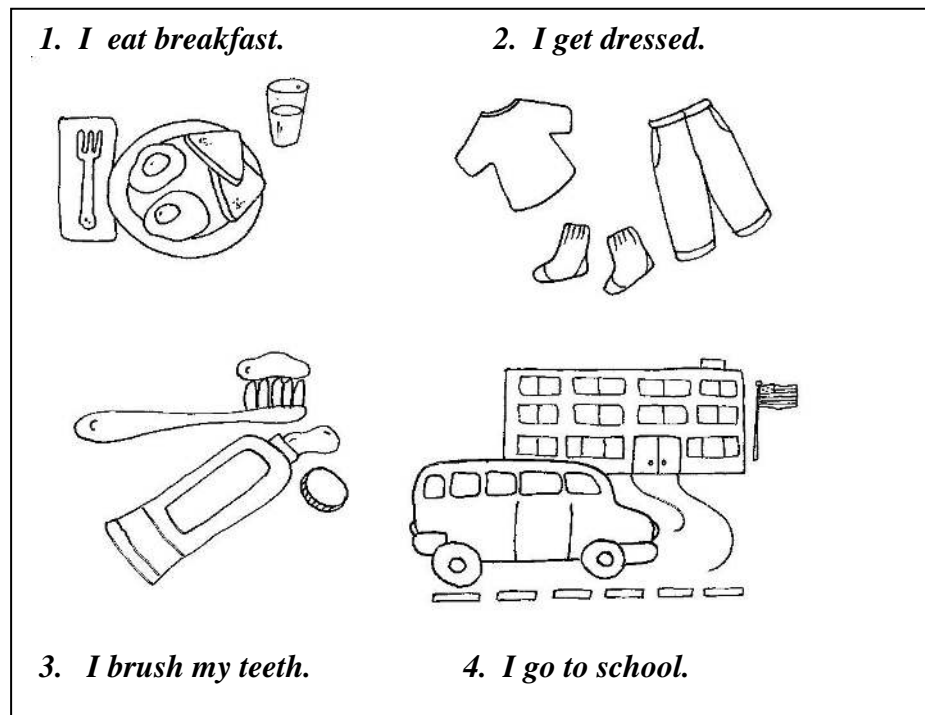
For example: “How do you make a peanut butter and jelly sandwich?” At first, the sentences may need to be modeled or written out in full for the child:

- First, _____ (put two pieces of bread on the plate).*
Second, _____ (spread the jelly on one piece of bread).
Third, _____ (spread the peanut butter on the other piece of bread).
Last, _____ (put the pieces of bread together).

Children with hyperlexia may enjoy writing steps out and/or drawing pictures to accompany these steps.

Making schedules at home is also helpful when teaching sequencing skills. The child is asked “What will we do today?” At first, it is helpful to have photographs that correlate with daily events with Velcro backs. The child can then practice placing these in order on a large schedule that has written cues on it. For example:

- First, I eat breakfast.*
Next, I get dressed.
Then, I brush my teeth.
Last, I go to school.



15. Attributes and descriptors.

In order to teach the child to use appropriate and varied words to describe objects and situations, we play a variety of games. One example is called *Secret Square* grab bag.

What we do:

- ▶ Put tiles with pictures of objects on them in a bag and shake it up. Have the child choose a tile at random. Then have the child list three things describing the picture. For example, if the child picks a picture of an apple, he or she may list:

1. *red*
2. *fruit*
3. *crunchy.*

- ▶ Write the child's words into a sentence for him or her:

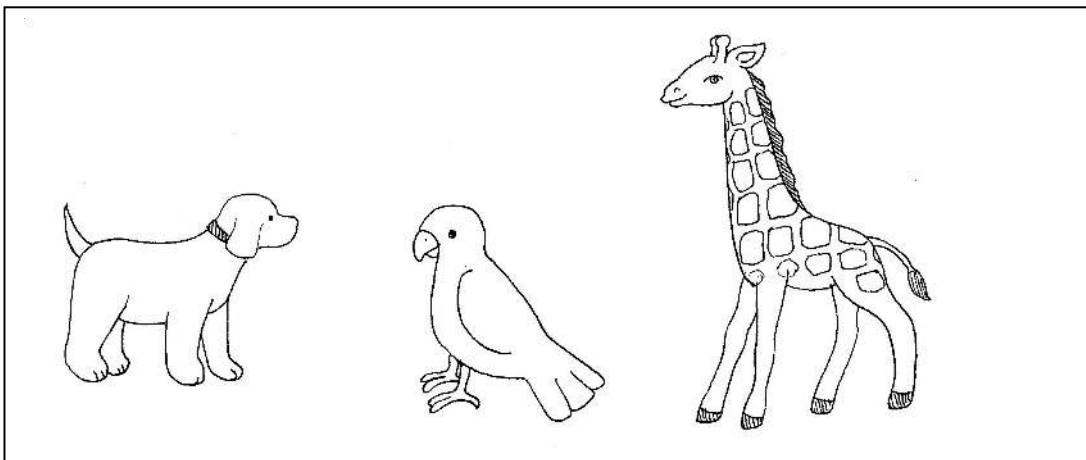
An apple is a red, crunchy fruit.

The child will then be able to use this language to describe things on his or her own over time.

- ▶ When describing an animal, for example, the therapist can provide a written list of features from which the child can choose to help describe it. When describing a dog, the therapist could provide the following list:

- tail*
- 4 legs*
- long neck*
- mane*
- feathers*

and the child could circle or cross out the descriptors according to the object.



