



The "missing" Visual Cue Sequence

**Why literacy goals
are so difficult to reach
in the modern classroom...**

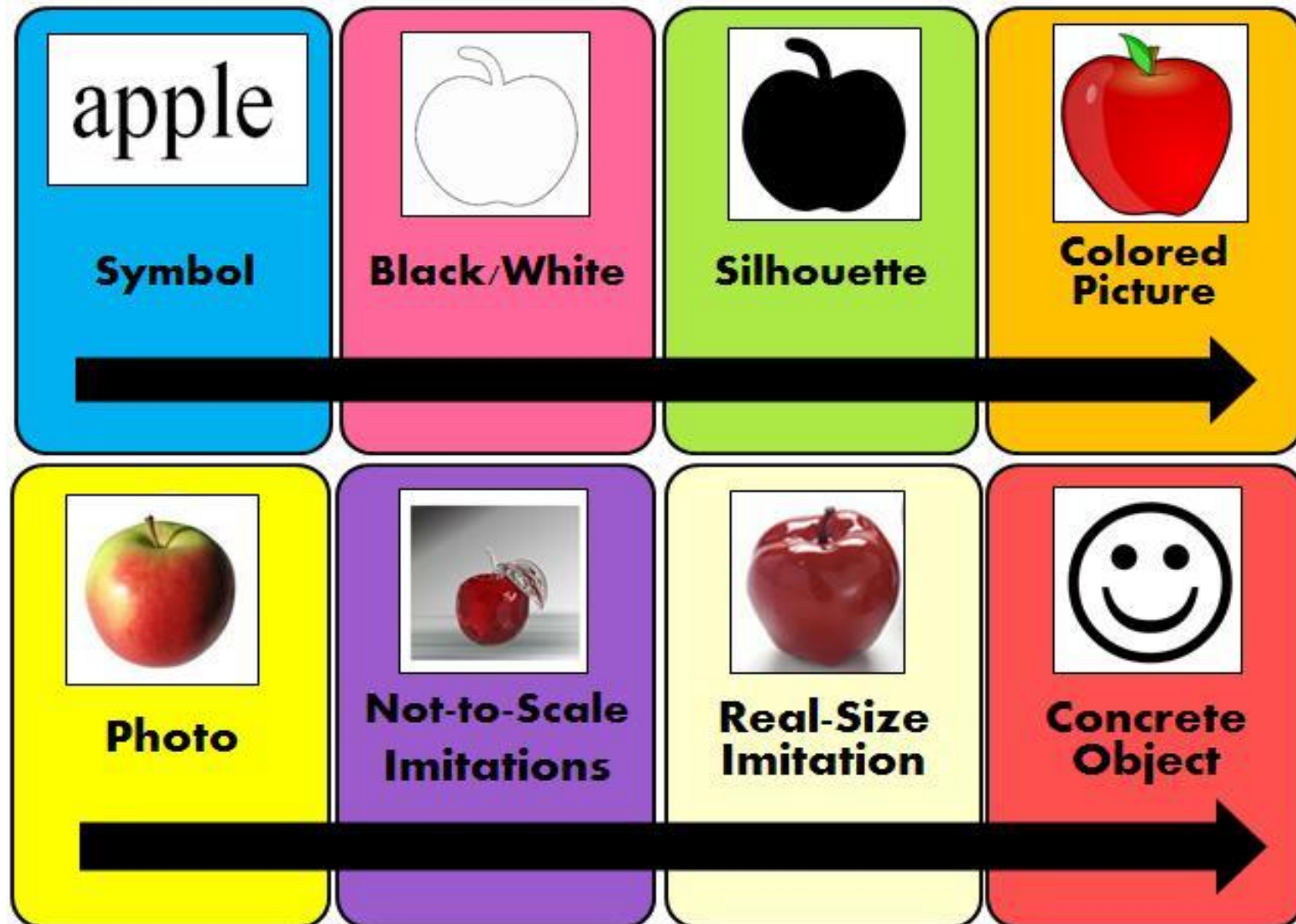
By Maria Sargent

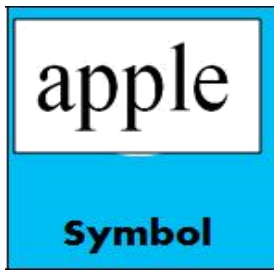
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What is the Visual Cue Sequence?

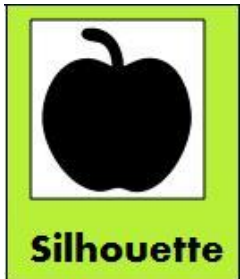
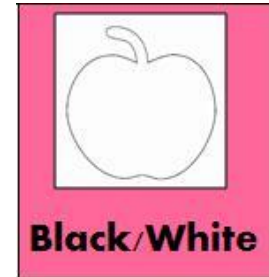
Most teachers are familiar with the concept of hands-on teaching and the use of visual and concrete items, but many do not realize that there is a neurological hierarchy to these different teaching materials. We will be exploring this concept and its impact on the typical early childhood classroom. Let's begin by first looking at the visual cue sequence:





As you can see, at the top of the sequence is the **symbol level**. This level includes “implied information”, misc. symbols like an addition sign, and of course, words. This is the literacy goal we hope to reach.

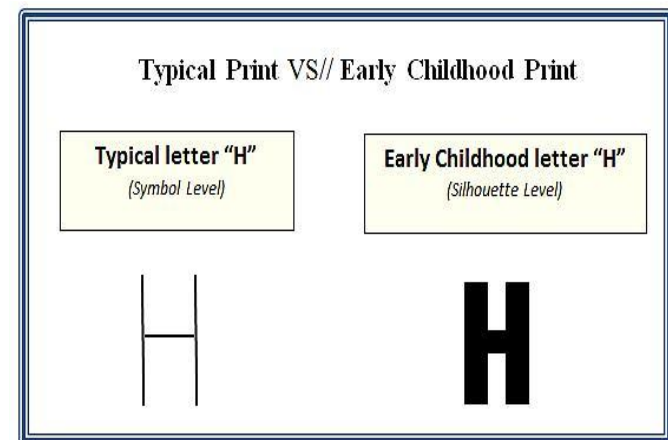
Moving down, we then go to the **black and white line level**. This level is found on any handout, worksheet page, coloring book and other printed materials. Many teachers worry about this level and totally avoid it in early childhood classrooms. While it should not be used prematurely, it is important to remember that this level IS part of the visual neurological sequence and may be appropriate for highly gifted children. So, the question is not whether it is appropriate or not appropriate in early childhood, it is *whether it is appropriate for the CHILD*. Just like it would be wrong to use these to teach when a child is not ready, so too, it is incorrect to withhold them when they **are** ready. Use your judgment and explore non-commercial forms of this level...

