ONLINE ORIENTATION

SPECIAL EDUCATION NEEDS



Special Education is the term used to describe learning opportunities for **PERSONS** with disabilities.

 According to a 2010 UNESCO report, disability is a "multidimensional and complex construct involving legal, political, and social discourses".

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This presentation will provide opportunities to acquire knowledge of...

... different aspects of Special Education and ...

... understand
 varied nuances of
 Special Education
 teaching.

With regard to different aspects of Special Education,

First we will
 examine the
 various groups
 involved in the
 Special Education
 system.

 Then, we review the different classifications that are considered "disabilities" and eligibility for **Special Education** services.

Lastly,

 We will examine the "Best Practices" as suggested by today's research.



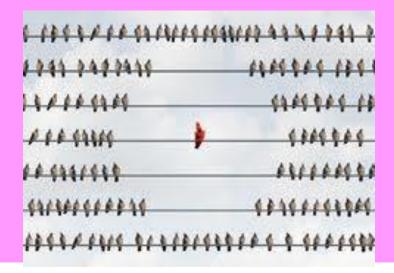




 Some people think in picture. We learn from maps, charts, graphs, photos, & cartoons.
 We are called iconated thinkers.

What causes a person to be disabled?

 Historically, in some cultures, it was believed that having a child born with a disability, represented a curse upon the family. As such, s/he was cast out as a means of purification.



What causes a person to be disabled?

In other cultures, the opposite was true. A child with a disability received respected status as a talisman providing good luck and protection to

Today we still hold some historic perceptions and prejudice.

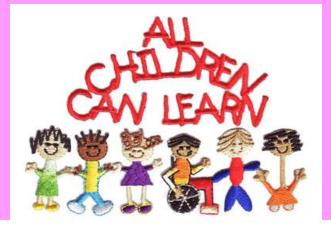
 It is not too long ago that a person with epilepsy was seen as being demonically possessed.



 Or that a person with Tourette's Syndrome, with its tics, repetitive movements, and vocalizations, was perceived as a victim of witchcraft.

In general, what is a disability?

• It is a **physical** or **mental** condition that **limits** a person's **movements**, **senses**, or **activities**. It is the traditional role of Special Education to address the learning challenges faced by individuals with disabilities.



Besides individuals with disabilities, other groups are involved in Special Education.

<u>Families Perspectives</u>:
 Provide information about health, development, and emotional history.

<u>Child's Social Group</u>:
 <u>Acceptance or Bullying</u>



 Policy and Law: Legislation and Court Decisions

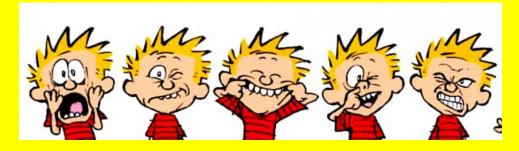


- <u>Community:</u>
- Institutionalization
- Isolation
- Integration
- Inclusion



Social Policy, Community, and Culture

- Perceptions & Assumptions ->
- Lazy, dumb, stupid, cretin, dimwit, dullard, brainless; IQ Tests = moron > imbecile > idiot



• If I believe something to be true, whether or not it is true, causes me to act in a predicable way.

Classroom Practice: Historic Perspective

 19th century Education for Visual and Hearing Impaired



 Perkins School for the Blind



Gallaudet School for the Deaf

 Most other disabilities failed to be identified or were ignored as recently as the mid 20th century

INSTITUTIONALIZATION → Agnew State

Developmental Center





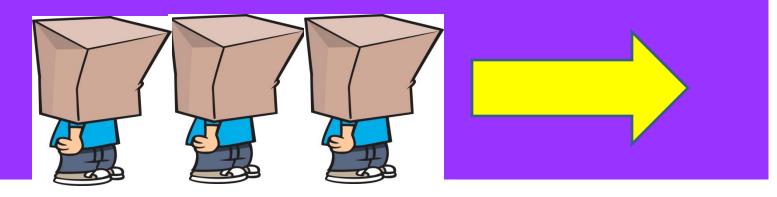


• ISOLATION → The Retard Room

 What do you notice about these children?



- INTEGRATION → The Resource Room
- This program usually involved pulling the students from their regular classrooms to provide individual curriculum and programming for their special needs.



INCLUSION →



 Provides opportunities for students with disabilities to learn alongside their non-disabled peers in general education classrooms with the support of Special Education teachers, Aides, Accommodations and Modifications.

What is a disability?

 As it relates to educational law, a DISABILITY is "a disorder in one or more of the basic neurobiological processes involved in understanding or in using language, spoken or written, that may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or do mathematical equations".

When you think of these terms, what words come to mind? *

- DYSLEXIA
- ADD / ADHD
- DYSCALCULIA
- DYSGRAPHIA
- SENSORY PROCESSING DISORDERS

Classification of Disabilities

- **SPECIFIC LEARNING DISABILITIES**: Affect ability to read, write, listen, speak, reason or do math. Here are some of the issues that could fall in this group:
- Dyslexia
- Dysgraphia
- Dyscalculia
- Auditory Processing Disorder

Dyslexia:

Neurobiological in origin, it is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. At least, 10% to 15% of students in India suffer from this disorder. Multilingualism may impact this as well.

Dysgraphia:

Associated with impaired handwriting, coding (the storing process of written words and processing the letters in those words), and finger sequencing (the movement of muscles required to write). It is believed that about 5% of students in India have this disorder.