- ▶ Describing objects is a skill that can be practiced using a set of color pictures or actual objects placed in a box or bag. Take turns with the child pulling objects or pictures out of the bag or box while the other person does not look. Written clues should be marked on a card to help script clues for the child. For example:

1. *What color is it? (use markers to make color samples)*
It's _____.
2. *Where do you find it?*
You find it _____ (i.e., inside, outside, in a _____, on a _____, next to _____, at the _____).
3. *What does it feel like?*
It feels _____ (i.e., hard, soft, furry, rough, sticky, bumpy).
4. *What category is it?*
It's a _____ (i.e., food, vehicle, clothing, animal, toy, furniture).
5. *What do you use it for?*
You use it to _____.

- ▶ If the child has difficulty using a mixed set of pictures or objects, consider focusing on only one category (e.g., animals). If the child has difficulty guessing when given clues, another method to try is to place pictures in front of the child and play “I Spy”. For example:

I spy with my little eye _____.

1. *What color is it?*
... something _____
2. *Does it have a pattern on it?*
... something with _____ (i.e., stripes, spots)
3. *How many legs does it have?*
...something with _____ legs (i.e., two, four) or without legs
4. *Where do you find it?*
...something you see _____ (in a tree, in the jungle, in the sky, in the water, in a cave)
5. *What kind of sound does it make?*
...something that makes a sound like _____
6. *Does it have a tail?*
...something that has a tail
...something that doesn't have a tail`
7. *Does it have horns?*
...something that has a horn (or horns)
...something that doesn't have a horn.

Note: As the child gains proficiency, written cues should be phased out. This skill can also be practiced by choosing one item or picture and writing out sentences to describe it.

- Using real objects is another option. For instance, use a pair of scissors and write the following sentences (with key words underlined):
 1. *My scissors feel hard.*
 2. *My scissors feel sharp at the tip.*
 3. *My scissors are used to cut things.*
 4. *My scissors are blue and silver.*

- Children with hyperlexia have trouble being flexible with their language, so it is important to try to use several variations of the same object, if possible (i.e., two different looking pairs of scissors). Also, having the child practice describing an actual object and a picture of an object will help with flexibility when describing items.

16. Explaining and describing.

What we do:

- Simple drawing tasks are wonderful for explaining and describing skills. A physical barrier placed between the therapist and the child places additional incentive for the child to accurately explain how to do something. The goal of seeing if the pictures on both sides of the barrier match can be highly motivating. If the child has difficulty with this task, the barrier can be eliminated, initially. Written cues should be provided.
 1. *What shape?*
Draw a _____ (circle, oval, square, rectangle, triangle, heart)
 2. *What color?*
Make it _____ (black, purple, orange, yellow, green, red)
 3. *Where does it go?*
Put it _____ (on top of _____, under _____, above _____, next to _____, at the top _____, in the middle _____, at the bottom _____).

- Explaining is also a skill that can be developed by having the child explain how to play simple games. First, familiarize the child with the game by actually playing it. Write out rules as you explain the game to the child. Then go back and ask the child, “How do you play this game?” The steps can be written out completely and numbered at first. Then, just cues can be provided:

First _____, next _____, then _____, last _____.

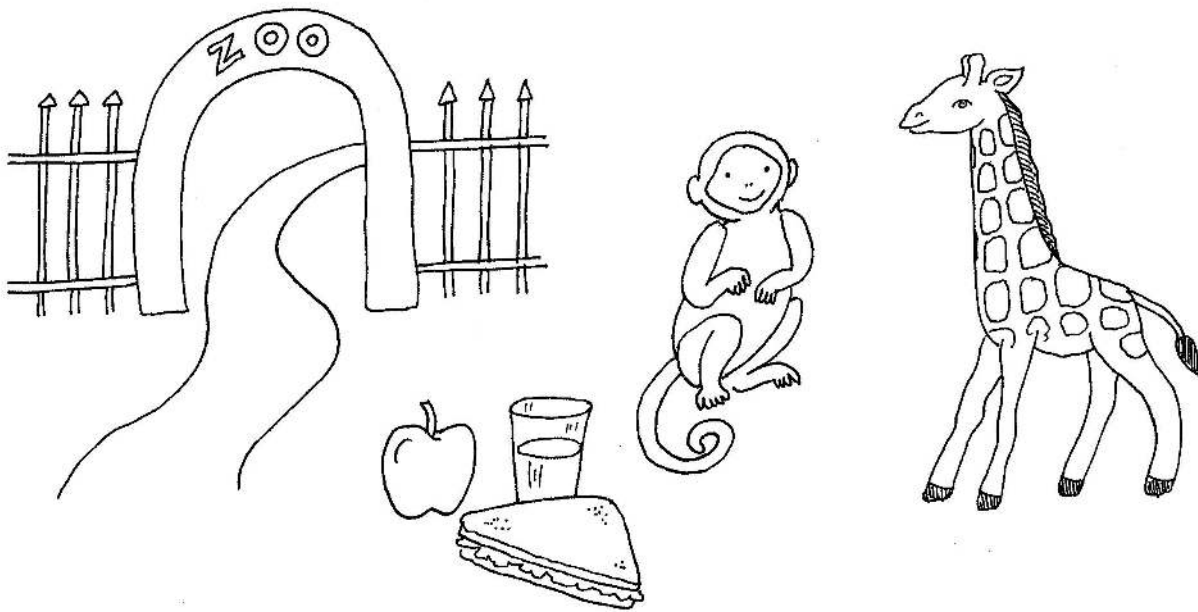
- Finally, see if the child can verbally explain the steps of the game. If necessary, pictures can be drawn to represent each step of the game or actual pictures can be taken.

17. Narratives and dialogues.

Three-sequence stories are helpful in teaching narratives.