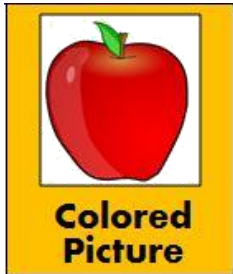


Another step down brings us to the unusual **silhouette level**. Silhouettes are not always seen in every skill or concept, but when they are present, they really do make a difference in how quickly the mind understands the visual information and how well it holds it in memory. This is why we see this level on streets signs.



We also see this level in early childhood materials. That big, blocky, filled-in letter form we see in books for young children is actually the silhouette level of the letter. Young children are able to see the differences between letters better when we use this level.





As we continue down the sequence, we come to the colored picture level, and then, the photo level. While we can see the differences between these two levels, most typically-developing children will move back and forth between them with ease. Some children, though, will struggle, so we should be aware of the difference and their place in the hierarchy. This can especially be true for children with special needs. For this group the difference between a photo of a cracker and a colored picture of a cracker can make all the difference in the world!



After photos, we then move into the three-dimensional items. The first item we encounter is the not-to-scale level. This level includes miniatures and items that are larger than real life (i.e. very large, pretend pennies). This level is followed by another 3-D level, this time to the correct scale. This real-size imitation level includes any object that is an *exact duplicate* of the real item.



And, of course, the final level, concrete object level, cannot be shown here. Using the theme of our example, it would include any real apple.



Many wonder whether these variations in visual cues really make that much of a difference. Well, to most children it might not matter too much, for others, the impact is great. It seems strange that such small differences would matter, but just look at how using the visual cue sequence changes this puzzle. The puzzle's frame has been cued at the *symbol level* (puzzle indents) → *black and white line* (lines highlighted with black marker) and → *silhouette level* (filled in shapes). As you can see, the difference is very clear and powerful.

If you really think about it, we use these same visual cue variations in our daily lives. Just look at this sequence that can easily be seen when someone is typing a paper:

If we are typing something normal, we use the regular font...
(Symbol Level)

If we wish to emphasize it a bit, we underline it
(Black & White Line Level)

If we want it to stand out more, we put it in bold
(Silhouette Level)

If we want it to jump out, we put it in color
(Colored Picture Level)

As you can see, the sequence really does make an impact, and we use it often....even if we are not aware that it exists. So, how is this sequence present in the classroom? That is exactly the next topic we will explore!

How Toys Have Changed

We know that toys prepare our students for advanced schoolwork and that reading is a key skill our children must master. What we may not know is why so many children are struggling. Think about it... Our students start school much earlier, especially if you include daycare, they have more toys, more life experiences, and more books than any generation before them. So, why are so many children finding it MORE difficult to reach the level of reading competency previous generations achieved?

Well, it is true that many of our students have more complicated lives, that is a given. It is also true that we tend to be more inclusive than in ages past. We tend to keep students in general education classroom who have learning disabilities and no longer push them out of the mainstream and into vocational tracks or early community jobs.

Still, that said, there IS a difference for children in general, and I believe that difference lies in the neurological cue sequence itself. Let's first take a look at the toys that fall into the different categories of the sequence. We will then look to see exactly how toys have changed in the modern classroom. Let's start at the top with the **Symbol Level**.



The symbol level can be easily seen in today's classroom. Most rooms have many books and opportunities for children to "play" at this level. There has also been little change. If anything, the selection of books has improved over time. No problems to be seen at this level!

Moving down, we hit many *two-dimensional* toys and activities. These 2-D items include the following levels:

- [Black and White Line](#)
- [Silhouette](#)
- [Colored Picture](#)
- [Photo](#)

We know that worksheets fall in this category, but what about *the toys*? Here are some that are included:



2-D Level

- ❖ Flannel Boards
- ❖ Magnet Boards
- ❖ Etch-a-Sketch®
- ❖ Paper Dolls
- ❖ Colorforms®

This is where we can begin to see a problem, isn't it? How many classrooms have these items for the children to freely use? For a while, I have to say, I rarely saw these in classrooms at all. Now, however, I have begun to see some magnet boards and flannel boards creep back into classrooms, thank goodness, but it is still not nearly at the level it should be. So, while they may be hard to find, they are well worth the bother, even if you have to resort to old items on auction sites or from garage sales. As you will see, the lack of play at this level is one of the reasons we see so many literacy issues in today's students. Some nice companies that carry these flannel products so you can get them back into the classroom include <https://storytimefelts.com/> and <http://www.storytellingfun.com/> as well as many general teacher supply stores and even individuals on Pinterest. Take a look 😊

Now, this is where it really gets interesting....the 3-D category... Here are toys typically seen at this level:

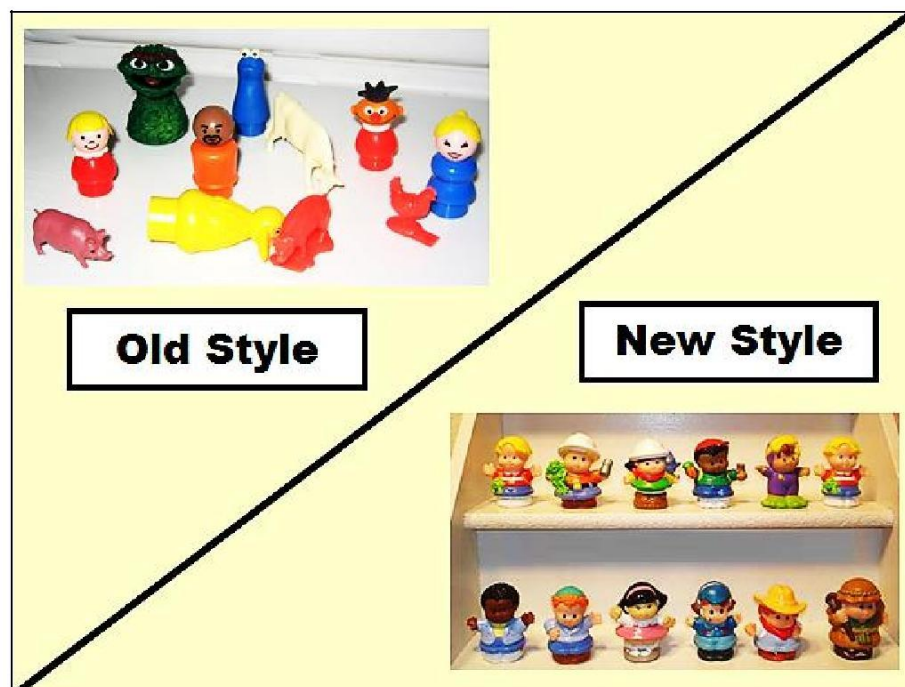


3-D Level

- ❖ Miniature Sets
-toy house, etc.
- ❖ Real-Size Toys
-pretend food, etc.
- ❖ Concrete Items

Do we have these items in our rooms? Well, of course we do. We have real objects (i.e. old egg cartons, cereal boxes, etc.) in our dramatic play center. We also have real-size plastic cups, pans, play food, etc. And, miniatures-----we have lots of those, too!

