## Simulation 101

**Title**: Simulation 101  
**Created by**: Eva Cowen  
**Audience**: Children, teens, adults, lay leaders etc.  
**Materials Needed**: A writing utensil for each participant  
A “Math Test” and the Billy Goats Gruff story for each participant  
A bag of kosher marshmallows

**Program Description**: Explain to the group that you are going to do a few simulations to help understand what having a disability *might* at times feel like. Simulations are tricky because we can never, in a short simulation, really understand someone else lifelong challenges. The goal of these simulations is to stimulate reflective discussions. If someone in the group has disabilities and is willing to share, their personal reflection can provide valuable depth and understanding.

Depending on the group, choose which and how many of these simulation activities to do (activities can be done in any order and each relates to a specific disability):

### Math Test (meant to simulate a learning disability)
1. Hand out the math tests and ask everyone to keep them face down until ready to start.  
2. Tell the group it is an *easy* math test.  
3. Tell them to turn paper over and start. Don’t *tell* them to read the instructions although they are critical. Some people finish the test in a very short time, as they haven’t read the directions. When they do read the directions, it makes the test more tedious to complete.  
4. When time is up, ask people for their strategies for completing the test.  
5. Discuss how having learning disabilities makes it more difficult for people to process and retain information but doesn’t reflect intelligence. Point out that they were able to do the math test when they came up with strategies to complete it. Having a learning disability means having to continuously use a strategy as opposed to many of us who would complete those problems directly.

### Reading Time - (meant to simulate dyslexia, visual processing and depth perception issues)
1. Pass out the story and tell the group you are going to call on people to read and that there will be a quick reading comprehension quiz at the end.  
2. Do not tell the group that this is a story of Little Red Ridinghood written out with letters reversed, words crooked, etc. so it is difficult to read.  
3. Call on readers randomly and at a quick pace  
4. Discuss how it felt to read this story. Point out that not all individuals with dyslexia actually “see” words that look different but the frustration and pace of being to ask to read something this challenging is a common experience for many.  
5. Talk about how someone might act in class if this is what a written page looked like every
time they open a book. Discuss how a student may joke or otherwise purposely draw attention away from the fact that reading is challenging.

6. Also discuss how visual processing disorders go beyond school and can affect participation in sports (depth perception and ball sports, etc.) and can also affect socialization because it can sometimes make it difficult for people to interpret visual cues.

**Marshmallow activity** (meant to simulate articulation disorders that might go along with cerebral palsy).

1. Call for a volunteer (who is not allergic to eggs as marshmallows contain egg whites) to come up and read. Have a sentence written out on an index card.
2. Ask the volunteer to fill his/her mouth with marshmallows until their tongue is immobilized. Have them read to everyone what is on the card. They have to repeat it until the group understands.
3. Discuss that this simulates an articulation disorder. The person knew clearly what they wanted to say but brain doesn’t communicate correctly with muscles in the mouth to form the words. Imagine if you couldn’t take the marshmallows out of your mouth. Discuss that we sometimes want to pretend that we understand what person is saying to make things more comfortable. We say "oh that's great". But what if the person is saying "I feel sick and I want to go to the nurse" Remind group that the person generally knows that their speech is difficult to understand and they just want to hear the message that you are going to take the time to listen and try to understand. Talk about strategies - asking yes or no questions, asking if they can write it down, asking another person to come over and see if they can understand, etc.

**Story with an "N"** (meant to simulate a language processing/expressive language disorder)

1. Have everyone sit in a circle. Tell them they are going to tell a progressive story starting with "Today I woke up" (or any other starting sentence) and each person has to add a sentence or two to the story. Tell the story.
2. Repeat the story but this time, tell the group that they CANNOT use any words that contain the letter N.
3. Discuss the experience of telling both stories, which story was easier to tell, which story included more details, maybe more drama, how telling each felt, etc.
4. Point out that it took longer and was more difficult to have a conversation when not using words with the letter N because everyone had to think of they wanted to say and everyone had to choose specific words. This is what that people with language processing/expressive language disorder have to do. Talk about being patient and not rushing people who have expressive language difficulties.
A Children’s Story:

Once upon a time, in the middle of a thick forest stood a small cottage. I taws the home op a pretty little girl known to every one as Little Red Riding Hood, because of the brightly colored coat she wore. One day, her mother gave her a wooden basket full of delicious food, and said:

“Grandma’s ill. Take this basket of cake, but be very careful. Don’t stagger through the woods.”
A Simple Math Test

In the following simple arithmetic exercise, a "+" sign means to multiply, a "−" means to add, a "−" means to divide, and a " x " sign means to subtract. Complete these problems following the above directions.

8 + 2 = 14 − 7 =
9 − 3 = 6 × 5 =
4 × 3 = 8 + 3 =
6 − 2 = 7 × 2 =
9 − 3 = 9 + 2 =
7 × 4 = 8 − 4 =
4 + 4 = 9 + 4 =
8 − 4 = 1 − 1 =
12 × 2 = 6 + 7 =
9 − 1 = 16 − 4 =
5 − 6 = 8 × 2 =
3 ÷ 5 = 10 − 2 =
3 − 6 = 15 × 3 =

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