What we do:

- ▶ Put the story events in order, with the written prompts above the events (first, next, last). Also, provide written prompts to address grammar issues of the story.



- ▶ After this is mastered, a five-sentence story form (topic, three details and closing sentence) can be used. For example:

I went to the zoo. I saw monkeys. I saw giraffes. I ate lunch. It was fun.

- ▶ A written prompt for dialogues is an effective tool. A statement, a question and a comment about the answer is a good beginning format. Show the written prompt to the child while looking at objects around the house or in a book. For example:

1. *I like _____.* (statement) *Do you?* (question)
2. *Oh, cool!* (comment)

18. Grammar skills.

PRONOUNS. Learning pronouns is difficult for many children with hyperlexia. Teaching pronouns should be supplemented by written cues. Pronouns can be taught using picture cards, books, computer games and cards.

What we do:

- **I/You.** When teaching *I* and *You*, the words can be written on Post-It™ notes. The note with the word *I* can be placed in front of or on the child, while the adult wears the *You* note. Whenever the child misuses the pronouns, cue the child by pointing to the appropriate card. If the child is referring to himself or herself in the third person (i.e., *Michael* instead of *I*), it is sometimes helpful to add another written cue. On the note with the word *I*, the child's name can be written, with an X through it. Instruct the child to only say "*I*."
- **She/He.** When teaching *he* and *she*, it is important that the child first be able to differentiate between boys/men and girls/women. The words *girl* and *boy* can be written on cards and placed in front of the child. The phrase *That's a _____* can be written on a card in the middle. Then, one at a time, cards or photos can be presented to the child, who can practice putting them onto the correct pile and saying, "*That's a girl*" or "*That's a boy*." When this has been mastered, the task can be expanded by writing the words *she* and *girl* on the same card and the words *he* and *boy* on another card. Then the phrase in the middle can be written *_____ is a _____*. The child can sort cards and practice saying, "*She is a girl*" and "*He is a boy*."

This task can be further expanded to sentences about what different people are doing (i.e., "*She is walking*," "*He is walking*.") When reading books, the child should be asked questions such as "*What did SHE do?*" (placing the emphasis on the word *SHE*). As the question is asked, point to the word *SHE* written on a card. Point to the word again to cue the child's answer. After much practice, perform the same task without the written cues. If the child continues to confuse pronouns, go back to using written cues. Written cues with the words *she* and *he* should be used with a variety of activities, including computer programs, dolls, actual photographs and games to promote generalization.

PRESENT PROGRESSIVE VERBS. When teaching present progressive verbs, write out and attach them to cards, pictures, book pages and so on as they apply. For instance, "*walking*," "*laughing*," "*writing*," "*running*," can be written out for the child. Then, the child should be asked, "*What is _____ doing?*" (this is also written on a card in front of adult). The child is then cued to the written prompt "*_____ is _____ing*." Writing *-ing* endings in a different color provides the child with an additional visual cue, if needed.

the
all

19. Using social rules.

The child with hyperlexia needs to be taught accepted social rules. Because the child is often unaware of subtle social cues from others, we teach social rules using lists of proper or accepted behavior for various situations.

What we do:

- ▶ **Teaching social rules for group settings.** The following lists are examples of the written cues provided to the child during group times. The lists are reviewed prior to the child entering the social group setting, and again, as needed, during the group time. Here is an example of general social rules that the child can apply to many settings:

Rules for Talking with Friends

1. *When you want to say something to someone, say their name first to get their attention.*
2. *Always look at the person you are talking to.*
3. *Face the person you are talking to or turn your body toward them.*
4. *Always listen to what the other person is saying.*

- ▶ Here is an example of more specific social rules, limited to a particular group setting (in this case, the group is working on conversational skills):

Mac's Rules for Group

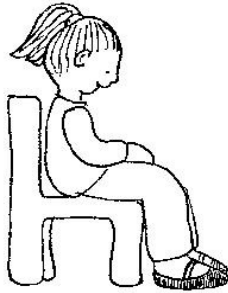
1. *Eye contact.*
2. *Say 2 sentences, then let the other person talk.*
3. *Ask a question, then wait for an answer.*
4. *Stay on topic.*

- ▶ And here is another (shorter) example of group social rules:

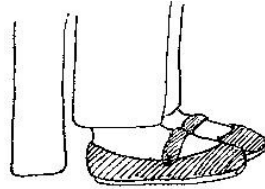
Patrick's Rules for Group

1. *Look at the person when you talk.*
2. *Ask questions about the other person.*
(“Do you _____?”
“Have you ever _____?”)

- ▶ These rules for social behavior can be geared specifically for the situation and/or the child, as necessary. The child who is reading and functioning at a lower level will need a simpler list of rules, possibly using picture cues along with the written ones. Here is an example of such a list of social rules:



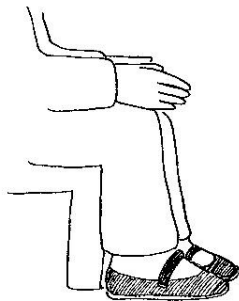
Sit on a chair.



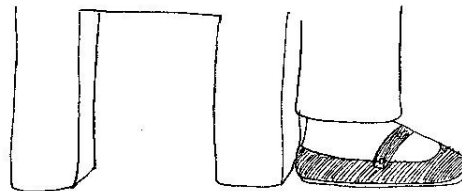
Keep your feet on the floor.



No screaming.



Keep your hands to yourself.



Keep chair legs on the floor.

You may provide stars or stickers next to each rule as it is completed.