Dyslexia

Dysgraphia

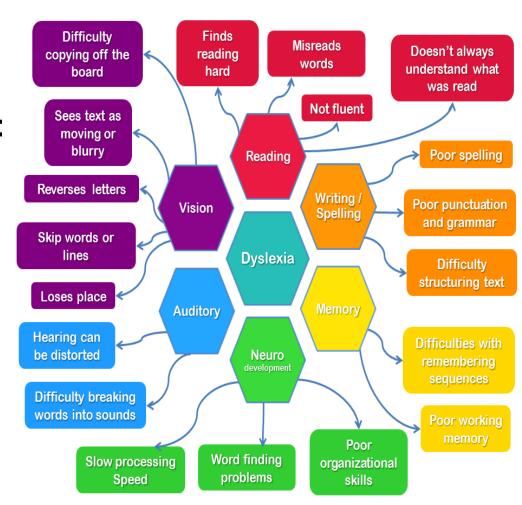




DYSLEXIA impedes the student's ability to read and comprehend a text.

 Among five of the critical components in reading instruction are:

- 1. Phonetic Awareness
- 2. Phonics
- 3. Fluency
- 4. Vocabulary
- 5. Text Comprehension



Phonemic Awareness is ...

... a major aspect of literacy that is essential for children to develop before they can begin learning to read. Based in oral language, phonemic awareness serves, as not only the foundation for reading, it is also one of the strongest indicators of a child's potential for learning to read, and essential to reading comprehension success. The most critical predictor of success is whether a child has been read to!

DYSGRAPHIA: Statistics

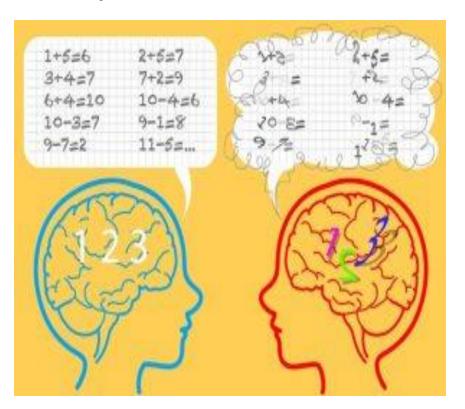
Researchers have so far identified 5 subtypes
 of dysgraphia including ones tied to dyslexia,
 motor skills, spatial and visual skills, as well as
 phonological issues. It is not uncommon for a
 person to have more than one Learning
 Disability. This is known as "comorbidity".

People with Dysgraphia ...

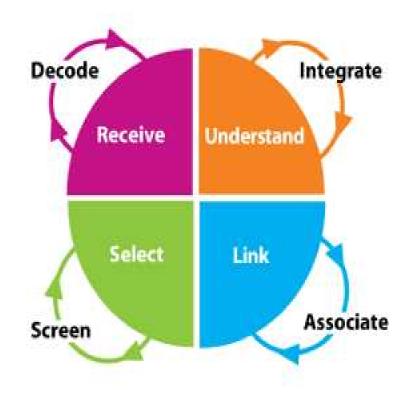
- Often have a higher than average IQ, but lack co-ordination, and may find other fine motor tasks such as tying shoes difficult, although dysgraphia often does not affect all fine motor skills. These individuals can also lack basic spelling skills (having difficulties with p,q,b,d), and often will write the wrong word when trying to formulate thoughts.
- Thought/Though/Tough/Through/Thorough

- Dyscalculia:
- Difficulty in understanding numbers, learning how to manipulate numbers, and learning facts in mathematics. Current research suggests that between 3% and 14% of children may have mathematical difficulties.
- Auditory Processing Disorder:
- Affects how the brain integrates spoken language which makes it difficult for the child to process verbal instructions or even to filter out background noise in the classroom. Percentage of students with this disorder range from 2% to 7%.

Dyscalculia

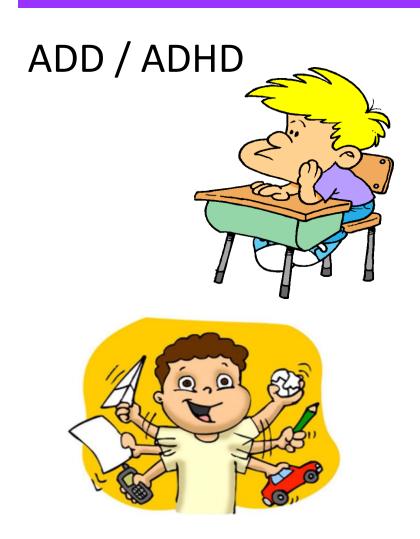


Processing Disorders



 Other Health **Impairment**: Limits a child's strength, energy or alertness. One example is attention issues like ADD and **ADHD.** In Primary Schools, the percentage of students identified was 11.32% (3:1 M:F)

 Autism Spectrum **Disorder**: Affects a child's social and communication skills. It can also impact behavior. Its mildest form is known as Asperger's Syndrome. Diagnosis ranges from .23% to 1.8% in India.



AUTISM SPECTRUM



 Also, children with ADHD /ADD or oppositional defiant disorder (ODD) tend to not to display such personality traits.

EMOTIONAL ISSUES:

Includes mental illnesses such as Anxiety Disorder, Schizophrenia, Bipolar Disorder, Depression and Obsessive-Compulsive Disorder. In ages 4-16, 12% of population are affected. High suicide rate

SPEECH OR LANGUAGE IMPAIRMENT:

Communication problems including stuttering, impaired articulation, language or voice impairment.

EMOTIONAL ISSUES



1 in 7 children aged 2-8 years has a mental, behavioral, or developmental disorder.

The number increases with the onset of puberty.
(Depression, Bipolar Disorder, Eating Disorders, and Schizophrenia.

SPEECH OR LANGUAGE IMPAIRMENT

Speech & Language Disabilities

- Speech disorders include disorders of voice, articulation, & fluency.
- <u>Language disorders</u> affect the student's ability to use language (phonology, morphology, syntax, semantics, & pragmatics).
- Over a million students have a speech or language disability.

VISUAL IMPAIRMENT INCLUDING BLINDNESS:

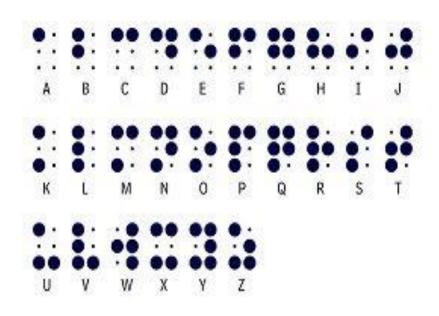
Includes both partial sight and blindness.
If eyewear can correct a vision problem, then it doesn't qualify.

