RESEARCH ON VISUAL IMPAIRMENT

- People with visual impairments regularly report:
  - Being ‘on the sidelines just sitting’
  - Being ‘put to the side’
  - Being ‘excluded from activities that my classmates might be doing if my teachers felt like I couldn’t do them’
  - ‘I would just stay out of PE activities and sit in the library’
  - ‘Gym was frustrating because there were a lot of activities where I wasn’t included’
I knew I was different from the other kids at an early age. There was a lot I couldn’t do and I couldn’t participate in and the divide seemed bigger in PE than anywhere else. And I think that was a really bad thing because I think it defined me for much of my life.
OVERVIEW

- What is a visual impairment?
- Basics of visual impairment.
- Teaching strategies.
- Activity modifications.
- Resources.
VISUAL IMPAIRMENTS

- Visual impairments, including blindness, means an impairment in vision that, even with corrections, adversely affects a child’s educational performance.
- This term includes total blindness and partially sighted (IDEA, 1997).
# VISUAL IMPAIRMENTS

<table>
<thead>
<tr>
<th>Classification</th>
<th>Description of Visual Impairments</th>
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<tbody>
<tr>
<td>Visual impairment</td>
<td>Umbrella term encompassing total blindness and partial sight.</td>
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<tr>
<td>Partial sight</td>
<td>Can read print through use of large print or magnification.</td>
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<tr>
<td>Blind</td>
<td>Unable to read large print even with magnification.</td>
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<tr>
<td>Legal blindness</td>
<td>Acuity of 20/200 or less in the better eye with best possible correction or a field of 20° or less diameter in the better eye.</td>
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<tr>
<td>Travel vision</td>
<td>Able to see at 5-10 feet what the normal eye can see at 200 feet.</td>
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<tr>
<td>Light perception</td>
<td>Able to distinguish a strong light at a distance of 3 feet from the eye but unable to detect a hand movement at 3 feet from the eye.</td>
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<tr>
<td>Total blindness</td>
<td>Unable to recognize a strong light shining directly into the eyes.</td>
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VISUAL IMPAIRMENT | CAUSES

- Cortical visual impairment (CVI)
- Macular degeneration
- Retinoblastoma
- Rubella
- Albinism (Ocular Albinism)
- Retinitis Pigmentosa
- Glaucoma
- Cataracts
- Retinopathy of prematurity

Blindness Simulator
• Students with visual impairments (aged 6-21) make up less than 1% of student-aged populations in the United States.
VISUAL IMPAIRMENT BASICS

What should you do when you meet a person with a visual impairment?

• Identify yourself

• If there are others present, address each person by name so there is no mistake as to whom you are talking to.

• Talk directly to the person.

• Tell the person when you leave so they are not left talking to an empty space.
When talking to a person who has a visual impairment:

- Look directly at the person when speaking to him or her.
- It is okay to use words like: See or Look.
- Use a normal tone of voice.
VISUAL IMPAIRMENT BASICS

When offering assistance to someone who is blind:

- If you think a person needs help, offer assistance, but allow the person to decide whether your help is needed.
- Placing a person’s hand on the back of a chair will allow him/her to seat themselves.
- If you must leave a person alone momentarily, leave him/her in contact with a wall, chair, or other stationary object.
- Keep directions as clear as possible, using left or right is a safe bet.
- Be verbal – Hand gestures are meaningless is people cannot see them.
VISUAL IMPAIRMENT BASICS

If you guide a person, offer your arm and let him/her hold your arm just above the elbow for a person equal in height to you.

*Let's try this!*
Before planning for a class with a student with a visual impairment, there are several things you should know about the student:

- Learn about the student’s type of vision.
- Find out if the student has any other disabilities.
- Inquire about the student’s previous physical activity experiences.
- Determine if there are any contraindications.
VISUAL IMPAIRMENT BASICS

Additional basic tips:

• Leave doors either fully opened or fully closed.

• Try to leave the gymnasium set up the same way each day.

• If you choose to rearrange equipment, allow the student with a visual impairment to explore and understand the new arrangement before class.