20. Time concepts.

- ▶ Scripts and prompts are useful tools to help the child remember and formulate things he or she did today, yesterday and tomorrow, and to practice telling someone about them. A calendar with large squares to write things in or an erasable calendar makes a great visual aid, paired with written prompts such as:

Yesterday, _____.

Today, _____.

Tomorrow, _____.

IV. MANAGING CHALLENGING BEHAVIORS

One of the most difficult aspects of parenting or teaching a child with hyperlexia is dealing with behavior issues. While each child presents unique behavioral challenges, we have gathered some suggestions and strategies that have been helpful to us as clinicians and to the parents of the children we treat. As a matter of fact, a number of these strategies originated with parents of children with hyperlexia.

Early intervention and teaching self-regulation skills cannot be stressed enough. In fact, we have seen children with hyperlexia placed in behavior disorder classes because of their trouble with self-regulation. This is most definitely NOT the place for these children. If we can teach them to regulate and monitor their behavior at a young age, we can avoid situations like this.

How Does Your Engine Run?

Difficult behaviors are often a result of difficulty with sensory modulation or the ability to flexibly attend to relevant stimuli in the environment, and “tune out” the unimportant sensory information.

Some children with hyperlexia are so busy seeking out specific types of sensory inputs that they cannot attend to the relevant information at hand and they become a distraction to others around them. Other children have such low energy levels that they find it difficult to focus on what is happening around them.

Occupational therapists often use a “sensory diet” to help children get to and maintain an optimal arousal level. A sensory diet uses activities that have a specific impact on the nervous system as a means of adjusting the child’s arousal level in order to decrease inattentive and distractible behaviors.

Older children who are starting to practice self-regulation can play an active part in deciding which activities work best in different situations.

Two occupational therapists have developed a program that helps children identify when they are not in the optimal arousal level, and then decide what to do about it. ***“How Does Your Engine Run?” The Alert Program for Self-Regulation***, developed by Mary Sue Williams, OTR and Sherry Shellenberger, OTR uses the analogy of a car engine going too high, too low or just right as a means of developing a way for parents, professionals and children to talk about and work on self-regulation problems. The program is designed for children 8-12 years old, but it can be altered to be used with older and younger children. (For example, the program was altered for younger children using a Winnie the Pooh analogy, with Eeyore representing too low, Pooh being just right and Tigger representing too high.)

Following directions

For the child with hyperlexia, following directions is a particularly tough challenge, especially when it comes to spoken directions, because of the child's language comprehension difficulties.

- **Parent's challenge:** *My preschool daughter was having trouble putting her coat away in her cubby upon arriving at school.*

Solution: *We gave her a piece of paper that said CUBBY. The teachers showed it to her when she arrived at school. Then she seemed to understand where her coat was supposed to go, and she followed through with putting her coat away like the other children.*

Following directions is a skill that can be practiced in conjunction with gross motor activities. For example, pictures of body parts can be used. Post-It™ notes can be placed on the pictures with commands, noting that at first it is best to use only one verb so as not to confuse the child (i.e., Touch your _____ [nose, eyes, hair, ears, hand, etc.]). These commands should be practiced one at a time. The task can then be broadened to include more verb forms (i.e., Wiggle your fingers. Rub your nose. Pull your ears. Wave your hand). Again, all of these commands should be written on Post-It™ notes attached to the appropriate picture and presented one at a time to the child.

Presenting the child with two cards at a time can broaden the task further. A paper should be put in front of the child. A line can be drawn down the middle, with "First _____" written on the left half of the paper, and "Then _____" written on the right half of the paper. A card with a written command is placed on the left half of the paper, and a different card is placed on the right half of the paper. The child is then prompted to complete the two-step command. Eventually, the task should be attempted without any written cues. Written cues should be re-introduced when the child seems ready to practice three-step commands.

Dealing with perseverative behaviors

Often, children with hyperlexia demonstrate some perseverative behaviors that can, at times, interfere with the child's attention and learning. Writing rules about certain behaviors can help give the child some guidelines on dealing with these behaviors and moving on.

- ▶ **Parent's challenge:** *The number of bathrooms in public places overwhelmed my son. He wanted to visit each one and had tantrums when he couldn't!*

Solution: *Before we went to a public place, I laid out specific ground rules for bathroom use. "We are going to the airport. You can use the men's room two times with Daddy."*

Children with hyperlexia can often get stuck on saying or doing something over and over. For instance, if a child is continually rewinding a video at home and watching a particular part of the video repeatedly, write a rule (Only rewind 2 times.) and hang it next to the video player. As the child is rewinding, count out "1" and "2" and point to the written cue. If the child still wants to rewind more, there should be a consequence to the perseverative behavior, such as turning the video off. Positive reinforcement should be provided for adhering to the rule (i.e., stars, letters, stickers), as well as verbal praise.

Sometimes, children with hyperlexia will get stuck on saying a word or phrase repeatedly. When this occurs, write the repeated phrase on a piece of paper and put an X through it. If the child continues to say the phrase, give a visual cue by pointing to the paper, and say "We're all done talking about _____." Then turn the paper over. Depending upon the phrase, the child may need to be provided with a written model of a more appropriate phrase to replace the perseverative one with. For example, if the child is always saying "Susan is happy, John is happy," to others and labeling their emotions, the child could be taught instead to ask "Are you happy, John?" as a more acceptable form of communication.

Participation in activities

Simple activities, such as playing games or working in small groups, are some of the most difficult situations for the child with hyperlexia. Because of the social nature of these activities, participation techniques can be taught and scripted, so the situation becomes familiar and less stressful for the child.

