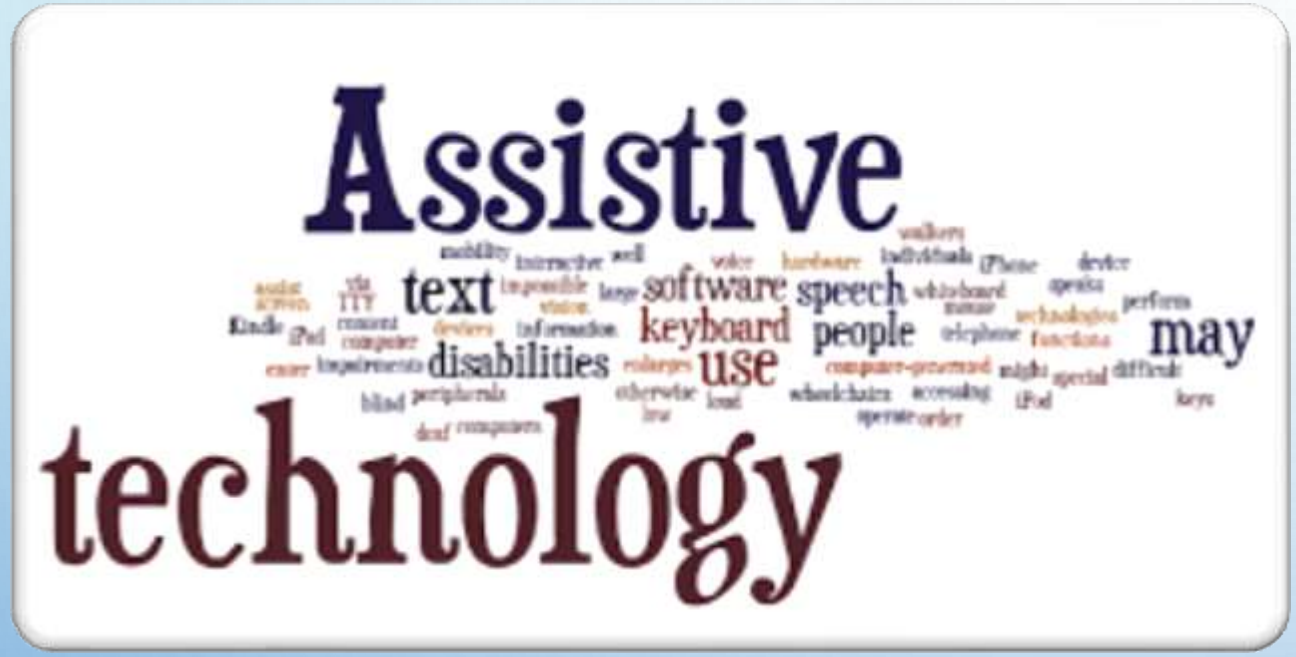



# ASSISTIVE TECHNOLOGY

BY: SUSHMA RATHI

# WHAT IS ASSISTIVE TECHNOLOGY DEVICE

**ASSISTIVE TECHNOLOGY DEVICES ARE IDENTIFIED IN THE IDEA 2004 AS:**

**ANY ITEM, PIECE OF EQUIPMENT OR PRODUCT SYSTEM, WHETHER ACQUIRED COMMERCIALLY OFF THE SHELF, MODIFIED, OR CUSTOMIZED, THAT IS USED TO INCREASE, MAINTAIN, OR IMPROVE THE FUNCTIONAL CAPABILITIES OF CHILDREN WITH DISABILITIES.**

**ASSISTIVE TECHNOLOGY CAN BE USED TO SUPPORT AND ENHANCE COMMUNICATION FOR PEOPLE WITH AUTISM, REGARDLESS OF SPEECH ABILITY.**

**AUGMENTATIVE AND ALTERNATIVE COMMUNICATION (AAC) IS A SPECIFIC TYPE OF ASSISTIVE TECHNOLOGY THAT CAN BENEFIT PEOPLE WITH AUTISM OF ALL AGES BY PROMOTING INDEPENDENCE, EXPANDING COMMUNICATION, AND INCREASING SOCIAL INTERACTIONS.**