So, yes, we do have these items, but having them present is not the only factor we should be looking at. We also need to look at how well the toy moves the child forward in the visual cue sequence. If the toy does not do that well, then we are not moving towards literacy. So, let's look at how toys in this category *used* to look and how they look today. Let's start with simple little miniature people.



As you can easily see, today's products are more realistic than they used to be. A child using the older items had to do some pretty intense symbolizing in their heads in order to play with the toys. We can see that same trend towards realism in most of today's toys--- dinosaurs, play food, baby dolls, etc. Of course this is a generalization, you will find toys outside this pattern, but overall play has greatly changed:

Past Generations

(3-6 yrs.) simplistic toys

- used toys that required imagination (i.e. Fisher Price®, simple miniatures) - complex scenarios; toys did little on their own (i.e. plain baby dolls)
- toys more demanding and children played until school-age and beyond

(5-12 yrs.) advanced toys

- toys that required imagination AND dexterity (i.e. constructor sets)
- 2-D toys in complex, dramatic scenarios (i.e. paper dolls, Colorforms®)
- had fewer toys so needed to construct different ways to use them
- created games on their own, especially neighborhood games/sports



Current Generation

(2-5 yrs.) simplistic toys

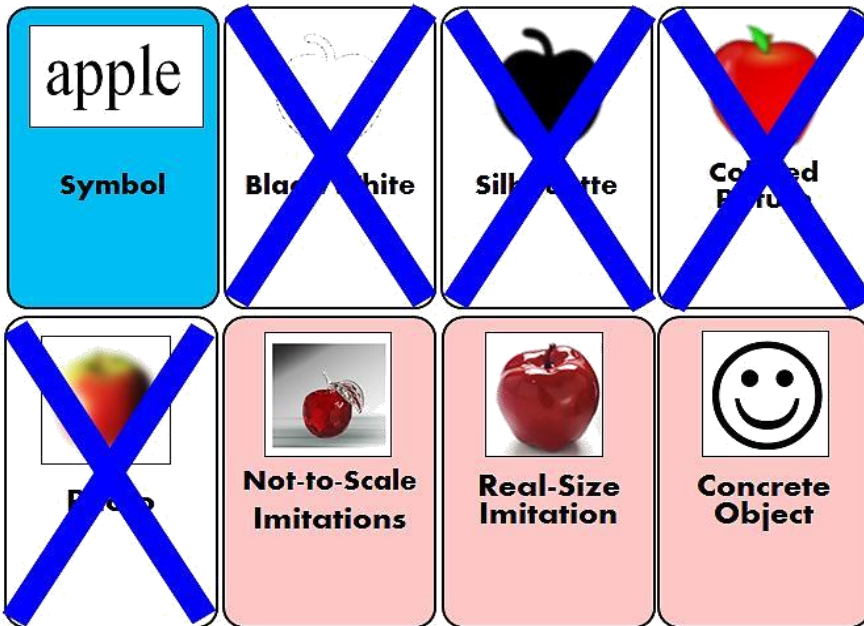
- most toys are very realistic so much less imagination is required
- many miniatures are designed for younger children and usually abandoned in preschool or kindergarten

(4-8 yrs.) advanced toys

- toys are more realistic and designed for younger children; less imagination required and discarded earlier
- fewer games on playground, athletics are adult-organized with drill; fewer neighborhood games

(5+ yrs.) electronic toys

- many children rapidly move into video-related play and abandon toys for some or all of their playtime

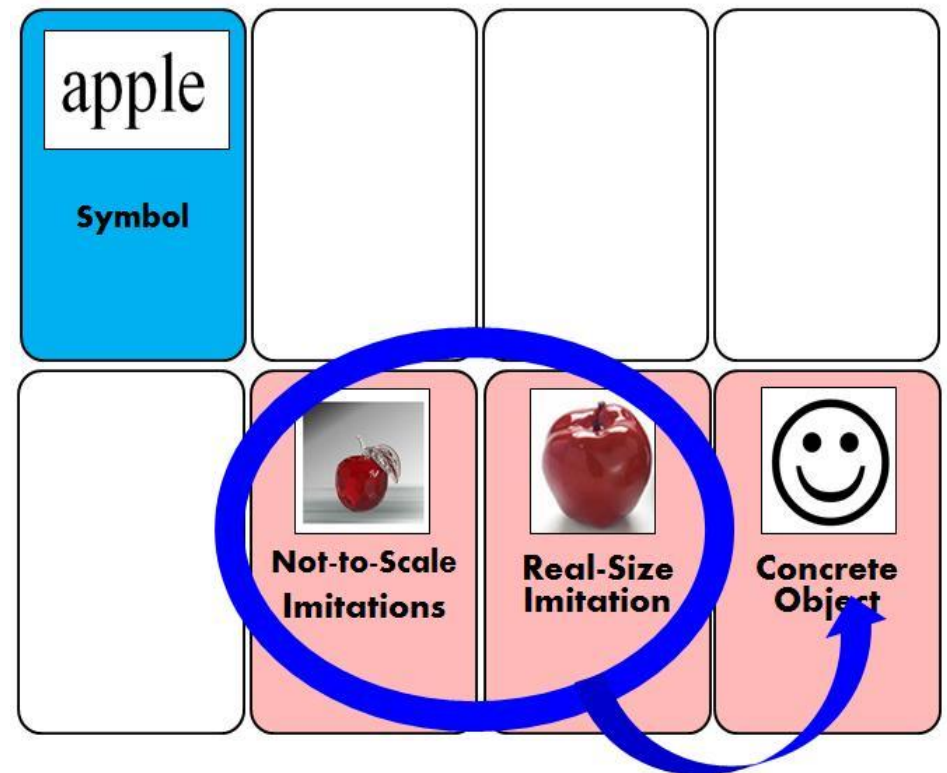


Because of these changes, our students have many books and 3-D toys, but few, if any, 2-dimensional toys. This causes their play to be less advanced, a problem we will explore in the next section.

