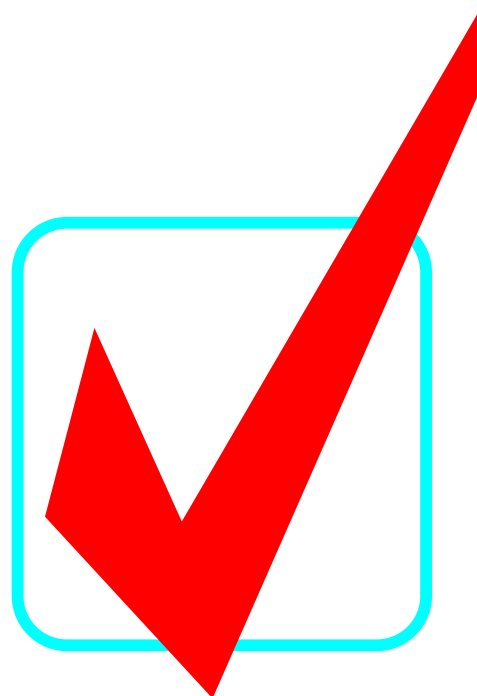


# Functional Vision Checklist for Augmentative and Alternative Communication (FVC/AAC)



Pennsylvania Training and Technical  
Assistance Network (PaTTAN)  
*Pennsylvania Department of Education*

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# Functional Vision Checklist for Augmentative and Alternative Communication (FVC/AAC)

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## What is the purpose of the FVC/AAC?

To assist teams in assessing a student's ability to visually access a communication system or display whether or not a diagnosed vision loss is present.

## Why should teams use the FVC/AAC?

To better understand a student's ability to visually access AAC and the environmental factors that may impact on the use of AAC.

## For which students should teams consider using the FVC/AAC?

Students with or without a diagnosed visual impairment or students who experience systematic motor difficulties. Functional vision considerations may be a concern when these students are using AAC.

## Who should use the FVC/AAC?

Team members including: parents, teachers of students with visual impairments, occupational therapists, physical therapists, speech/language pathologists, teachers of students with multiple disabilities, general education teachers, etc.

## When should the FVC/AAC be completed?

Although the FVC/AAC is designed to guide the student's team during the exploration, assessment or decision-making portion of the assistive technology process, it may also be used at any time during the implementation of assistive technology.

## Background information

Name: \_\_\_\_\_ Date: \_\_\_\_\_ DOB: \_\_\_\_\_

Date of Last Eye Exam: \_\_\_\_\_ Summary of Results: \_\_\_\_\_

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# Section One: Optical/Motor Visual Skills and Abilities

Code: F = Family  
E = Educational Staff  
EC = Eye-Care Professional  
MD = Medical Personnel

Yes	No	Need to Assess	SKILL/ISSUE	DESCRIPTION	QUESTIONS TO ASK	WHO MAY PROVIDE INFORMATION?
			Attention	Awareness of lights or large objects without understanding or interpreting them.	Does the student appear to react to lights and objects in the environment?	F, E, EC
			Localization	Finding and fixating on a specific target (lights or objects or pictures.)	Is the student able to find and maintain eye contact on a target at both near and distance?	F, E, EC
			Tracking	Maintaining visual contact on a moving object; includes horizontal, vertical, diagonal and circular; may involve eye, head or a combination of eye and head.	Is the student able to visually track objects without moving the head or changing body position? Is the student able to visually track without losing balance or increasing or decreasing body stability?	F, E, EC
			Tracing	Ability to motor plan for the visual system to outline a stationary object.	Is the student able to visually trace a target to perceive form, shape or detail?	F, E
			Scanning	Ability to systematically move from one localization or target to another in various planes.	Is the student able to systematically move from one target to another horizontally, vertically, diagonally and circularly? Is the student able to continue the motoric task while visually scanning to the next step?	F, E, EC
			Acuity	Clearness or sharpness of vision.	Is the student able to discriminate targets at near, intermediate and in the distance? What size target is the student able to discriminate at these distances?	F, E, EC
			Visual Fields	Approximately 180 degrees in all meridians; includes central and peripheral as well as superior, inferior, nasal and temporal; field losses or scotomas may occur in any field, be scattered, or be hemianopic.	Is the student able to look at targets which are presented directly in front or does the student look off to the side - if so, which side (central fields, eccentric viewing?) When looking straight ahead, is the student aware of targets presented to the left, right, above and below.	F, E (screening/observation) EC (diagnosis)