# STRATEGIES

**ASSISTIVE TECHNOLOGY CAN BE DIVIDED INTO THREE MAIN CATEGORIES: LOW-TECH STRATEGIES, MID-TECH STRATEGIES, AND HIGH-TECH STRATEGIES.**

## *Low-tech strategies*

- ✓ Low- cost
- ✓ Less training
- ✓ No complex features

**Examples:**

- ➢ Visual support
- ➢ handheld magnifiers
- ➢ large print text
- ➢ using paper and pen to communicate
- ➢ canes and walkers
- ➢ reachers/grabbers
- ➢ specialized pen or pencil grips and much more


## *Mid-tech strategies*

- ✓ Some-complex features
- ✓ Maybe electronic or battery operated
- ✓ Requires some training

**Examples:**

- ➢ talking spell checkers
- ➢ manual wheelchairs
- ➢ electronic organizers
- ➢ Closed Caption Televisions (CCTV's)
- ➢ amplifiers
- ➢ books on CD
- ➢ environmental control units (ECU)
- ➢ alternate mouse or keyboard for the computer and much more

## *High-tech strategies*

- ✓ Complex devices
- ✓ Requires effort and training
- ✓ May be computerized
- ✓ Costly
- ✓ Have electronic components

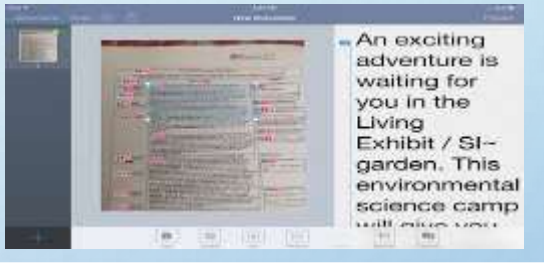
**Examples:**

- ➢ power wheelchairs and scooters
- ➢ digital hearing aids
- ➢ computers with specialized software such as voice recognition or magnification software
- ➢ electronic aids to daily living
- ➢ digital hands-free headsets
- ➢ voice activated telephones
- ➢ communication devices with voices
- ➢ bluetooth integration
- ➢ digi-drive technology (operating a vehicle with a joystick)

# ASSISTIVE TECHNOLOGY TO SUPPORT COMMUNICATION AND LANGUAGE

| ***Low-tech*** | ***Mid-tech*** | ***High-tech*** |
| --- | --- | --- |
| **Communication board**<br>**-made using paper and pictures**<br>  | **Go Talk 9 is portable.. Helps in teaching life skills.**<br>  | **Proloquo2go-app for ipad**<br>**Symbol-supported communication.**<br>  |
| **PECS**<br>**-can be used to support varied communication needs**<br>  | **TalkTrac – wearable communication device. Supports in social communication**<br>  | **NOVA chat- Portable design that includes a 10.1 display, switch scanning, social chat, speech synthesizer, and many other chat features.**<br>  |

# ASSISTIVE TECHNOLOGY TO SUPPORT ACADEMICS AND COGNITIVE NEEDS

| ***Low-tech*** | ***Mid-tech*** | ***High-tech*** |
| --- | --- | --- |
| **Concrete-manipulatives- can be used to solve algebra, integers, area, perimeter, and fractions.** | **Pentop computers-can be used for reading (text-to-speech), writing (digitizing written words), and math (strategy feedback).** | **Optical character recognition(OCR)- reads aloud text from images and pictures.** |
|  |  |  |
| **Pencil grips- serves as a low-tech writing-based AT to support students with disabilities and fine motor issues** | **Calculators-supports with basic facts and helps students with poor working memory.** | **Text-to-speech (TTS)-lets kids see text and hear it read aloud at the same time.** |
|  |  |  |

# ASSISTIVE TECHNOLOGY TO SUPPORT TRANSITION

***Low-tech***

**Visual pictures to support details- can be used for work schedule or simple tasks like brushing teeth**


***High-tech***

**On-key screen boards**


**Handheld magnifier-helps a student with low vision to move on to employment in a retail store and to magnify product tags or to access store's cash register.**

**Phone planner/Home smart devices- will support with daily activities and things that need to be accomplished**

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