If a child is really resistant to a particular activity, it is often helpful to attach a concrete limit to the amount of time the child will be required to participate in the activity (so the child knows there is a specific end in sight). For instance, if the child is resisting playing a game, write the numbers 1, 2 and 3 on a piece of paper. Then write "Take 3 turns and then time to play computer" (or whatever motivates the child). As the child takes a turn, cross off the number 3, then the number 2, etc. If the child still refuses to actively participate, first try saying "no computer" or pretend you are about to cross computer off the schedule. Remind the child, "First game, then computer." If this does not work or if the child becomes too upset, the adult should take the three

game turns (modeling the expected behavior and not requiring active participation from the child) and cross off the numbers as the turns are taken.

Sometimes, the child with hyperlexia just needs to be exposed to the activity one time before becoming a willing participant. It is also helpful to begin the activity yourself so the child can see how it is done before joining in. Script language such as “How do you play?” and “This looks hard. Can you help me?”

Safety Issues

Safety in and around a child with hyperlexia’s environment can propose a challenge for parents. The difficulty in understanding what is safe and how to be safe can stem from different sources. For example, the child could be under-responsive to environmental cues (such as the noise of a car coming), they may be hyper-responsive to sensory input (they refuse to hold hands because they dislike being touched), they may be overly focused on the end result of their action or they may over-generalize what is permissive at certain times and dangerous at others.

An example that combines these issues in terms of safety while out of the home: A 4-year-old boy runs out into the busy parking lot of his favorite restaurant in order to get to the door before anyone else in the family, disregarding all traffic. He refuses to hold anyone’s hand, due to tactile sensitivity, and throws a tantrum if anyone tries to impose any physical restriction on his movement. If his mother asks him why he ran across the parking lot he replies that grandma lets him run in her street (she lives in a cul-de-sac with one other family and very few cars are present during the time the boy is outside).

In this case, writing the rules in simple language will help to increase the child’s understanding of what is safe. (Use “I” if the child has a grasp of pronouns; if he or she talks in third person, use the child’s name.)

- *If there are cars in the street, I can get hurt.*
- *I should not go in the street by myself.*
- *I need to hold onto mom or dad when I cross the street.*

Note: If a child has tactile issues and will not touch the car or hold someone’s hand, give the option of holding a corner of someone’s coat or shirt (most children will accept this as an alternative).

It is important to provide positive reinforcement for following the rules to increase the child’s interest in practicing the safety rules until they achieve mastery.

Safety awareness in the home poses a different challenge. These types of situations generally focus on the delineation of what is safe at one time and not safe at other times. For example, several parents have reported that their child has left the house unattended in order to go play in the yard or go to a neighbor's house as early as 4 or 5 in the morning wearing nothing but pajamas in the middle of winter.

- Other safety issues to consider are:
 - Access to plugs and outlets
 - Access to knives
 - Access to the stove
 - Access to chemicals or cleaning fluids
 - Access to foods that may cause an allergic reaction
 - Access to power tools
 - Access to unstable furniture that can be used for climbing
 - Access to doors and windows

- Some strategies that can improve a child with hyperlexia's ability to adapt to environmental safety rules are:

- Hang signs on doors that lead outside that have simple rules:

Do not open door without mom or dad

or

Go find mom to go outside

- Put a picture of a stop sign with the word stop on anything that is completely off limits (cleaning closet, storage room with tools)

Night waking can be a particular challenge for parents. If a child is a night waker, he or she could leave the safety of his or her bedroom and may attempt unsafe activities.

- Place a visible sign inside the child's room

I must stay in my room until 6 a.m. (if the child has time concepts)

or

I must stay in my room until the alarm clock sounds

- If the child is toilet trained hang a sign in the child's room

I can only leave my room (before 6 a.m. or before the alarm) to go the bathroom.

- Hang a sign in the bathroom

1. *Use the toilet*
2. *Go back to my room*

- Other suggestions for increasing safety are:
 - Write a short story with the child as the main character and read the “book” to the child several times to instill the concepts.
 - Laminate and place cards on an “O” ring (that can be purchased at an office supply store) that you carry with you for the most important rules (such as not running in the street, wearing a seatbelt in the car, etc.).

When the child has mastered the rule itself, more concepts can be added to increase the child’s understanding of safety. Refer back to the section on “*Wh*” questions to provide general teaching strategies for understanding “why” we follow rules.

Why do you wait to cross the street?

So I don’t get hit by a car and get hurt.

Remember that most safety situations are based on verbal cues, which is a great challenge for these kids – they want to be safe, they just do not understand how.

Transitions

Transitions between activities are often difficult for children with hyperlexia, in part due to their comprehension problems, and in part due to their sometimes-rigid behaviors.

Transitions are usually smoother when the child with hyperlexia has a written schedule in front of him, as well as some sort of visual indicator that the activity is ending. A written schedule should be provided at the beginning of a therapy session, school day or time at home. For instance, a schedule for time at home might read as follows:

1. *Eat breakfast.*
2. *Get dressed.*
3. *Go to school.*
4. *Eat lunch.*
5. *Go to park.*
6. *Eat dinner.*
7. *Playtime.*
8. *Go to bed.*

While participating in each of these activities (i.e., playing at the park), the child should be given time warnings, such as “5 more minutes...4 more...etc.”. If the child does not have a good grasp of time, or still gets upset when it is time to go, an additional cue may be added, such as a timer. Again, if the child is not satisfied with only an auditory cue from the timer, show the child the timer so he or she receives an additional visual cue. In this way, the child receives both a visual and two auditory cues (beeping of the timer and verbal warnings).