## Section One: Optical/Motor Visual Skills and Abilities

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			<b>SKILL/ISSUE</b>	<b>DESCRIPTION</b>	<b>QUESTIONS TO ASK</b>	<b>WHO MAY PROVIDE INFORMATION?</b>
<b>Yes</b>	<b>No</b>	<b>Need to Assess</b>	Binocularity	Ability of both eyes to work together as a team; includes fusion which is the ability for both maculas and the brain to work together to perceive one image.	Does the student appear to be using both eyes at the same time? Does the student over or under reach when contacting targets? Does the student exhibit unusual head tilts or turns when visually contacting a target?	F, E (screening/observation) EC (diagnosis)
			Convergence	Ability of both eyes to maintain focus on targets at different distances (especially as they move closer.)	Is the student able to maintain the use of both eyes at different distances? Is the child able to use both eyes as a target moves closer to him? If not, at what distance does the student appear to lose binocularity?	F, E (screening/observation) EC (diagnosis)
			Accommodation	Ability of the lens to change shape in order for the visual system to maintain focus on targets at different distances.	Is the student able to look quickly from near to distance targets (and vice versa) without blurring or losing his place?	F, E (observation) EC (diagnosis)
			Eye-Hand Coordination	Ability of the eyes and the hands to work together for accurate reaching and contact with one's environment for various tasks; may include eye-foot or eye-body.	Is the student able to maintain visual contact on a target while contacting it motorically? How accurate? Does the student over or under reach?	F, E, EC
			Refraction	The bending of light rays as they pass from one medium to another; may include correction for myopia, hyperopia, astigmatism and presbyopia or the use of bifocals and other low vision optical devices.	Does the student have a refractive error? Does the student wear glasses or contacts? If so, are they designed to be worn all the time? Are they designed to correct near or distance vision? Does the student use bifocals for near and if so, is the student using them correctly? What condition are the glasses or contacts (scratches, fit?) How old is the prescription?	EC (diagnosis, prescription)

Additional Comments/Suggestions:

## Section One: Optical/Motor Visual Skills and Abilities

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Yes	No	Need to Assess	SKILL/ISSUE	DESCRIPTION	QUESTIONS TO ASK	WHO MAY PROVIDE INFORMATION?
			Medication	Medications may cause changes in visual functioning.	Is the student taking any ocular or systemic psychotropic, behavioral or seizure control medications which may impact on visual functioning? Does the student's level of visual functioning change after taking medications?	F, E (observation) EC or MD (prescription/information/modification)
			Light Sensitivity	All people experience some level of light sensitivity. The intensity, type and location of light can cause sensitivity.	Is the student bothered by bright lights or various types of light? Is the student able to adapt from bright to dim light and vice versa?	F, E, EC
			Contrast Sensitivity	The ability to detect objects of low contrast.	Is the student able to discriminate targets and detail with low contrast?	F, E, EC
			Cortical Functioning	Has the student been diagnosed with cortical visual impairment?	Is the student's visual attention fleeting? Does the student exhibit high levels of fluctuation in visual functioning? Does the student perform better visually in a non-cluttered environment?	EC
			Color	The use of color on AAC displays is often utilized.	Is the student motivated by color? Is the student able to perceive differences in color? Is the student able to perceive differences in hue? Is the student able to use color coding for enhanced localization and scanning? Does the use of color enhance or decrease contrast?	F, E, EC
					Is the student able to discriminate targets at near, intermediate and in the distance? What size target is the student able to discriminate at these distances?	F, E, EC

