

***Making Art Accessible for Students with
Physical, Visual, Speech and Multiple
Disabilities using AT***

Council for Exceptional Children Convention
Philadelphia, PA
April 2014

For materials go to:
http://web.utk.edu/~mbc/mbc_materials

Presenters:

Mari Beth Coleman, Ph.D.

Assistant Professor, Special Education Instructional Program
Department of Theory and Practice in Teacher Education
University of Tennessee
A416 Bailey Education Complex
Knoxville, TN 37996-3442
865-974-4456 (office phone) | 865-974-6302 (fax) | mbc@utk.edu

Joan Grim, M.S.

Senior Lecturer, Special Education Instructional Program
Department of Theory and Practice in Teacher Education
University of Tennessee
A413 Bailey Education Complex
Knoxville, TN 37996-3442
865-974-4155 (office phone) | jgrim2@utk.edu

**Checklist of Assistive Technology Solutions for Enhancing Art Instruction
for Students with Physical, Visual, Severe, and Multiple Disabilities**

Student: _____ Date: _____

Student's Diagnosis/Eligibility: _____

Student's Capabilities in Art with/without Assistive Technology: _____

Student's Functional Limitations that Require Assistive Technology: _____

Complete the following checklist for assistive technology solutions that may be beneficial for this student to participate fully in art class.

Solutions That Do Not Use Technology (Accommodations and/or Modifications)

- Peer or adult assistance in gathering materials
- Increased time to complete art assignments or assessments
- Decreased number of assignments or assessments
- Decreased number of written assignments
- Directions given in an alternate format (e.g., spoken instead of written)
- Directions broken down into small steps
- Additional explanation of requirements
- Partial participation (student creates as much of project possible while someone else creates the rest)
- Modified grading rubrics requiring reduced number of standards met (e.g., mastery of one concept instead of all concepts presented).
- Other: _____

Assistive Technology for Students with Physical Limitations

AT for Positioning to Enhance Access to Art Activities

- Adapted position of desk (e.g., desk raised or lowered)
- Adapted position of materials (e.g., placement of materials to student's dominant side).
- Classroom adaptations which allow extra room for mobility or positioning equipment (e.g., wider aisles for wheelchair or walker)
- Use of a slant board or other slanted surface for students with decreased range of motion
- Use of nonslip material for stabilization (e.g., rubber shelf liner placed under materials)
- Use of rolls, wedges, or other equipment to stabilize student during activity (e.g., rolled up towel placed under arm)
- Other: _____

AT for Students with Fine Motor Limitations to Enhance Access to Art Activities

- Student uses an alternate body part (e.g., paints with brush held in mouth or with foot)
- Student receives hand-over-hand or hand-under-hand assistance (student retains control of paintbrush or writing utensil)

- Large handled paintbrushes or writing utensils
- Larger sized materials (e.g., larger shape cutouts)
- Adaptive scissors (double handle loops, spring open scissors, scissors mounted on a platform for one-handed use)
- Precut materials
- Student creates parts of clay project and directs a peer or adult to put pieces together
- Students uses adaptive tools instead of hands to shape clay
- Stamps used instead of writing or drawing
- Battery-operated painting device (e.g., Spinart, Doodle Doug) used so student can be independent instead of having someone else paint for him/her
- Magazine pictures or pictures/clipart acquired from internet sources used instead of drawing by hand
- Computerized drawing or painting program used instead of painting/drawing by hand
- Student is given an alternative activity which allows for more independence (e.g., switch-operated computer program teaching colors or shapes for students with severe intellectual disabilities)
- Other: _____

AT for Students with Visual Impairments

- Larger text created with word processing software or copier
- Magnifiers (nonelectronic or lighted)
- Electronic or computerized magnification (e.g., materials viewed using a Closed Circuit Television or viewed on the computer using screen-magnifying software)
- Text provided auditorially using an MP3 player, specialized text-reading device, or computer with text-reading software
- Use of tactile rather than visual materials (e.g., instead of different colors, student uses different textures)
- Light box (similar to a Light Bright or created from a Light Bright) used to provide visual contrast while student is working
- Other: _____
































AT for Students with Communication Limitations















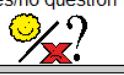































- No technology solutions such as signing or gestures.
- Nonelectronic communication devices with pictures of art materials or activity-specific vocabulary (e.g., cardstock with pictures on which student points to indicate choices).
- Battery-operated communication devices with activity-specific phrases (e.g., BIGmack Communicator programmed with the phrase, "I need more paint.")
- Computer-based communication devices programmed with a page for each art activity (e.g., separate pages for painting, sculpture, paper-making, etc.)
- Other: _____

I need... 	more 	different 			
paint 	paintbrush 	paper 			
Black	White	Red	Green	Yellow	Blue
Brown	Orange	Pink	Purple		

Example of a board made from internet images.