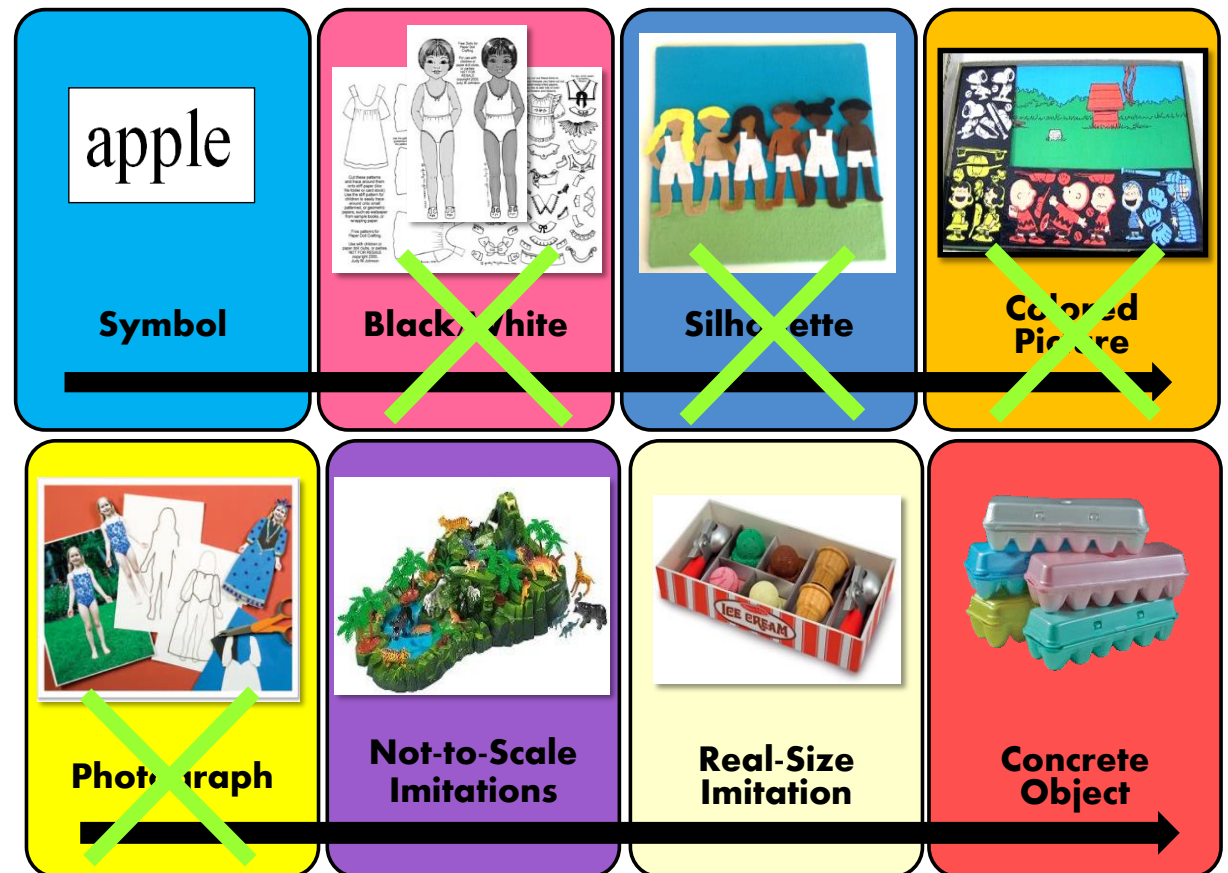
To summarize, because the toys are less complex, this newer generation tends to leave these toys at a younger age and move into the newer electronic toys. The time for this transition appears to be dropping to younger and younger ages.

In addition, there have been some marked changes in the Not-to-Scale and Real-Size Imitation toys. They are so realistic, they often require no imagination at all. The play food looks like the real item and may even have scents. Dolls walk and carry on conversations. Even toy trucks make multiple sounds and run on their own.

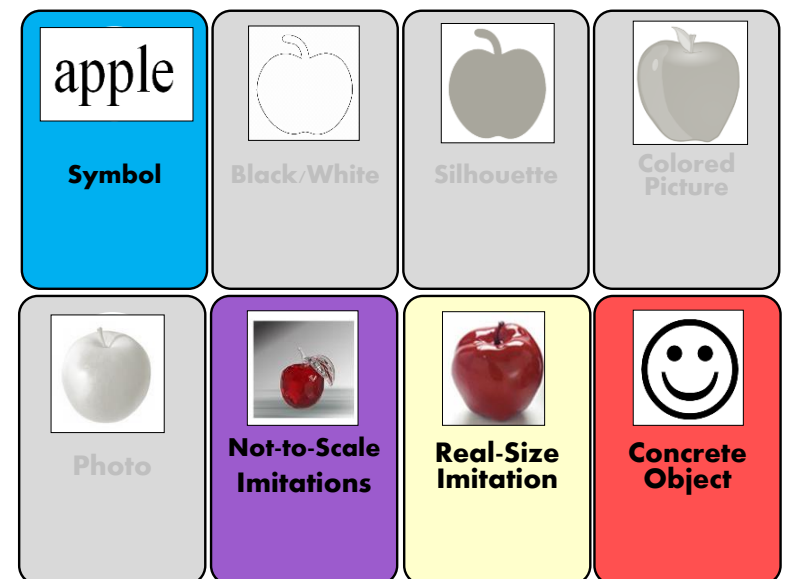
This means these two levels (i.e. Not-to-Scale Imitations and Real-Size Imitations) are more like Concrete Objects than ever before and do little to enhance children's play. So, while some of these newer toys are great and lots of fun, there really is a place and a need for the older style toys in today's homes and classrooms!