DEAF-BLINDNESS:

Dual diagnosis of both hearing and visual impairments require programs that offer extensive and intensive training.

Specific Learning Disabilities: Blindness





DEAFNESS:

Severe hearing impairment; unable to process language through hearing.

HEARING IMPAIRMENT:

Refers to a hearing loss not covered by the definition of deafness. This type of loss can change or fluctuate over time.

Specific Learning Disabilities: Deafness



Specific Learning Disabilities

ORTHOPEDIC IMPAIRMENT

Mobility issues that limit an individual's movement. Examples include cerebral palsy, polio, muscular dystrophy.

INTELLECTUAL DISABILITIES

 Refers to belowaverage intellectual aptitude; may also have poor ability with communication, a lack of self-care and a deficiency in social skills. Down Syndrome is one example of an intellectual disability.

Specific Learning Disabilities: Orthopedic and Intellectual





Specific Learning Disability

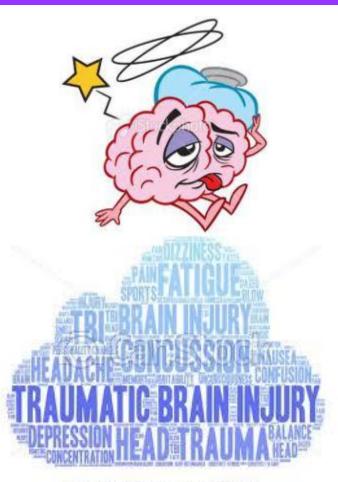
TRAUMATIC BRAIN INJURY

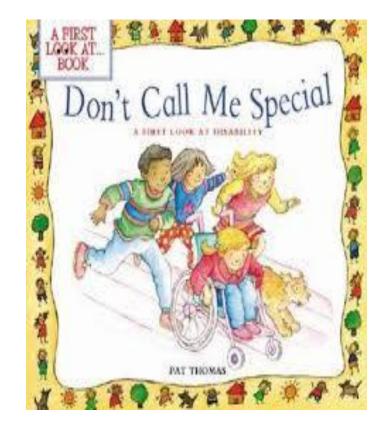
- Generally caused by an accident or some kind of physical force.
- Can affect various parts of the brain including memory, executive function (organization), balance & coordination, mood, & sleep disorder

MULTIPLE DISABILITIES

 A child with multiple disabilities has more than one condition covered by IDEA. Having multiple issues creates educational needs that can't always be met in one program for any one condition.

Specific Learning Disability: T.B.I. and Multiple Disabilities





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Having examined the more common Learning Disabilities,

 for purposes of discussion, let's develop a common vocabulary and identify the various individuals involved in Special Education.



BACKGROUND: Vocabulary

- Accommodations: Curricular adaptations that compensate e.g. Book on Tape/CD/DVD vs. Textbook
- Assistive Technology: Mobility devices as well information hardware and software
- **504 Plan**: Federal Legislation that guarantees civil rights protection to all individuals with disabilities, not just students
- I.E.P.: Individual Education Plan

BACKGROUND: Vocabulary

- I.E.P. Team: Includes Parents, Special Ed Teacher, General Ed Teacher, School Psychologist, Administrator; Others might include a translator, special services representative,
- LRE: Least Restrictive Environment
- Modifications: Curricular adaptations that change or lower expectations or standards
- Outcomes: Short term goals of IEP that are relevant, specific, and measurable

BACKGROUND: Who's Who on I.E.P. Team

- School Administrator
- Regular Classroom Teacher
- Special Education Teacher
- School Psychologist
- School Nurse
- Counselor
- Speech Pathologist
- Occupational Therapist
- Physical Therapist
- Social Worker

 SCHOOL ADMINSTRATOR

Represents the school system; Has knowledge of educational law



- REGULAR CLASSROOM TEACHER
- Provides curriculum for a child's grade level;
 Monitors child's needs, progress, and learning



- SPECIAL EDUCATION TEACHER
- Either Resource <50%
 Or Special Day Class
 >50% of time; Separate
 remedial environment
 or within regular
 classrooms
- SCHOOL
 PSYCHOLOGIST
- Administers and interprets standardized achievement and aptitude tests.



SCHOOL NURSE

 Besides caring for sick and injured students, they also educate students on health care and growth and development.



COUNSELOR

 Provide academic, career, college admission, and socialemotional support



- SPEECH PATHOLOGIST
- Remediates speech and language problems (articulation, fluency, voice) as well as chewing and swallowing issues.

- OCCUPATIONAL THERAPIST
- Customizes plans to improve the person's ability to perform daily activities and reach their goals

PHYSICAL THERAPIST

Remediates impairments and promotes mobility and function; Gross and fine motor skills, balance, strength



SOCIAL WORKER

Refer clients to additional resources, develop educational programs and support groups at schools.



Individual Education Plan (I.E.P.)

- The I.E.P. is developed to ensure that a child who has been identified with a learning disability receives specialized instruction and related services.
- It provides extensive information concerning the student and clearly defines the resources available and the outcomes to be expected.

Individual Education Plan (I.E.P.)