• Do not leave equipment or weights on the floor.
TEACHING STRATEGIES

• Verbalizing Instruction/ Tactile Modeling
• Tactile Boards
• The Use of Sound
• Modifying Implements
• Peer Tutors
VERBALIZING INSTRUCTION

• For children with visual impairments, visual models are less effective.
• In order to accommodate all students, teachers should verbalize each movement as they visually show it.
• For example: push up
  • Lay flat on your stomach, hands on your sides with palms down next to your chest.
  • Extend arms, pushing body upward until elbows are fully extended.
  • Flex elbows, lower body back to the ground.
WITH A PARTNER WHO HAS A BLINDFOLD ON, GIVE HER OR HIM INSTRUCTIONS ON HOW TO DO THE FOLLOWING ACTIVITY.

*Do not use the name of the activity….since we must assume it is new.
ROTATE POSITIONS, AND GIVE THE PERSON WHO HAS A BLINDFOLD ON INSTRUCTIONS ABOUT HOW TO DO THE FOLLOWING ACTIVITY.

Sit-ups
PHYSICAL GUIDANCE

• Physically manipulating the students body in the direction that you want the student to move.

• This should be done at the same time the teacher is verbalizing instructions.
TACTILE MODELING

• Tactile modeling, also known as hand-under-hand instruction, includes demonstrating an activity and allowing a student to feel what you (the instructor) is doing.

• This allows the student to feel the form of a movement that the teacher is describing verbally.

• Recommended for dynamic movements.
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ROTATE POSITIONS, AND GIVE THE PERSON WHO HAS A BLINDFOLD ON INSTRUCTIONS ABOUT HOW TO DO THE FOLLOWING ACTIVITY.
TACTILE BOARDS

- Tactile boards, or tactile maps, provide the physical layout of a playing area using raised lines and figures.
- Students explore the board, and navigate through the actual court with a teacher to gain an understanding of a playing area.
TACTILE BOARDS
THE USE OF SOUND
THE USE OF SOUND

• Creating a sound source at the location of a **target** can enable students to orient themselves and successfully participate in tasks.

• Teachers should tell students if the sound is before, after, or embedded into the target.

• **Sample sound sources:**
  - Clapping
  - Portable sound sources
  - Wireless doorbells
  - Adapted Balls
MODIFYING IMPLEMENTS

Use equipment which is more visible for children with visual impairments. Use brighter, LARGER, or neon taped implements to better help students whom are visually impaired locate them better.

For kids that are completely blind, specially made balls with bells or sound are more appropriate.
MODIFYING IMPLEMENTS

Dozens of other ways to modify equipment, rules, and boundaries during gameplay.
EQUIPMENT

- Using a larger ball
- Lower baskets or make goals larger
- Tie a plastic bag around it to add noise
- Using a softer ball
- Add sound sources
- Deflate a ball to slow it down
- Add a beeper or bells to the ball
- Use balloons or scarves that are light and will stay in the air longer
- Give sound cues to goals or baskets (hitting a cane or stick against basketball rim)
RULES

• Give offensive player more space between himself and defender
• Bounce passes or rolling of the ball only during basket-ball
• Forgive technicalities (double dribble in basketball or out of bounds in soccer)
• Allow more bounces (2 or 3 bounces for tennis or volleyball)
• Assign role players (offense only, defense only)
• Everyone must touch the ball be-fore scoring
• Give everyone a turn before changing possession (everyone shoots on the basket dur-ing basketball, everyone kicks while playing kick-ball).
BOUNDARIES

- Increase or decrease playing area
- Rope under tape to give rise to boundaries
- Caution tape or flag-rope to mark off playing area and boundaries
- Sound sources behind goals or areas students are trying to get to.
- Bright tape or high contrast colors on floor to mark boundaries
- Guides and spotters in key areas to help redirect play or prevent injuries
- Larger cones to mark areas
MODIFYING IMPLEMENTS

• Utilizing brightly colored neon tape to highlight paths or body movements is another tip that can enhance skill development.
PEER MODELS

• Research has shown that using peer models increases activity time for children with visual impairments in physical education.