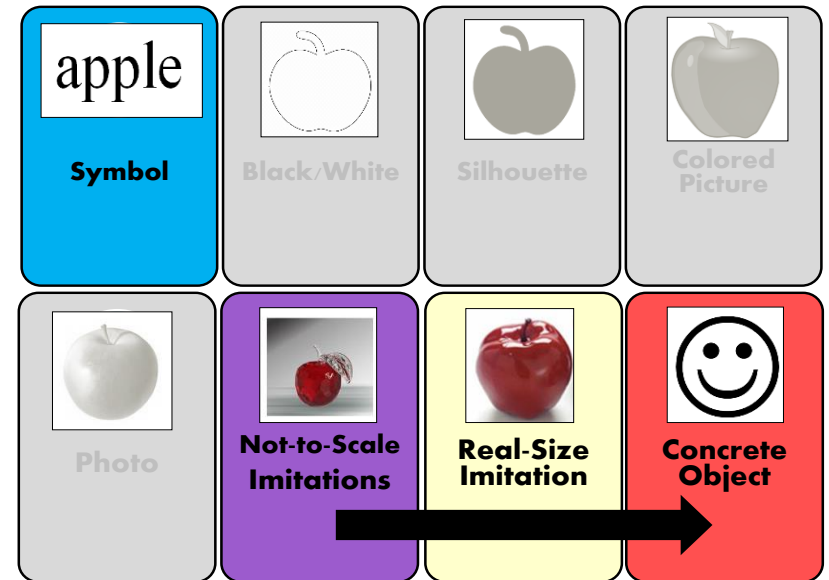
So, let's just mull the impact of this over for a moment. We have lost many of our 2-D toys...



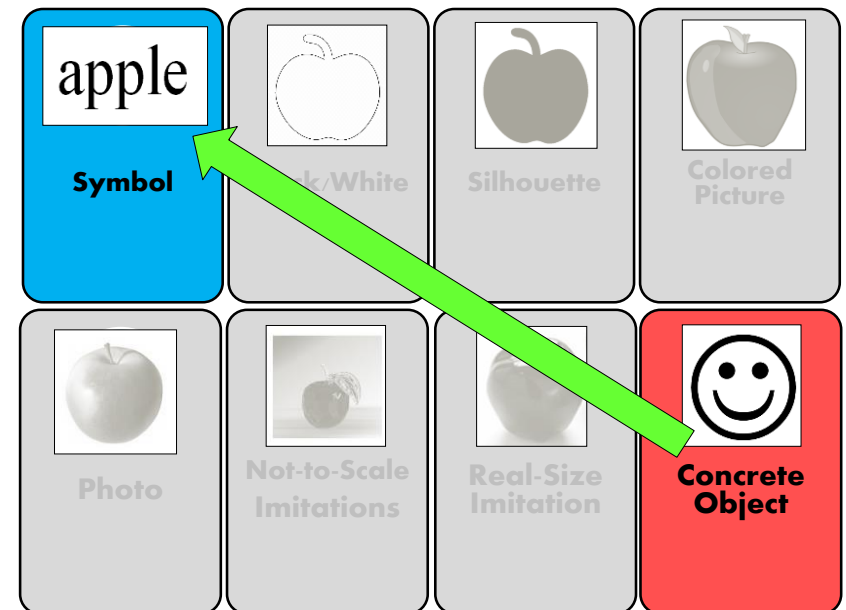
...and this makes the move towards symbolism (i.e. literacy) much more difficult to achieve.



Then, throw in the fact that the 3-D toys are much more realistic and closer to “Concrete” objects than ever before, and you can clearly see how difficult we are making symbolism for some children!



It is this extreme jump to symbolism/literacy that is hampered by our strange lack of play materials. Yes, we have more toys than ever before, but they are of lesser “cognitive quality” and will produce less of an impact on both play and eventual literacy levels. This doesn’t mean that all newer toys should be avoided; some of them are quite lovely. You also will not see literacy concerns in most children solely due to this issue, there are so many more variables at play. It just means that it is one more factor that may be impacting literacy growth, and since it is a problem that is so easy to correct, it is well worth our time to consider our toy selection.



The Impact on Play, Behavior and Cognitive Skills

We have seen that there have been changes in toys that impact play levels, but exactly how does this relate to what we see in today's classrooms in terms of skills? Here are some of the changes that many students will show:

Play Skills The change to overall play skills is definitely seen in terms of toy usage, but if you look very closely, you can also see some additional impacts.

In order to play at a high, socio-dramatic play level, children have to be able to imagine scenarios in a complex form, hold them in memory, and then act them out step by step over time. In addition, the most skilled players will be able to adjust these scenarios based on what their peers are doing while they are engaged in the activity.

Children who lack this practice due to toy simplicity WILL play, but if you observe intensely, you will see that their play is fragmented. For example, they will go into a kitchen area, and may even stay as long as a more skilled player, but their play sequence is isolated and contained.



Unskilled Play Level (40 min.)

1. Feeds doll, dresses them, etc. and is finished
2. Plays with stove and food, makes dinner and is finished
3. Plays with grocery cart and goes to store and is finished
4. Puts doll to bed and leaves play area

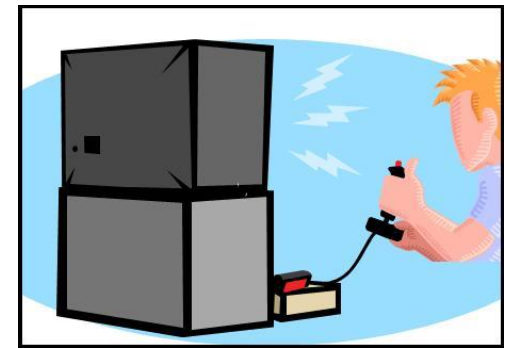
Skilled Play Level (40 min.)

1. Dresses doll to go to store
2. Goes to store, brings food home
3. Cooks food and feeds doll
4. Puts doll to bed; leaves area

Many teachers may not even notice the difference in the play of the students today because they DO often engage in play for just as long as children in the past. The time duration is the same. The difference is in the overall complexity and sequence of their play scenarios.

Behavior Skills The change in behavior is so subtle that many may not have made this connection either. But, it is there and has a great impact on the level of aggressive and violent play we see in many children. In order to play with a toy and use ANY scenario, the child has to be able to come up with story sequences on their own. If they do not have this ability due to poor play or toy simplicity, *they have to rely on some other source for their story ideas*. That is exactly the scenario we see today.

This means that many children import ideas from things they have seen....television shows, video games, movies, etc., and unfortunately, these storylines are usually violent. The problem is compounded when the toys being used are miniatures of characters that come from these shows themselves. Then, you can be sure that the storylines the children will use will be an exact duplicate of the violent shows or games they have seen.