- IDENTIFICATION: Name, SSN, Age, DOB, Grade, Gender, Language, Parent(s), Contact Information (Phone, Text, Email, Address), Race
- DISABILITY: Primary, Secondary, Referred, Verified, Parental Consent, Eligibility Meeting, Dates(s)
- PRESENT LEVELS OF ACADEMIC ACHIEVEMENT AND FUNCTIONAL PERFORMANCE: Strengths, Preferences, Interests; Concerns of parents to educational progress

- PRESENT LEVELS OF ACADEMIC
 ACHIEVEMENT AND FUNCTIONAL
 PERFORMANCE: Results of Standardized Tests
 in Language Arts (Reading, Writing, Speaking,
 Listening, Research), Math (Concepts &
 Procedure, Problem Solving & Data Analysis,
 Communication Reasoning), Science, Physical
 Education
- HEALTH: Vision and Hearing Testing

- PREACADEMIC/ACADEMIC/FUNCTIONAL SKILLS: Communication Development, Fine and Gross Motor Skills, Social / Emotional / Behavioral, Vocational Skills, Adaptive/ Daily Living Skills, Health
- DEVICES AND/OR SERVICES: Assistive
 Technology Devices/Services; Low Incidence
 Services Equipment, Services, Materials

- CONSIDERATIONS IF STUDENT IS ENGLISH LANGUAGE LEARNER: English Language Mainstream, English Immersion, Primary Instruction
- STUDENT BEHAVIOR: Impede learning of self or others; Interventions? Strategies?
 Supports?

I.E.P. (Critical Part of the Plan)

- AREA(S) OF NEED
- MEASURABLE ANNUAL GOAL(S)
- PROGRESS REPORTS: #1, #2, #3 → Summary of Progress and Comments
- AREAS OF ASSESSMENT: With or Without Accommodation, With or Without Modification; Other Options – Alternative Response Mode, Assistive Equipment/Device

- ANNUAL REVIEW: Goal(s) Met Comments:
- SERVICE OPTIONS: Considered by IEP Team;
 Potential harmful side effects on child
- SUPPLEMENTARY: Aids, Services, Programs, Accommodations, Modifications, and/or Services

•	Start	End	Frequency	Duration	Location
	Date	Date			

 Participants' names, titles and date of each meeting are recorded.

PARENTAL AGREEMENT

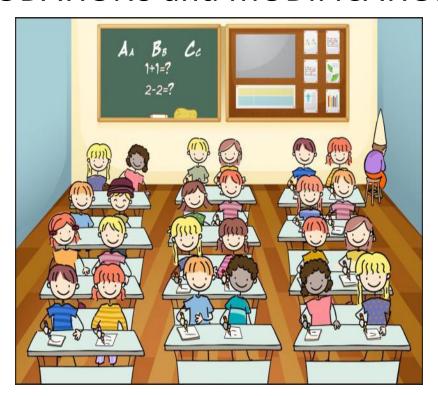
- I disagree with all parts.
- I agree with all parts except
- I decline the offer of special education services.
- I understand that my child is not eligible.
- I understand that my child is no longer eligible.

OUTCOMES: These goals are **S**pecific, Measurable, **A**ttainable, **R**elevant, **T**ime-Bound. They include a:

- 1. Time Frame: "by the annual review date"
- 2. **In Some Condition**: "when given 10 opportunities"
- 3. Will Accomplish Something: "will correctly identify the parts of a sentence"
- 4. At Some Criterion Level: "with 80% accuracy"
- 5. Achievement Schedule: "Every Term"

How these outcomes are applied, we focus on

ACCOMMODATIONS and MODIFICATIONS.



WHAT'S WRONG WITH THIS PICTURE?

The I.E.P. will contain Accommodations and/or Modifications to the student's education plan.

ACCOMMODATIONS

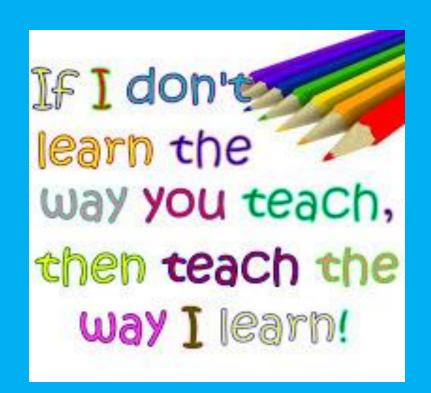
 change how a student learns the material.
 They can help students learn the same material and meet the same expectations as their classmates.

MODIFICATIONS

 change what a student is taught or expected to learn. They are not the same expectations as those of other classmates.

ACCOMMODATIONS can be made in

- Environment
- Schedule
- Teaching Technique
- Schedule
- Materials
- Learning Style
- Assignments



ACCOMMODATIONS

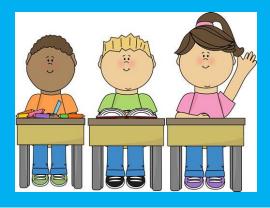
- Assistance
- Grading
- Testing
- Organization
- Behavior
- Therapy: Occupational / Physical
- Therapy: Speech / Language

Fair isn't everybody getting the same thing.
Fair is everybody getting what they need to be successful.

ACCOMMODATIONS

ENVIRONMENT:

- Change Seating?
- Change Group?
- Change Class?



SCHEDULE:

- Activity Breaks
- Free Time After Task
 Completion
- Work with Student Before or After School
- Change Schedule

ACCOMMODATIONS: Teaching Techniques

- Vary Voice Volume
- Increase Eye Contact
- Hand on Shoulder Contact
- Circulate Around Room
- Use Visual Cues
- Provide Extra Examples
- Use Positive Reinforcement



ACCOMMODATIONS: Teaching Techniques

- Teach Through Child's Interest
- Individualized Instruction
- Model Expectations



- Repeat Instructions
- List Assignments/Instructions on Board and Individual Papers



ACCOMMODATIONS: Materials

- Timer
- Manipulatives
- Learning Game
- Computer
- Overhead Projector
- Word Banks
- Notebook for Personal Spelling Dictionary



ACCOMMODATIONS: Learning Style

- Limit Number of Oral Instructions
- Teach Note Taking Skills
- Provide Copy of Notes
- Cooperative Learning Groups
- Vary Reading Approach
- Alternatives to Writing
- Assignment Modifications
- Use Best Learning Modality



ACCOMMODATIONS: Assignments

- Simplify
- Shorten
- Fold Paper in ½ or ¼
- Highlight Parts
- Alternate Assignment
- Assignment Notebook
- Enlarge Materials
- Keep Work Sample

- Break Instructions / Narrative into Sections
- Make Instructions
 Clearer, More Concrete,
 Simple
- Use "Assignment Buddy" System
- Use Student Helper/ Aides

Accommodations: Assistance

Contact Parent(s)

Consult Counselor

Consult with Other Staff



ACCOMMODATIONS: Grading

- Pass / Fail
- Grade Percentage of Improvement
- Narrative Rather than Percentage
- No Handwriting Penalty
- No Spelling Penalty

ACCOMMODATIONS

 ASSISTIVE TECHNOLOGY: Designed for students with learning and attention issues, this is equipment, software, or product designed to increase, maintain, or improve the functional capabilities of a person with disabilities.