In a therapy session or during sit-down activities, a child may benefit by being given numbers to represent the number of minutes left in an activity. Even if an activity will be longer than five minutes, the numbers 1-5 can be cut out separately, laminated and attached to a Velcro strip. As the activity continues, take off one number at a time, starting with 5, and say “four more minutes,” etc. so the child can see the amount of time is getting smaller and smaller. The actual time spent on the activity may be shorter or longer than five minutes (if the child does not understand time concepts) but the cue “five minutes” can still be used.

New experiences

New experiences, like transitions, can be difficult because the child may be anxious about not knowing what will happen. Again, the child may have difficulty understanding the verbal explanations given about the experience. Written rules and stories often work well in these situations.

An example is a book written by a family member for her brother with hyperlexia. The book detailed the behavior expected of the young man when he was in a wedding party. He was in some of the pictures taken at the wedding, so he needed to follow these rules:

Rules for Taking Pictures:

1. *Stand still*
2. *Always look at the camera*
3. *Smile when the photographer tells you to*

The rules for wearing tuxes are:

1. *Stand up straight*
2. *Keep your tie on*
3. *Don't scratch*
4. *Don't eat messy foods*
5. *Keep your shirt tucked in*



A very creative parent had a wonderful idea to get her son to try new foods. She used his obsession with Star Wars to generate a menu that included items such as Tatooine Pasta and Nabu Bologna Sandwich.

When Kids Say Exactly What They Think

Often, the child with hyperlexia speaks out loud every thought that comes into his or her head; even things that are not socially acceptable or polite are spoken out loud, without the child monitoring these thoughts. It is difficult for the child to understand that there are some thoughts that are better kept to themselves.

One strategy to teach this concept is using comic book thought bubbles. Draw pictures of a situation where people are interacting, and an incident happens where one person could be angry, hurt or scared. Provide specific talking bubbles in which the child can project what the characters might be thinking or feeling.

The example here was a first attempt developed by two children who participate in a social motor group at our Center. The children had been having a difficult time deciding what to do, causing many arguments. Each child assumed the role of one of the characters. The therapist provided the pictures with a short narrative underneath to explain the situation. Each child had a turn to “talk” or “think” in the first two frames. Then they had the opportunity to “talk” and “think” in the later frames. By separating the two processes of talking and thinking on paper, the children were better able to keep the undesirable names and thoughts to themselves. Therefore, they increased their ability to interact more appropriately, even when something upsetting happened.





We hope these ideas will be useful as you work with a child with hyperlexia.

We also hope that you will be inspired to create new activities and find your own unique solutions.

We would love to hear about your “Therapy That Works.”

E-mail us at info@csld.org.

V. RESOURCES

COMPUTER ACTIVITIES

Most of the computer software we had suggested in the past does not run on modern computers. We keep some old iMac computers around so we can use our favorites. Although there are many text-to-speech programs on various devices, the old *Simple Text* program that had been loaded into the old Mac computers still is a favorite. Kids can type words and the computer will say or sing it using many different voices. It is an all time favorite of many of the children with hyperlexia. CD-Rom disks such as *Thinkin' Things* and *Zoombinis Logical Journey* are favorites of elementary school-age children. They too will only run on old computers, and have not yet been developed for newer devices.

Popular computer based activities can be found at these websites:

PBS Kids www.pbskids.org

Nick Jr. www.nickjr.com

Starfall www.starfall.com

Apps:

There are literally thousands of apps that can be used and each child has his or her favorites. There is an *Autism* app that lists recommendations for apps.

Here are some that we use regularly:

i write words

First Words Deluxe

Model Me Kids Going Places

Tap to Talk

Wonderful Interactive Storybooks (Old Living Books programs in the app format)

Story Builder

Language Builder

Conversation Builder

Sentence Builder

Preposition Builder

Mercer Mayer stories

Story Patch

Splingo

SuperDuper apps

Little Reader

Little Speller

Who Am I? (for animal lovers)

Stack the States and Stack the Countries (for geography lovers)

Hangman

Scribblenauts

Montessori Crosswords

Dora's Rhyming Word Adventure

Thomas & Friends
Super Why
Dino Math
Math Bingo

Therapy Materials:

Most of the therapy materials we use are modified from general speech-language materials. These publishers produce wh-question cards, language games, spps and CD-Roms that can be adapted for children with hyperlexia. Some of our favorite sources for this material include:

LinguiSystems www.linguisystems.com
Super Duper Publications www.superduperinc.com
Abilitations www.abilitations.com
Pro-Ed www.proedinc.com
Mayer-Johnson www.mayer-johnson.com
Pearson www.PsychCorp.com
Academic Communication Associates, Inc. www.acawebsite.com

LinguiSystems has published a *Reading Comprehension Kit for Hyperlexia and Autism (Level 2)*, (2010) for elementary school age children by Phyllis Kupperman.

A free continuing education course for speech/language pathologists *Children with Hyperlexia* by Phyllis Kupperman is also available through LinguiSystems.

Teach Me Language. (1996). Sabrina Freeman, Ph.D. and Lorelei Dake, B.A., SKF Books, Langley, BC, Canada.

Games:

These games are perennial favorites at the Center for Speech and Language Disorders. They can be adapted by teachers and parents to be used as learning tools and for developing social skills. At first, introduce games in a supportive, non-competitive way. Later children can learn about winning and losing. We write scripts for the children to say while they are playing these games. Games offer structure and predictability while practicing basic social conversation.