Now, it is true that children have always done this to a degree. The old batman show had a level of violence, and children also imported those ideas back in the 60's. Same for the 50's and the cowboy craze. The difference was when this play was forbidden for some reason, the children had other ideas and storylines they could fall back on, and that is not the case today. I work with many children who cannot think of what else to do! Even when given toys that are rather difficult to conceptualize as "violent" (i.e. ducks, cows, cats, etc.), they still tend to go to fight scenarios.

True, some of the problems do stem back to less-than-peaceful home environments, but a great deal is also due to poor toy and visual cue exposure. They truly have no other storylines in their back pocket to

use and lack the play skills to generate them on their own. There are ways to combat these using interventions for violent play (see document on *Reducing Aggressive Play*), but it is somewhat distressing that I am having to do so much of this lately. I definitely see a sad difference in this area.

Cognitive Skills The last change we will address has to do with overall cognitive ability to use higher levels of symbols in play. We alluded to this back on pages 11-13, so let's explore this a bit further.

When I am working with children in a low level play area that contains many concretes and real size imitations (i.e. dramatic play housekeeping area), if I see the child can carry on a fairly well-developed storyline, for example a birthday party, I used to be able to move the child to a higher level of play over time using the following sequence:

Linking Story Scenarios to the Visual Cue Sequence



1. Child uses storyline of a birthday party in housekeeping using **Concretes** and **Real-Size Imitations**
2. Same storyline is used at **Not-to-Scale** level (i.e. with dollhouse, dolls and birthday props)
3. Same storyline is used at any of the 2-D levels (i.e. **Black/White Line, Silhouette, Colored Picture** or **Photo**) using magnet board, flannel board, etc.
4. Same storyline with “script” added to guide play next time (i.e. words / **Symbol** level)

This, unfortunately, is becoming more and more difficult to do. The children do not have the skills to move their play to a higher symbolic level. They will play with a toy like a dollhouse, mind you, but they have difficulty making the dolls talk to each other, they want to go back to saying it themselves like they did in the lower level housekeeping area. Even when I prompt, “Yes, you are the mommy, so have the mommy doll say it for you,” they may do it once and go right back to the lower level soon afterwards.

The 2-D level is even worse! The children simply cannot fathom how this piece of paper or flannel can carry on a conversation with another character of the same material. Instead, what I see is “**placement play**”, they create pretty little pictures by making different scenes with the flannel pieces (this can also be seen in very poor play at the miniature/doll house level where they merely place the dolls around the house but do not use them). Unfortunately, actually carrying out a socio-dramatic scene with the figures is beyond them, and this is something that children used to be able to do for hours with paper dolls, etc. You used to be able to give a child paper characters and they would carry out complex stories totally in their head, often with no other props at all...

Please realize this lack of cognitive skill to symbolize is a monster with many tentacles. I see this problem impact play on the playground (i.e. cannot construct new games to play), an inability to generalize (i.e. cannot imagine how concepts apply in a different subject or situation), and even see it creep into math and science (i.e. cannot apply concepts to solve previously unseen story or theory problems). This is a true problem that should be addressed soon before we lose this generation of thinkers.



The Impact on Literacy

In closing, what does this mean for literacy skills then?

Well, as I mentioned, *if a child cannot superimpose their thoughts and ideas on a miniature or 2-D objects, like shown in the examples above, they will definitely struggle doing the same with symbols like words.* This means reading comprehension will be lower because the student has learned to rely on television storylines and other visuals for their source of ideas. So, books that have stories they have never visually seen are going to be harder to remember. You will see these students struggle with story sequence, details, and even when given logical questions that they should be able to just deduce from life, they will make mistakes due to their lack of imagination.



You will see something similar in writing skills, especially when writing stories. Since the children lack practice in envisioning new storylines in their mind during play, you will see that they struggle to do the same with words. They cannot come up with scenarios to use and will often rely on the same stories they see on television and video games. Some will have minor abilities to write stories from their own life and home experiences, but to envision a true fantasy story that they totally create in their own minds is often beyond them.

In other words, the inability to use toys to generate stories in their heads, bring them to life through their actions, carry them out in sequence, and adjust to add new details will also be seen in the world of symbols (i.e. reading and writing). The impact on literacy is very strong and explains why our children have access to so many toys and books and yet seem to struggle with reading and writing more than many students who have come before them...

Simple Solutions

So, how do we combat this problem? The solutions are as follows:

1. Bring more demanding toys back into our homes and classrooms, and yes, you will have to search for some of these on auction websites.



2. Bring back story tapes and records that force a child to imagine a story scenario they are only hearing. This is wonderful practice for imagination skills and will help children visualize stories in their own minds. Reading to children (while not showing the pictures) will also strengthen this skill.
3. Watch for fragmented play and help the children link their various storylines into a sequence that makes sense. Use visual cues like picture cards if they struggle doing this in their mind.

These first three should assist students showing mild deficits in play. With this little bit of assistance, they will move forward rapidly and will soon show better play on their own.

For children still struggling or who need a more assistance due to their developmental needs, you should directly intervene. **Linked Play Intervention** is simple to implement in the regular classroom and will move children to higher and higher levels of symbolism in their play. The technique follows on the next page...

Interventions: Linked Play Therapy

Linked Play Intervention is really just an active implementation of the sequence we first saw on page 14. To run Linked Play, all you do is follow the steps below.

PLEASE NOTE: you may start this at any step! Look at the child's play and start them at the step that mirrors their current ability. Do not start all children at step one...



1. Start with the child's current play theme that is using **Concretes** and **Real-Size Imitations**. The easiest ones to use will be themes occurring in the dramatic play area or blocks.

*-You should observe to make sure the child's play is strong enough to even begin this process. If it is not (i.e. it is fragmented or does not follow a strong sequence) work on the current play at this level before trying to move them to step 2. You can find detailed information on this in the **Play Intervention** document.*

-I find it best to immerse myself in the child's play at this level before trying to move them to step 2.

-You may need to prepare for movement to step 2 by creating or finding the right miniature.

-I usually use an excuse for moving to step 2...for example, "I am SO tired today! You know, let's keep playing doctor, but we can do it at the table instead. I found a wonderful doctor set we can use!"



2. Bring the SAME storyline down to play with a **Not-to-Scale** level that has the same theme. So, for example, if the child is in the dramatic play area, bring the play to a dollhouse or play set (i.e. store, vet, doctor, etc.) with the same theme. If the child is using some miniatures already, add to what they are using.