Example of a generic communication board created with Boardmaker.

drawing 	painting 	clay 	sculpture 	printmaking 	photography 	multimedia 
line 	shape 	space 	texture 	value 	color 	form 
white 	black 	yellow 	red 	blue 		
green 	brown 	orange 	pink 	purple 		
small 	medium 	big 	light 	dark 	thin 	thick 

	yes 	no 	I don't know 	not on this board 	
I need help 	I need 	I want 	I don't want 	I like 	I don't like 
more 	different 	I have something to say 	Ask me questions 	Ask me a yes/no question 	Do you understand? 
What are you doing? 	Tell me about that 	What do you think? 	What is your favorite? 	Which do you like? 	That's cool 
painting 	paint 	paintbrush 	paper or canvas 	easel 	mix 
line 	shape 	color 	texture 	tint 	shade 
white 	black 	red 	yellow 	blue 	light 
brown 	green 	pink 	purple 	orange 	dark 

Example of a board with social communication options in addition to specific vocabulary for painting. This could be used low-tech or could be linked to similar boards with the bottom containing activity-specific vocabulary (e.g., clay vocabulary).

To use this Task Analysis, the art educator should create a list of steps for the art activity. The special educator and paraprofessional should design how to implement technology and partial participation for each step. Data should be collected on implementation during the activity.

Task Analysis: Creating a Nicho to Represent a Population of People Indigenous to North America

NATIONAL ART STANDARD: 5-8 VISUAL ARTS

4. Content Standard: Understanding the visual arts in relation to history and cultures

Achievement Standard: Students: a. know and compare the characteristics of artworks in various eras and cultures; b. describe and place a variety of art objects in historical and cultural contexts; c. analyze, describe, and demonstrate how factors of time and place (such as climate, resources, ideas, and technology) influence visual characteristics that give meaning and value to a work of art

Student: Suzie Q. (5th grader with spastic quadriplegic CP, low vision, IQ in average range)

Instructors: Ms. Smith (art teacher), Ms. Jones (paraprofessional), and Mr. Doe (special education teacher)

STEPS	TOOLS NEEDED	LEVEL OF INDEPENDENCE EXPECTED / ACCOMODATIONS	DATA: PROMPTS / PERFORMANCE NOTES
COMPUTER LAB DAY 1	-----	-----	-----
1. Research the significance of nichos in Latin American culture	Trackball, text-to-speech software, onscreen keyboard, clicklock and magnifier turned on in control panel.	Suzie should identify selected population via her AAC device, locate website provided by teacher, read / listen to key information. Ms. Smith can prompt by asking leading questions, assisting with spelling, and assisting with locating website.	
2. Complete graphic organizer with main ideas about student's culture (which will be incorporated into student's nicho)	Same as above plus worksheet scanned into PDF manipulation software.	Suzie will type at least 3 answers independently. To save time, Ms. Smith will pull up worksheet for Suzie and can help type answers after first 3.	
ART ROOM DAY 2	-----	-----	-----
3. Paint background of nicho	Peers will use paints; Suzie will have a choice of paintbrush with soft grip or create background with TuxPaint or pictures from internet.	Suzie can draw her background using adapted paintbrush (hand over hand from Ms. Smith), or create with TuxPaint or she can select an image from the internet. Ms. Smith will help her print and cut background image.	
4. Shop for materials to add to nicho	Materials provided by art teacher. The area with materials must be w/c accessible so Suzie can shop or materials may be selected and placed on Suzie's wheelchair tray.	Suzie may hold all materials close to her face / feel them.	
5. Create character people or culturally relevant props to add to nicho using materials	Materials provided (e.g., clay, cardboard, straw, cotton); adapted glue bottle; glue with color for easier visibility.	Suzie may use clay or other materials with hand-under-hand assistance or TuxPaint or Internet images to create people and items. Suzie will place glue on materials and Ms. Smith will help her glue them to cardboard.	
6. Place and glue materials in nicho	Adapted glue bottle; glue with color for easier visibility.	Suzie will place glue on materials and provide verbal instructions to Ms. Smith for placement of materials in nicho.	