For younger children:

Boggle Jr. (*Parker Brothers*)
Cariboo (*Cranium*)
Crazy Eights (*School Zone Publishing*)
Don't Bug Me (*Great American Puzzle Factory*)
Go Fish
Kids on Stage Charades (*University Games*)
Secret Square (*University Games*)
Zingo! (*Thinkfun*)

For elementary school-age children:

Alien Hotshots (*Gamewright*)

Apples to Apples Kids 7+ (*Mattel*)

Blink (*Out of the Box*)

Guess Who (*Milton-Bradley*)

My Word! Junior (*Out of the Box*)

Scrambled States of America Game (*Gamewright*)

Smart Mouth (*Binary Arts*)

Stare! Junior (*Game Development Group Inc.*)

Books:

Reading Too Soon, (1993). Susan Martins Miller, Center for Speech and Language Disorders

When Babies Read (2005). Audra Jensen, Jessica Kingsley Publishers

The Anti-Romantic Child (2011). Priscilla Gilman, Harper Collins Publishers

The Source for Intervention in Autism Spectrum Disorders (2008). Phyllis Kupperman, LinguSystems.

Blogs and Online resources:

Darold A. Treffert, *Hyperlexia: Reading Precociousness or Savant Skill*
www.wisconsinmedicalsociety.org/savant_syndrome/savant_articles/hyperlexia

Jeff Katz, *Mission of Complex: Our Journey through Hyperlexia*
<https://missionofcomplex.wordpress.com>

Priscilla Gilman www.priscillagilman.com

Hyperlexia Parents Network health.groups.yahoo.com/groups/H_P_N/

Facebook Hyperlexia group

Center for Speech and Language Disorders www.csld.org

Oasis @ MAAP www.asperger.org

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Staff Biographies

Lauren Adkins, M.S., OTR/L

Lauren Adkins received her Masters of Science in Occupational Therapy from Rush University. Ms. Adkins has a variety of experience working with children and adolescents who have special needs, including those diagnosed with Asperger's Syndrome, autism, learning disabilities, ADD (ADHD), blindness and hearing loss. She has served as a classroom aide, occupational therapy aide, and substitute teacher in a private school for children with severe learning disabilities. Ms. Adkins has expertise with educational modifications, handwriting and sensory integration and its impact on school functioning. Ms. Adkins is currently employed as an occupational therapist at CSLD.

In addition to working with school age children, Ms. Adkins served as a special needs student liaison at Mississippi State University. Her role as liaison was to aid university athletes either with existing diagnoses or new diagnoses who were new to the university environment in order to become familiar with and utilize special needs services within the university. Ms. Adkins has extensive experience collaborating with other professionals in various fields to fulfill the needs of individuals with special needs.

In terms of program development for the center, Ms. Adkins participated on the team that developed a pilot summer program called "Power Play." This summer program combines speech and occupational therapy in order to give children with play and social interaction difficulties an opportunity to learn the skills needed for better participation in a classroom or camp environment. This program is designed to resemble a camp or class structure rather than a social therapy group.

Susan Anish, M.S., CCC-SLP

Susan Anish received her Master of Science degree in Speech-Language Pathology from Illinois State University in 1998 and received her Bachelor of Arts degree in Psychology from University of Illinois at Chicago in December of 1993. She has been employed by the Center for Speech and Language Disorders in Elmhurst, Illinois since June of 1999 providing speech and language screenings, evaluations, individual and social group treatments and co-treatment with an occupational therapist. Ms. Anish has had experience in working with children and adolescents with pervasive developmental disorder, autism, hyperlexia, nonverbal learning disorders, Asperger's syndrome, Down syndrome, seizure disorder, fluency issues, apraxia/oral motor disorders and language delays.

Ms. Anish also serves as a clinical supervisor for graduate students. Ms. Anish has also presented to parent and professional groups, as well as such conferences as the American Speech-Language-Hearing Association, the Illinois Speech-Language-Hearing Association and the Center for Speech and Language Disorders.

Denise Deditz, M.S., CCC-SLP

Denise Deditz received her Master's Degree in Speech and Language Pathology from Illinois State University in 1998. Since that time, she has been employed by the Center for Speech and Language Disorders in Elmhurst, Illinois. Her experience at the Center includes providing speech and language screening, evaluation, early intervention, advocacy and consultation services for both children and adults with a variety of speech and language disorders. She has a special interest in working with children and adolescents in the areas of nonverbal learning disabilities, early intervention, apraxia, pragmatic language disorder, and pervasive developmental disorders including autism, Asperger's syndrome and hyperlexia.

Ms. Deditz also serves as a clinical supervisor for graduate students and coordinator for the Fast ForWord program. She has extensive experience in working with the Fast ForWord program in home, school and clinical settings. She has designed and implemented a semi-longitudinal study of the Fast ForWord program and its use with children diagnosed along the pervasive developmental disorder spectrum.

Ms. Deditz has presented at parent support groups, as well as regional and national conferences including the American Speech-Language-Hearing Association, the Illinois Speech-Language-Hearing Association, the Proviso

Area for Exceptional Children and the Center for Speech and Language Disorders. She has also developed presentations for the Autism Society of America.

Phyllis Kupperman, M.A., CCC-SLP, *Founder*

Phyllis Kupperman is a founder of the Center for Speech and Language Disorders, which was established in 1979. In addition to her work as a speech-language pathologist at the Center, Ms. Kupperman has presented workshops and seminars to numerous professional organizations, school districts and universities, including state and national conferences for the Autism Society of America and national and regional conferences for the American and Canadian Speech-Language-Hearing Associations. She has coordinated sixteen conferences on the Language Disordered Child, held annually in Oakbrook Terrace, Illinois.

Ms. Kupperman has published articles in journals and newsletters and has produced audio and videotapes for distribution through the Center for Speech and Language Disorders, addressing such topics as autism, Asperger's syndrome, hyperlexia, social communication, articulation and phonological disorders and pervasive developmental disorders.