Types of Assistive Technology

Devices







ACCOMMODATIONS: Testing

- Extended Time
- Large Print or Screen Reading Technology
- Designated Reader
- Scribes to Transfer Answers
- Distraction-Free Rooms
- Give Responses in Oral Form



ACCOMMODATIONS: Testing

- Use Word Processor
- Mark Test with Highlighter
- Use Timer to Manage Time
- Answer Fewer Questions
- Create Alternative Assignments



ACCOMMODATION: Organization

 Tied to Executive Function Disorder (TBI): Problems with Time Management, Paying Attention, Switching Focus, Planning, Remembering Details, Inhibition

ACCOMMODATION: Behavior

- Behavior Accommodations are specific, consistent, deliberate interventions implemented by the classroom staff.
- They can be divided into four categories:
- 1. Environmental
- 2. Academic
- 3. Instructional
- 4. Sensory

ACCOMMODATION: Behavioral - Environmental

- Minimum visual/auditory distractions
- Seat near positive role model



- Visual boundaries on personal space
- Give adequate personal space in group work
- Close proximity to staff
- Designated space to "cool off"
- Alternative place to work independently



ACCOMMODATION: BEHAVIORAL -Environment

- Post and review expectations
- Establish consistent routines for everyday practices



- Allow student to choose from a variety of activities
- Provide "Peaceful Activities"
- Anticipate need for physical activity

ACCOMMODATION: BEHAVIORAL -Environment

- Be in close proximity during Transitions
- Give "X" minute before transition
- Make sure student has all materials at time of transition
- Make student leader of Team Transition



ACCOMMODATION: BEHAVIORAL - Academic

- Follow harder task with easier one
- Apply learning to real life situations
- Provide samples of work as models
- Provide list of materials needed for each activity
- Offer a list of resources (People, materials)
- Provide assigned tasks in small segments



ACCOMMODATION: BEHAVIORAL -Instructional

- Model appropriate responses in classroom
- Require student to begin assignment in designated period of time
- Assist student with beginning steps
- Allow student to act as peer tutor to another
- Have student repeat instructions before beginning activity
- Emphasize student's choice and responsibility

ACCOMMODATION: BEHAVIOR -Sensory

- Sensory Bin for exploration of textures, shapes
- "Fidget" items
- Minds in Motion, Yoga, Meditation
- Seat cushions / "wiggles"
- Low lighting / color lighting
- Stress Reduction Items
- Headphones
- White noise



ACCOMMODATION: OT / PT

- Occupational Therapy OT
- Additional time on assignments
- Alternative format (Oral to written)



- Physical Therapy PT :
- Easy, safe wheelchair entrance/ exit access
- Emergency Drill contingency plan
- Handicapable Furniture

ACCOMMODATION: Speech / Language Therapy

- Work with Speech Pathologist/Therapist to reinforce exercises
- Use written rather than oral assignments
- Allow extra time for students to express themselves
- Use assistive technologies
- Model good speech practices
- Minimize classroom noise & distractions

MODIFICATIONS

- While accommodations address how a child learns the curriculum, modifications change what the child is taught or expected to learn. Modifications:
- 1. Change the academic standard expectations
- 2. As such, the student learns less than peers.
- 3. Thus, this may impact their future school success and job opportunities. However,

MODIFICATIONS (Continued)

There is a fine line between certain
 Accommodations and Modifications which can ease the effect. For example,

If testing for content knowledge, does it matter whether the format is written or spoken?

If student is not university-bound, are higher level maths necessary?



MODIFICATIONS (Continued)

 The key with Modifications is that they be ageappropriate, related to the curriculum, and do not draw undue negative attention to the student with disabilities.

 For example, a high school class is doing presentations on nutrition while the student with disabilities sits in the back of the room with a tub of lentils and rice to "explore". Is this alright? Why?

In the first part of this presentation,

We examined:

- 1. A historical perspective from Isolation to Institutionalization to Integration to Inclusion
- 2. The most common learning disabilities found in schools
- 3. The members of Special Education Staff
- 4. A sample of the information found with a Individual Education Plan (I.E.P.)

In the second part,

 we examined Accommodations and Modifications to the Individual

Education Plan.



Let's examine the data ...

Research suggests that the number of children and youth ages 3-21 receiving special education services is 6.6 million, or 13 percent of all public school students. It is believed that another 10 % of students who would qualify for special education services are **not** identified. This figure also doesn't represent students who attend private schools or are home schooled.

The Data

- The most common are Dyslexia, ADHD, Dyscalculia, Dysgraphia, and Processing Disorders.
- About 4% have both a Learning Disability and ADD/ADHD.
- Two-thirds of students identified with Learning Disabilities are male.

Graphic Representation: 13%X (10%)

The figure is more alarming

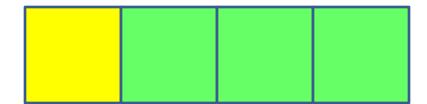
... when examining the total population.
 According to the 2010 U.S. Census, 56.7
 million people or 19% of the population, fit the broad definition of "disabled".



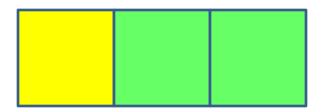
In India ...