## Section Two: Perceptual Visual Skills and Abilities

Code: F = Family  
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			<b>SKILL/ISSUE</b>	<b>DESCRIPTION</b>	<b>WHO MAY PROVIDE INFORMATION?</b>
Yes	No	Need to Assess	Closure	Ability to perceive and identify a total picture when only a portion or part is visible.	F, E, EC
			Figure-Ground	Ability to discriminate a specific target from its background.	F, E, EC
			Parts-to-whole	Ability to visualize parts that are able to be combined into an integrated whole.	F, E, EC
			Constancy	Ability to recognize similarities in targets that may be different in size, orientation or presentation.	F, E, EC
			Inner/Outer Line Detail	Relationship between the outside vs. the inside complexity and distinguishing features of visually presented targets.	F, E, EC
			Three to Two Dimensional Representations	Ability to developmentally move from concrete object representations to those on paper.	F, E, EC
			Visual Memory	Ability to recall from storage one's past visual experiences.	F, E, EC
			Visual Sequencing	Ability to logically order in a time series visually presented representations of events.	F, E, EC
			Laterality	Ability to understand one's body position and movement within the environment.	F, E, EC
			Directionality	Ability to understand prepositional relationships.	F, E, EC

## Section Two: Perceptual Visual Skills and Abilities

Code: F = Family  
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Yes	No	Need to Assess	<b>SKILL/ISSUE</b>	<b>DESCRIPTION</b>	<b>WHO MAY PROVIDE INFORMATION?</b>
			Spatial Relationships	Ability to perceive the position of two or more objects in relation to self and others.	F, E, EC
			Integration	Interpretation of irregularly spaced letters into words (visual/letter integration); interpreting nonlinguistic visual stimulus into a linguistic nonlinguistic visual stimulus into a linguistic written response (visual/writing integration.)	F, E, EC

## Section Three: Environmental Considerations/Adaptations

Not an Issue	Need to Assess	Adaptation	<b>ISSUE</b>	<b>DESCRIPTION</b>	<b>QUESTIONS TO ASK</b>	<b>POSSIBLE ADAPTATIONS</b>
			<b>Lighting</b>			
			A. Type	A student may function better visually under different lighting conditions.	Which type of light is best for the student in various situations? (types of light-incandescent, fluorescent, halogen, natural.)	Provide preferred type of light for student use.
			B. Indirect vs. Direct	Indirect or ambient light may cause glare problems. Direct light may increase contrast.	Does the student perform better visually when a direct light source is provided?	Provide flex-arm, gooseneck, etc., clip-on or mounted direct light source for the student.
			C. Amount	The intensity of the light source may impact on visual functioning.	Does the student perform better visually under high or low levels of illumination?	Use rheostats or environmental modifications to control amount of light.
			D. Direction	Visual functioning may be affected by the direction from which the light is coming.	Does the student perform better visually if the direct light source is coming from the left, right, or above? Does the student perform better visually with window light coming from behind, left or right?	Control the direction of the direct light source. Position student to best utilize indirect lighting or materials.
			E. Glare	Under certain conditions, light reflecting off visual targets may cause a decrease in visual functioning.	When I position my face where the student's face will be, do I perceive glare? When the student's position or environment changes, is there a change in the level of visual functioning?	If glare is present it may often be eliminated by simply repositioning the direct light source, the visual target, or the student. Provide an anti-glare shield on the display, device or board to block glare. Provide anti-glare overlay on visual target.

## Section Three: Environmental Considerations/Adaptations

Not an Issue	Need to Assess	Adaptation	<b>ISSUE</b>	<b>DESCRIPTION</b>	<b>QUESTIONS TO ASK</b>	<b>POSSIBLE ADAPTATIONS</b>
			<b>I. Lighting (continued)</b>  F. Photophobia/ Light Sensitivity	Some eye conditions result in photophobia or light sensitivity.	Does the student's eye condition result in photophobia or light sensitivity? Does the student perform better visually in lower levels of light? Does the student exhibit excessive squinting, blinking, or try to shield eyes under various lighting conditions. Does the student exhibit change in behavior when moving from dark to light or light to dark environments?	Use rheostats to control amount of direct light. Use absorptive sunlenses to help with photophobia and light/dark adaptation. Use color filters or different color light bulbs for comfort. Use hats with brims or visors to block light.
			<b>II. Contrast</b>  A. Light/Dark Density (Boldness)	Bolding targets may increase attention, localization, and discrimination. Bigger alone is not always better.	Does the student's accuracy, endurance, working distance and speed increase when targets are bolded? Does the student have difficulty using LCD displays?	Bold targets on displays or use backlighting on LCD displays. Use active matrix displays on computer screens. Use visual accents to increase visual attention to targets.
			B. Polarity	Most text and displays use positive polarity. Some students perform better visually when targets are presented using negative polarity.	Does the student's visual functioning increase when targets are presented using white on black (negative polarity) or black on white (positive polarity)?	Use preferred polarity when designing displays or boards.
			C. Color vs. Black/White	Many students report that black/white targets provide more contrast than color targets.	Does the student's visual functioning increase when using black/white targets vs. color targets?	Use black/white if color causes a decrease in contrast. If targets are already in color, use acetate color filters to enhance contrast.