Tips for peer models.

• Have all students in pairs, not just the child who is blind or visually impaired.

• When beginning the to use the peer buddy system, use friends of the student with blindness or visual impairments. Move to less familiar friends later in the year.

• Do NOT use the same student at the peer buddy every day, it may alienate both the peer buddy and the student with blindness or visual impairments.
ACTIVITY MODIFICATIONS

• Many students with VI or blindness may have difficulty with the general form of running.
• The motion of swinging arms back and forth while running is not easily understood by those with significant vision loss.
• Placing two hockey sticks or brooms in the student's hands with the instructor or a peer simulating the arm motion in the front can help the student comprehend the correct movement.
RUNNING

- **Sighted guide:** The runner grasps the guide's elbow, shoulder, or hand, depending upon which is most comfortable for the runner and guide.

- **Tether:** The runner and guide grasp a tether—a short string, towel, or shoelace. This allows the runner full range of motion of the arms, while remaining in close proximity to the sighted runner.

- **Guide wire:** The runner holds onto a guide wire and runs independently for time or distance. A guide wire is a rope or wire pulled tightly across a gym or track. A rope loop, metal ring, or metal handle ensures that the individual will not receive a rope burn and allows for optimal performance. The runner holds onto the sliding device and runs for as long as she wishes independently. Guide wires can be set up permanently or temporarily.

- **Sound source from a distance:** The runner runs to a sound source such as a clap or a bell. This can be done as a one-time sprint or continued for a distance run.
RUNNING
Bicycling
BICYCLING

- **Stationary bike:** An individual with a VI can ride a stationary bike with no modifications.

- **Tandem bike:** A person with a VI can ride a tandem bike with no modification. The sighted person can sit in front and give feedback and information to the rider with a VI.

- **Side-by-side bike:** These bikes can be ridden with both riders sitting next to each other. Balance and communication issues are eliminated.

- **Independently:** A rider with low vision may be an independent rider. A rider with a significant vision loss could ride a traditional bike in a safe, open area with feedback.
BICYCLING
SWIMMING

- **Tapper:** Some swimmers who are blind rely on a tapper, which is a long pole with a tennis ball or a piece of foam at the end. A sighted person taps the swimmer on their shoulder when he or she is about eight feet from the pool wall.

- **Counting strokes:** Some swimmers with VI know how many strokes they typically take in a 25-meter pool. They keep track while they swim so they know exactly when to turn at the wall.

- **Swim on the side of the pool:** The wall of the pool is a perfect position for a swimmer who is blind; she or he can swim straight by touching the wall or a lane line.

- **Sprinkler system:** A sprinkler system can be set up about 8-10 feet in front of the end of the pool to signal to the swimmer who is blind when he or she should get ready to turn.
SWIMMING
RESOURCES

PECentral.org ➔ APE Page

S&S Worldwide – Bell Balls

American Printing House for the Blind

Beep Kickball

United States Association of Blind Athletes
RESOURCES

APH

• Gross motor development curriculum for children with visual impairments
• 30-Love Tennis Kit (Blind Tennis Kit)
• Jump Rope to Fitness Kit
• Portable Sound Sources
• Walk/Run Fitness Kit
• COMING SOON: Sports Courts Tactile Maps
Quota Funds

- It is well known that it costs more to educate children with VI due to the need for modified equipment, print medium and assistive technology.
- Therefore each child is provided educational funding to purchase material each year.
- The equipment and materials must be ordered from the American Printing House for the Blind and must be done through the Teacher of The Visually Impaired or Certified Orientation and Mobility Specialist.
- Quota funds cover equipment, books and materials related to physical education and recreation.
RESOURCES

Camp Abilities Long Island
Director: Lisa Santos
Contact: campabilitieslongisland@yahoo.com
Website: Campabilitieslongisland.org
RESOURCES

Surf for All
Cliff Skudin (Skudin Surf)
Webpage: sufforall.org
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THANK YOU