 According to the World Health Organization, the total figure of people who are disabled is 25% which is lower than neighboring Bangladesh, which is 32%.

INDIA



BANGLADESH



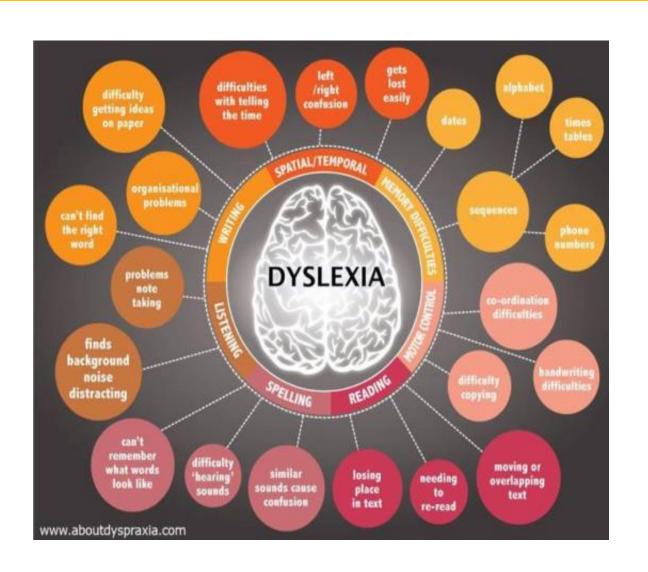
Although, there are many reasons

 for this disparity, this presentation will only suggest a couple. Poverty and resulting issues of health, especially prenatal and childhood health should be noted as significant factors in the presence of learning disabilities and the need for special education. However, genetics also plays the dominant role.

Let's review the most common Learning Disabilities

- 1.Dyslexia
- 2. Dysgraphia
- 3. Dyscalculia
- 4. Processing Disorders
- 5. ADD/ ADHD

To review, DYSLEXIA



Dyslexia: Statistics

- One in 13 people have dyslexia. Many people have dyslexia but are unaware that they do.
- It is not tied to IQ. Einstein had a 160 IQ and dyslexia.
- It occurs in people of all backgrounds and speakers of every language although the rates vary.
- Dyslexia tends to run in families.

Dyslexia: Characteristics / Concepts / Competencies

- Language: Understand directions; Repeat what was just said; Stay on topic
- Reading: Understand written material; Read smoothly; Stay interested in stories
- Writing: Listen & take notes, Proofread
- Socializing: Deal with peer pressure; Interpret body language;
- Other Skills Affected: Filter out background noise; Maintain self-esteem; Spatial Concepts

Dyslexia: Action Plan

- The Right Tools
- Have students dictate stories/answers
- Headphones to avoid distraction
- THINK TIME before response
- Pre-teach and preview materials

- Accommodations
- Extra time to complete assignments/tests
- Set of texts @ home
- IT software
- Do not force participation in oral reading PREREAD JOB READY

SIMULATION

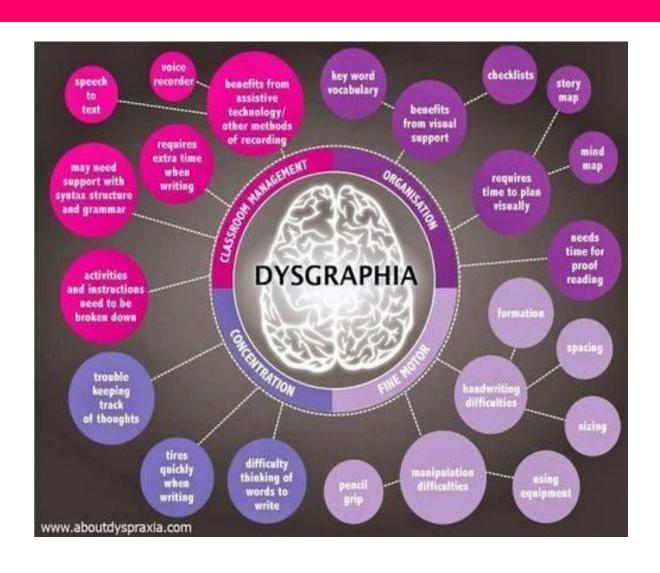
What letter is it?



SIMULATION

• What letter is it? It could be a B, D, P, or Q.

To review, DYSGRAPHIA ...



Dysgraphia Statistics

- Not much research has been done. However, it is estimated that about 5% of all students have some type of handwriting deficit.
- There are different types of Dysgraphia:
 Motor, Spatial, Visual, and Phonological
- Poor drawing skills
- Often difficulty with physical activities

Dysgraphia: Characteristics / Concepts / Competencies

- Writing involves complex skills: 1. fine motor dexterity, 2. patterns associated with letters,
 3. revisualization of letters
- Trouble tracking pen/pencil
- Often have memory capacity deficiency (short-term, long term, working memory)
- Inconsistent spacing between letters & words
- Tires while writing

DYSGRAPHIA: Action Plan

- The Right Tools
- Pencil Grips
- Slant Board
- Raised or Highlighted
 Paper
- Graphic Organizer
- iPad Apps

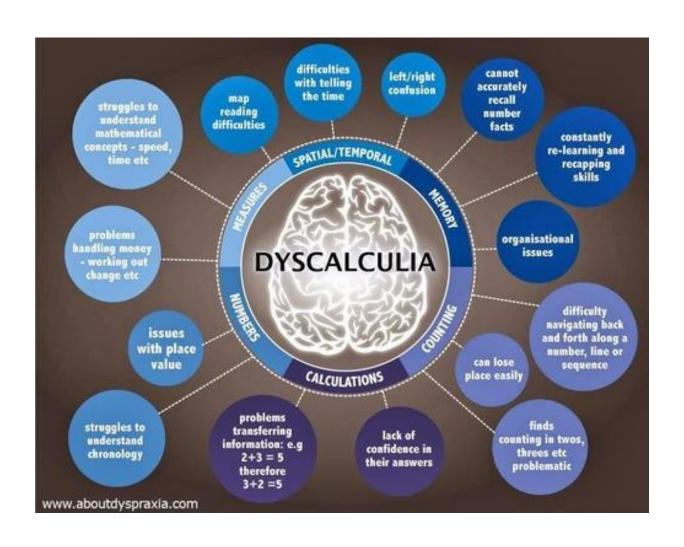
- Accommodations
- Work with an Occupational Therapist



SIMULATION

- 1. Write your name.
- 2. Write name with non-dominant hand.
- 3. Write name backwards.
- 4. Close eyes and write name forward.
- 5. Close eyes and write name backwards.