## Section Three: Environmental Considerations/Adaptations

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Not an Issue	Need to Assess	Adaptation	<b>ISSUE</b>	<b>DESCRIPTION</b>	<b>QUESTIONS TO ASK</b>	<b>POSSIBLE ADAPTATIONS</b>
			<b>II. Contrast</b> (continued)			
			D. Background (What's beyond the target?)	Contrast can be increased by controlling the background of the visual target.	Is the student able to discriminate targets when the background is cluttered or low in contrast?	When asking a student to make choices using visual gaze, wear contrasting clothing. Provide high contrast background on displays and boards. Modify computer screen backgrounds.
			<b>III. Magnification</b>	Enlarging targets may be accomplished in various ways.	Does the student require larger targets to increase discrimination?	Make targets larger. Allow student to move closer to target. Use optical low vision devices.

			<p><b>IV. Distance of Target (Working Distance)</b></p> <p>Students may prefer a certain working distance.</p>	<p>Does the student exhibit increased visual functioning at a certain working distance? Does the student exhibit problems with accommodations?</p>	<p>Help student control the environments by positioning targets at preferred working distance. Decrease the demand for accommodation by positioning multiple working targets at the same working distance.</p>
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### Section Three: Environmental Considerations/Adaptations

Not	Need to Assess	Adaptation	<b>ISSUE</b>	<b>DESCRIPTION</b>	<b>QUESTIONS TO ASK</b>	<b>POSSIBLE ADAPTATIONS</b>
			<p><b>V. Positioning of Target (Angle of View)</b></p>	<p>Placement of visual targets, devices, keyboards, or language boards in various planes and positions may increase visual functioning.</p>	<p>Does the student exhibit difficulty accessing desired targets when they are placed flat on a table or tray? Does the student exhibit field preferences? Does the student exhibit eccentric viewing?</p>	<p>Use a slant board to position target in the same plane as the student's face. Position visual targets in student's preferred visual field.</p>

		<b>VI. Number of Targets/Choices</b>	Complex AAC displays often require the student to access many targets.	Does the student exhibit systematic scanning and localization skills sufficient to visually access displays with many targets?	Use color coding to help the student with localization and scanning. Use typoscopes to help with localization and scanning. Promote systematic scanning on complex displays.
		<b>VII. Spacing (Visual Clutter)</b>	Complex AAC display may appear to be visually cluttered.	Is the student able to distinguish targets when they are placed in close proximity to other?	Use bold lines of demarcation between targets. Block targets with bold outline.
		<b>VIII. Font Qualities</b>	Different font characteristics may enhance visual functioning.	Is there a particular font which this student is better able to discriminate? Are serifs an issue?	Where possible, use the student's preferred font on displays and output devices.
		<b>IX. Time/Speed Requirements</b>	Communication often needs to be spontaneous and quick, requiring advanced visual skills.	Is the student able to effectively keep up with communication needs?	Plan for needed communication messages. Use a system that allows for maximum efficiency. Allow for extra time.

**Section Three: Environmental Considerations/Adaptations**

Not	Need to Assess	Adaptation	<b>ISSUE</b>	<b>DESCRIPTION</b>	<b>QUESTIONS TO ASK</b>	<b>POSSIBLE ADAPTATIONS</b>
			<b>X. Duration/Fatigue Endurance</b>	Visual fatigue may occur when Demands on the visual system	Does the student's level of visual functioning decrease after approximately 20 minutes?	Plan visual rests during The day. Allow for tactual or auditory Channels to be used if

outweigh tolerance.

What is the student's tolerance level?

tactual or auditory Channels to be used if  
Appropriate. Allow for use of No-tech and  
low-tech systems.

## Supportive References

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