*-Watch carefully for the **Placement Play** we discussed earlier. If you see this, prompt the child to attempt dramatic play with the dolls instead. You may even have to give the child the words at first. For example, "Yes, you are right. The daddy would say to get in the car. So, let's have your daddy doll say that to my little girl doll." You can even prompt further by having your doll lead in..."So, daddy, what do you want me to do?"*

-You may need to prepare for movement to step 3 by creating or finding the right 2-D pieces. I often have to resort to making them on my own 😊

3. Same storyline is used at any of the 2-D levels (i.e. **Black/White Line, Silhouette, Colored Picture or Photo** using magnet board, flannel board, etc.

*-Same as above, watch carefully for the **Placement Play**. If you see it, prompt as before.*

-Do not be surprised if this level takes a long time to complete. The ability to play with 2-D objects is not only a hard skill to develop, but many children will have no prior practice in this type of play and will be starting from square one. Be patient and it WILL eventually develop.

-Prepare for the next step by having markers, crayons, and paper available. Some children may also need visual cues in the form of pictures or stickers.

4. Same storyline with “script” added to guide play over time (i.e. words / **Symbol** level)

-Begin to have the child put their “story” down in words. I usually tell the child we are writing a script so we can do the same play over again in the future.

-Match the level of the language experience/writing used to the child’s level of reading. For many children, this means you will be writing single words and may be using pictures to assist the young reader.



-Continue to expand the script until the child is creating short paragraphs or stories. Remove visual cues and add vocabulary as appropriate.

-Old scripts can be left in the play areas for the children to use on their own. This is also a wonderful way to support the play of children who struggle with social interactions (i.e. disabilities, autism, etc.)

Conclusion



In conclusion, again, please know that this does not mean you should get rid of all of the newer toys and materials that are in your home or classroom. Many of these newer, more realistic toys really are a great deal of fun, and if the child has the play skills well in hand, may actually increase their play options.

For children without these skills, though, these more realistic toys can hold them back, especially if they are the only toys available to them. With the following information, I am sure you will be able to create many more variations that will move your own children forward in this very important skill.

Play truly DOES set the framework for our children's later cognitive, behavioral, and academic abilities. Literacy is especially impacted when play is poor.

As you can see, though, just a little intervention can go a long way towards correcting this problem. With our help, we can assist these little ones to reach higher levels of reading and writing. Well worth the effort in any teacher's book! To get you started, take a look at a few visual cue combinations I have used in the past...

APPENDIX

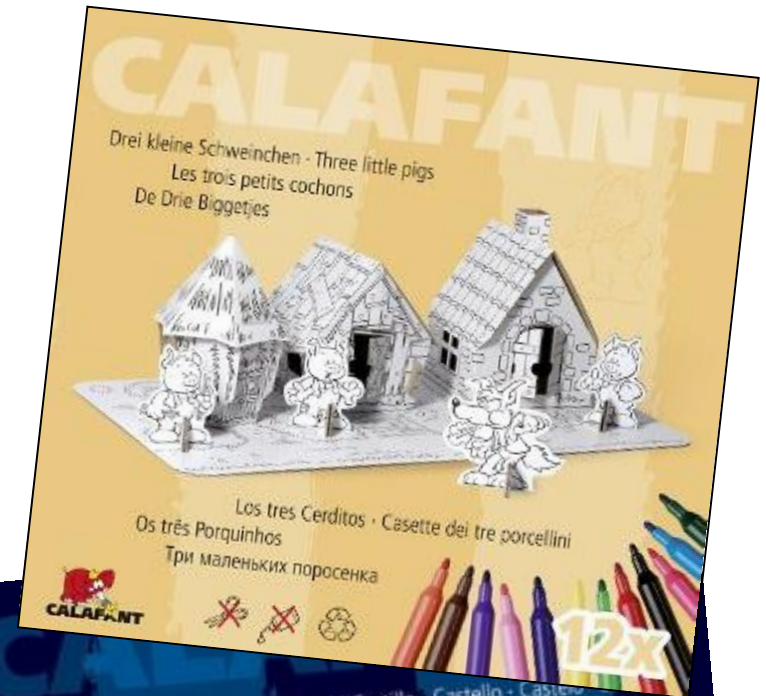
2-D Materials to Explore...