To review, DYSCALCULIA ...



Dyscalculia: Statistics

- Is present in about 5% of school age children
- It is associated cognitive dysfunction (e.g., impairment of working memory and visuospatial skills)
- About 20% to 60% of those affected have comorbid disorders such as dyslexia or attention deficit disorder
- It does not improve without treatment

Dyscalculia: Characteristics / Concepts / Competencies

- Quantity
- Number
- Symbol
- Calculation
- Operative Capacity
- Abstraction
- Numerospatial Conceptualization

DYSCALCULIA: Action Plan

- The right tools: Supportive tools and tech can help the child navigate difficult problems.
- A calculator s/he knows how to use to verify
- Pencils (for erasing!)
- Graph paper to help him/her keep columns and numbers straight.
- Pre-set phone reminders and alarms to help him/her keep track of time.
- Math apps and games that allow him/her to practice essential skills in a fun way

- Accommodations: Work with the child's family to ensure s/he's able to access appropriate supports including:
- Access to a calculator during class and tests
- Extra time on tests
- A quiet space to work
- The option to record lectures
- Access to the teacher's notes
- Time in the math resource room (if his/her school offers one) Inschool tutoring or homework assistance

DYSCALCULIA: Sidebar

 Math anxiety isn't exclusive to students with dyscalculia, but it is common among children with the disorder. One of the keys to helping students with dyscalculia is teaching them anxiety management strategies. With this is the issue of self-esteem. It is important to acknowledge the hard work and the struggle that the child experiences.

PROCESSING DISORDERS: Defined

 Difficulties in the way in which the brain integrates information. The data can be SPOKEN (Auditory), SEEN (Visual), or EXPERIENCE (Sensory).



PROCESSING DISORDERS: Statistics

 According the National Institute of Health about 5% of school age children have Auditory Processing Disorder. In children with learning disabilities, it is 43%. (About 50% of children with dyslexia also have APD.) The percentage is probably higher because often children go undiagnosed or misdiagnosed (ADD/ADHD, Behavior Problems, etc.). Just because a child passes a hearing tests, doesn't mean s/he does have APD.

PROCESSING DISORDERS: Auditory Characteristics / Concepts / Competencies

 Individuals with this disorder do not recognize subtle differences between sounds in words, even when the sounds are loud and clear enough to be heard.



PROCESSING DISORDERS

• Auditory: Flamenco vs Flamingo

Auditory Processing: Action Plan

- The Right Tools
- Rephrase rather than repeat
- Use images rather than words
- Seat away from window and doors; quiet area

- Accommodations
- Assistive Listening Device
- Extended time
- Non-verbal cues

Processing Disorders: Statistics

• Visual Processing Disorder affects about 10% of the population. It occurs in the brain, not the eyes. There can be weaknesses in the processing of the *visual* world including things like symbols, pictures and distances.

(Dyslexia affects the way the

brain processes language.)

PROCESSING DISORDERS: Visual Characteristics / Concepts / Competencies

- Easily distracted with too much visual information
- Inattentive during visual presentations
- Lacks interest in movies /television
- Difficulty copying board notes
- Poor reading comprehension when reading silently
- Skips words/lines when reading

Visual Processing: Action Plan

- The Right Tools
- Give oral as well as written directions
- Use audio books
- Use charts, graphs, diagrams instead of paragraphs
- Use highlighter for important information

- Accommodations
- Provide class notes or note-taker
- Allow students to write answers on separate paper (more space)
- Accept oral rather than written reports

Processing Disorders: Statistics

 Sensory Processing: A condition affecting about 16% of elementary age children. It exists when the senses (sight, hearing, touch, smell, taste, balance, spatial orientation, and self-awareness) are not adequately processed in order to provide appropriate responses to the demands of the environment.

PROCESSING DISORDERS: Sensory Characteristics / Concepts / Competencies

- Caused by a deficiency in a person's ability to effectively use the information gathered by the senses. It can relate to general sounds or be language specific. It can also affect visual images.
- Others with sensory processing disorder may:
- Be uncoordinated
- Bump into things
- Be unable to tell where their limbs are in space
- Be hard to engage in conversation or play

Sensory Processing: Action Plan

- The Right Tools
- Research on Sensory **Integration Therapy** (SIT) suggests it is ineffective. Most other current methods appear to have questionable rationale and no empirical evidence to support.

Accommodations

 Because of its comorbidity with other disabilities (Anxiety, ADHD, Behavioral Disorders, Autism Spectrum), many of the same accommodations regarding noise level and space apply.

ADD/ADHD Statistics

- ATTENTION DEFICIT DISORDER: A neurodevelopmental condition characterized by problems with paying attention
- ATTENTION DEFICIT HYPERACTIVITY DISORDER is ADD with addition of excessive activity or trouble controlling behavior.
- They affect 5-7% of the population with ADHD three times more prevalent in males.