In 1964, she received her Master's Degree in Speech and Language Pathology from the University of Illinois at Urbana-Champaign. Ms. Kupperman has been a faculty member at Elmhurst College and University of Illinois at Urbana-Champaign, and has worked in public and private schools. She provides speech and language therapy to many children at the Center for Speech and Language Disorders and has developed training and consultation programs for out of state therapists and/or families. She continues to be an outspoken advocate for the development of effective treatments for children with a variety of speech and language disorders and partners with children and their parents to increase awareness and appropriate intervention.

Anne Layendecker, M.A., CCC-SLP

Anne Layendecker received her Bachelor of Science Degree in Education from Eastern Illinois University in 1980. She taught in the regular education primary classroom in downstate Illinois and British Columbia, Canada for nine years. Anne received her Master's Degree in Speech and Language Pathology from the University of Illinois at Champaign-Urbana in 1991. She began her work as a Speech-Language Pathologist in the school setting with the A.E.R.O. Special Education Cooperative, working with children with a variety of diagnoses and moderate to severe speech and language impairments.

In June 1993, Anne began clinic-based work with the Adult & Child Rehabilitation Center of McHenry County. While working with the Rehabilitation Center, she acquired experience in hospital, school and clinic, treating children and adults with a variety of speech and language impairments, including several children who were diagnosed along the autism spectrum, with hyperlexia and moderate to severe seizure disorders. She began working with CSLD in September of 1997. In addition to clinical work, Anne has presented for regional and state conferences, as well as for school and nursing home in-service programs.

Misti Pepler, M.S. OTR/L

Misti Pepler received her Master of Science degree from Rush University in 1999. Her research thesis was entitled "A Descriptive Study of Play Behaviors in Pre-School Aged Children Whose Mothers Have Symptomatic HIV." She has experience providing OT in the schools as well as in the clinic setting. She uses sensory integration theory and techniques to work with children who have motor delays associated with Asperger's syndrome, pervasive development disorders, autism, hyperlexia, non-verbal learning disorders, ADD/ADHD, apraxia and oral motor disorders. Ms. Pepler has completed Western Psychological Services comprehensive training in Sensory Integration. She has developed social motor groups that utilize principles of sensory integration. Many of these groups include a parent education component. Additionally, she has worked with speech and language pathologists to develop multidisciplinary groups for children aged 2-6 in order to maximize language development through engagement in sensory motor activities.

Prior to receiving her degree in occupational therapy, Ms. Pepler taught special education for eight years with an emphasis on children who have moderate to severe mental handicaps. She received a Bachelor of Science degree from Illinois State University in 1988. She taught in several different environments with a variety of inclusive

experiences. She has experience with children at the primary age level (5-9) and immensely enjoys the junior high age level (10-14). As a teacher she worked closely with speech, occupational, and physical therapists to provide educational experiences in the school and community settings. She was a Special Olympics coach and greatly promotes extra-curricular activities of all types. Ms. Pepler is committed to parent and community education regarding child development and how environments can be structured or adapted to promote play and typical social/motor development.

Julie Petrie, M.S., CCC-SLP

Julie Petrie received her Master of Science degree in Speech-Language Pathology from Marquette University in December 1995 and her Bachelor of Science degree in Speech-Language Pathology in May 1992. Ms. Petrie has worked in public elementary schools in Milwaukee, Wisconsin and Berwyn, Illinois where she specialized in the delivery of speech and language services in traditional and fully inclusive settings. She has been employed by the Center for Speech and Language Disorders since June of 2002. Ms. Petrie has had experience in working with children with pervasive developmental disorder, autism, nonverbal learning disabilities, Asperger syndrome, Down's syndrome, attention deficit hyperactivity disorder, learning disabilities, behavioral disorders, fluency disorders, apraxia/oral motor disorders, phonological delays, and language delays.

Ms. Petrie has also been a guest lecturer and an instructor for a course on language disorders at Marquette University. She has presented research findings at the Wisconsin Speech-Language-Hearing Association state convention and through a poster session at the American Speech-Language-Hearing Association convention. Ms. Petrie was an invited speaker on home-based augmentative communication at the Wisconsin Technology Access Conference in Milwaukee, Wisconsin. She has a strong commitment to family-oriented therapy and educational issues.

Christina Rees, M.A., CCC-SLP

Christina Rees received her Masters Degree in Speech and Language Pathology from Northwestern University in 1996. Since then, she has been employed at CSLD. Her experience there includes screening, evaluating, and treating children and young adults with a variety of speech and language disorders, as well as serving as the Clinical Manager.

In her work at CSLD, Christina has a special interest in and experience working with children along the pervasive developmental disorders spectrum, including autism, Asperger's syndrome, hyperlexia, non-verbal learning disability, specific language impairment, developmental delay, apraxia/oral motor disorders and social/pragmatic disorders.

She has developed presentations about the development of social language skills with children along the pervasive developmental disorders spectrum, as well as the use of the Fast ForWord computer-training program with this population. She has spoken to parent support groups, and at regional and national conferences including the Illinois Speech-Language Hearing Association and Autism Society of America's annual conference.

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Terea Yurko received her Master's degree in Speech-Language Pathology from the University of Iowa in 2001 and her Bachelor's degree from the University of Illinois in Urbana-Champaign in 1998.

She joined CSLD in 2001. She has experience at a healthcare facility that specialized in the diagnosis and treatment of a variety of developmental delays, including pervasive developmental delays. She has co-authored an informational pamphlet on Asperger syndrome and has given a presentation on Asperger syndrome to the faculty at the University of Iowa.

ISBN: 0-9637921-1-3