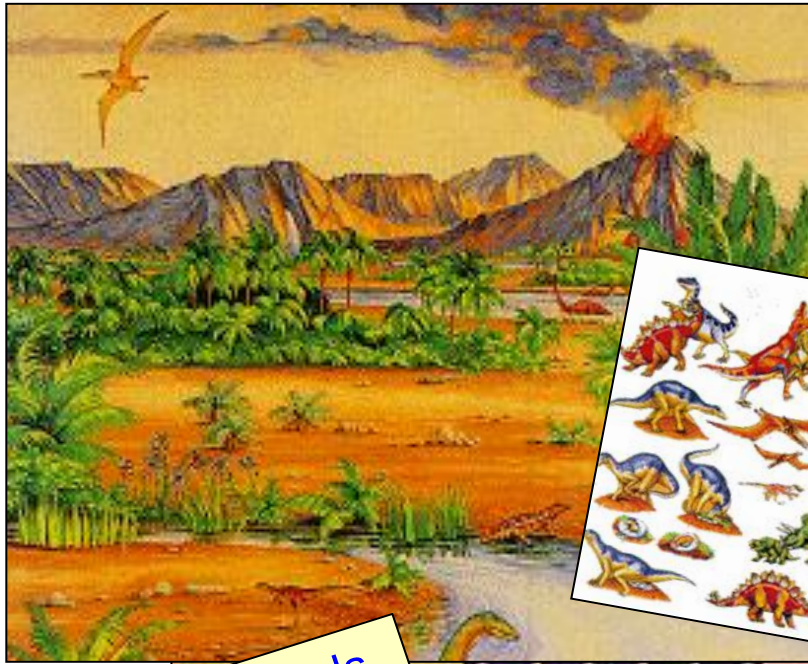


Color Forms®



Paper construction sets from other countries



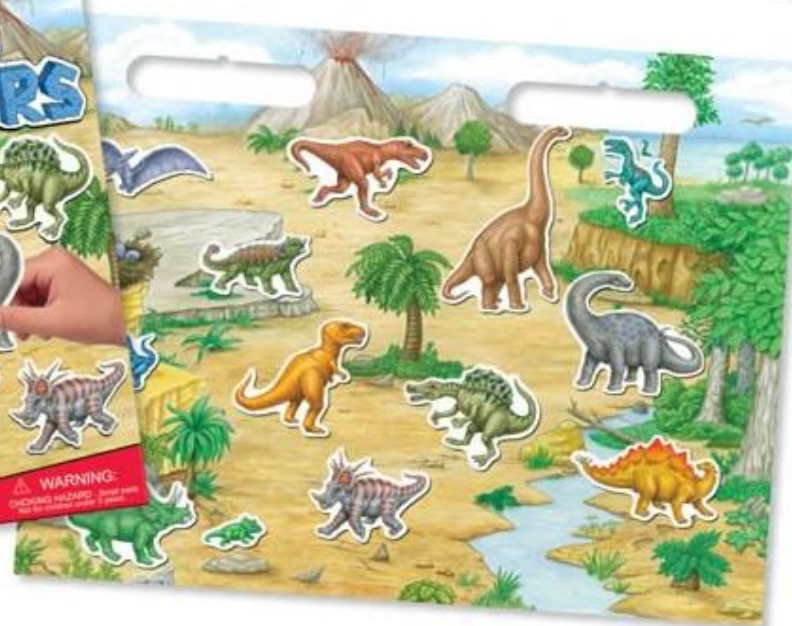


Flannel Boards

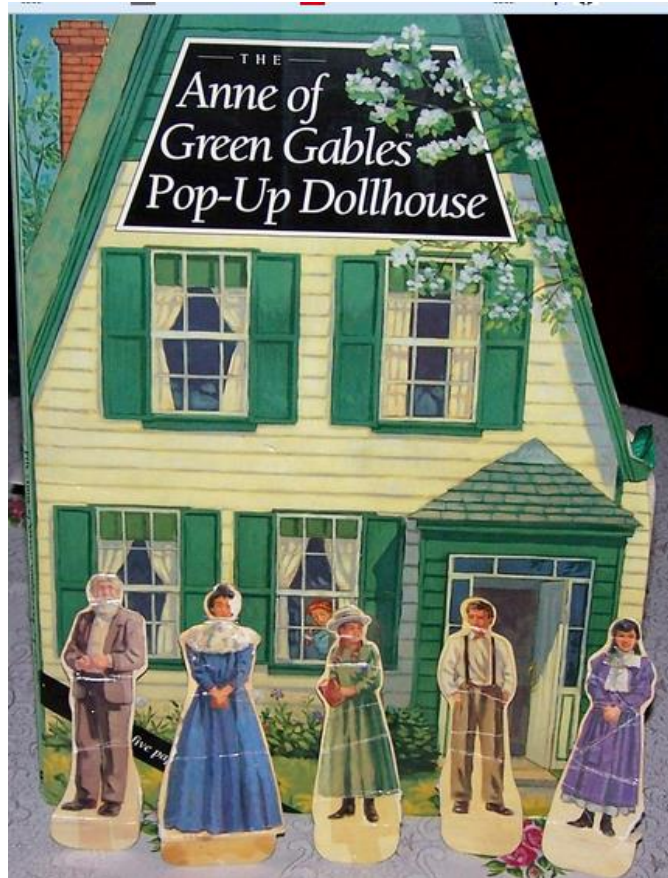


Paper Dolls





Stamping and
Magnet Playsets

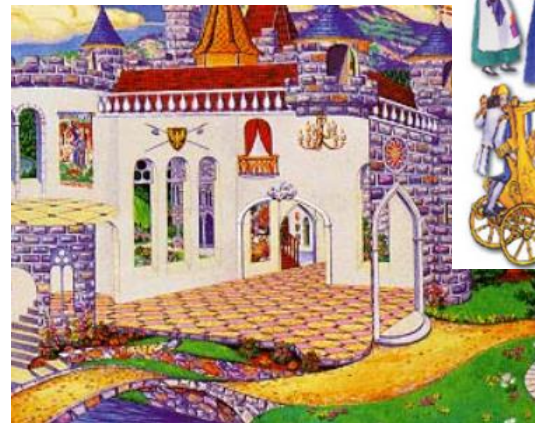
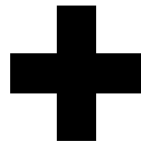


Paper-play books with
figures
(i.e. *My Fairy* series, etc.)

Linked Play Interventions works with any 3-D + 2-D combo

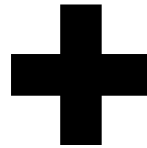


Magnets

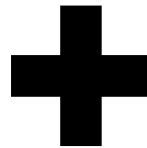


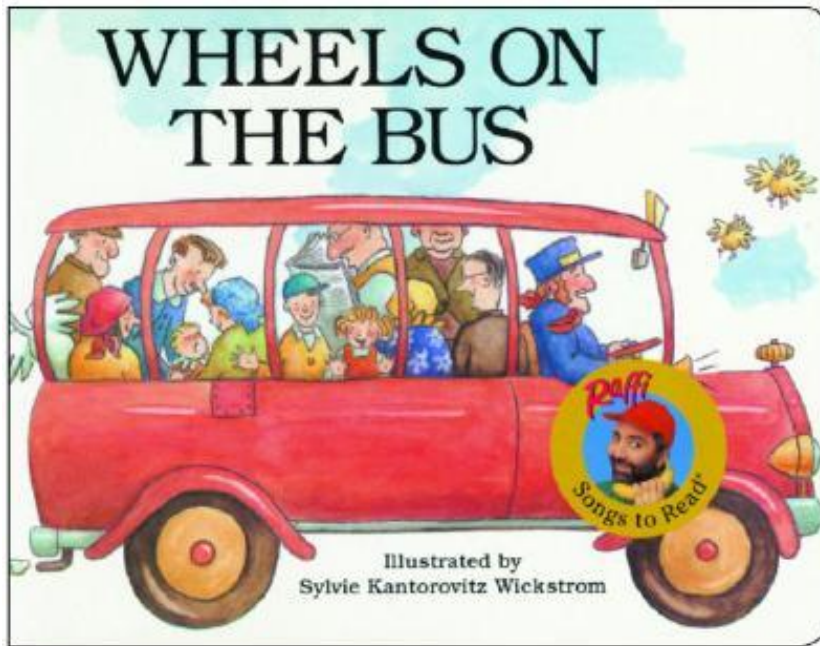
Flannels

Colorforms



Paper Dolls





**Link to advanced
2-D materials
(i.e. books)**



Visuals (i.e. movies)