ADD/ADHD Characteristics / Concepts / Competencies

- Significant problems functioning in at least two settings (e.g., social, school/work, or home)
- Be easily distracted, miss details, forget things, and frequently switch from one activity to another
- Become bored with a task after only a few minutes, unless doing something they find enjoyable

ADD / ADHD: Action Plan

- The Right Tools
- Help with Organization
- Attention Cues
- Segment Assignments
- Sectional color-coded binders
- Organize and check homework assignments before leaving class
- RED ALERT: EARLY INTERVENTION

- Accommodations
- Seating in front
- Repeat directions; have students repeat them
- Use visuals
- Schedule most difficult content early in the day
- Allow frequent breaks and squeeze ball
- Include movement in lesson

ADD/ADHD Characteristics / Concepts / Competencies

- Have difficulty focusing attention on organizing or completing a task
- Have trouble completing or turning in homework assignments, often losing things (e.g., pencils, toys, assignments) needed to complete tasks or activities
- Appear not to be listening when spoken to
- Daydream, become easily confused, and move slowly

As a means of conclusion,

 let's consider some of the guiding principles and best overall practices in Special Education today.

Guiding Principles of Special Education

 The Individuals with Disabilities Education Act (IDEA) ensures that all children with disabilities are entitled to a **Free Appropriate Public Education** (FAPE) to meet their unique needs and prepare them for further education, employment, and independent living.

Guiding Principles

- FREE: No cost to family
- APPROPRIATE:
 Specific to individual child's needs
- PUBLIC EDUCATION:
 Provided locally

- EDUCATION:
 Contains knowledge
 and skills
- EMPLOYMENT: Can be applied in workplace
- INDEPENDENT
 LIVING: Allows for self-sufficiency

Unique Needs

• The unique needs which we call disabilities are **physical** or **mental** conditions that **limit** a person's **movements, senses**, or **activities**. As such, they can impact a variety of aspects of an individual's everyday life.



Best Practices in Special Education

- With Regard to **Services**: Need for Clarity in Conceptualization, Organization, and Delivery. Moreover, participants must:
- 1. Understand human behavior

- 2.Have ability to problem solve through collaborative planning
- 3. Be familiar with the principles of organizational change

Current Trends in Special Education

- 1. Zero Reject Policies
- 2. Nondiscriminatory Evaluation
- 3. Appropriate Education
- 4. Inclusion and Collaboration Movements

Zero Reject Policies

 An educational philosophy which says that no child can be denied an education because they are "uneducable". One of the six core principles of Individuals with Disabilities Education Act (IDEA) states that no child with a disability can be denied a free appropriate public education.

Nondiscriminatory Evaluation

 Assessment of progress by student with disability must be unbiased and multifactored methods of evaluation and must not discriminate on a basis of race, culture, gender, or native language.

Appropriate Education

- As applied, this can range from "receive some educational benefits" to "maximize the child's educational potential".
- Recent court cases suggest that "accommodations and modifications be provided to give the student the greatest chance of progressing toward grade-level performance standards".

Special Education Teacher Retention and Attrition: A Review of the Literature

 What do you believe are the Top Four Reasons WHY Special Education Teachers remain or leave the profession?

Special Education Teacher Retention and Attrition: A Review of the Literature

1. Teacher Characteristics and Personal Factors

2. Teacher Qualifications

• 3. Work Environment

4. Teachers' Affective Reactions to Work

A greater percentage of Special Education Teacher leave than teachers in regular classrooms.

- External Factors: Economic, Societal, Institutional and/or Employment: Professional Qualifications, Work Conditions and Rewards, Commitments to School, District, Teaching Profession
- ISOLATION = CO-TEACHING
- CLASS SIZE = 20 ISN'T WORKABLE 15 IS BETTER;
 DEPENDENT ON LEVEL OF DISABILITY
- IT'S NOT RATIO
- FOCUS ON ONE AREA ONLY; TEACH TO THEIR STRENGTHS --. SING INSTEAD OF WRITE
- GO IN FOR WROMG REASONS SAVE THE WORLD, VACATIONS

Please Continue ...

 To do the critically important work that you with our students with special needs.

Beginning Sounds: The Alphabetic Principle

D	а					R	е		T	i		Q	0	Oo	u	i	٧
S	ga	6	ka			þ	ge		У	gi		Α	go	J	gu	E	gv
₼	ha					P	he		H	hi		ŀ	ho	Γ	hu	₩	hv
W	la					ഗ	le		ြ	li		G	lo	M	lu	ન	lv
$g_{\mathbf{r}^{\prime}}$	ma					Ю	me		Н	mi		5	mo	Ą	mu		
θ	na	Լ	hna	G	nah	V	ne		h	ni		Z	no	Đ	nu	Or	nv
Ι	qua					۵	que		P	qui		w	quo	ධ	quu	3	quv
Н	sa	\mathfrak{S}	s			4	se		Ь	si		ት	so	૪	su	R	sv
Ն	da	W	ta			S	de	$\boldsymbol{\delta}^{\text{ te}}$	V	di	$\boldsymbol{\mathcal{J}}$ ti	V	do	S	du		dv
&	dla	Γ	tla			L	tle		С	tli		A	tlo	\mathfrak{P}	tlu	P	tlv
G	tsa					\mathcal{V}	tse		h	tsi		K	tso	Ъ	tsu	Cž	tsv
\mathbf{G}	wa					W	we		0	wi		છ	wo	I	wu	6	wv
ක	ya					В	ye		Ψ	yi		ĥ	yo	G	yu	В	yv

 AYE/BEE/SEA/DEE/ EEE/EF/GEE/EHCH/ EYE/JAY/KAY/ ELL/ EM/EN/OH/PEA/ CUE/ARE/ESS/TEE/ YOU/VEE/EX/WHY/ ZEE

Beginning Sounds

- Using three letter sight words, this activity can be applied to beginning, ending and vowel sounds.
- Bat
- Cat
- Can
- Ran
- Rat



Rhyming and Alliteration





Phonics teaches readers to decode written words.

 It is most effective when instruction begins in kindergarten. Learning phonics benefits children of all ages, social classes, and abilities.

•
$$f = ph = gh$$

• fool = phone = cough



Expect the best....

Thank you!

