

Carnegie Mellon University Children's School

Continuum of Developmental Objectives

1. Self-Esteem & Independence - encouraging each child's growing self concept and confidence, as well as increasingly independent self regulation and self care.

A. SELF CONCEPT

3 ->	4 ->	5 ->
describe self in concrete/physical ways (age, clothes, body parts, etc.)	describe self in terms of abilities, activities (strength, favorite centers)	describe standard physical characteristics (hair, eyes, etc.) and accomplishments (can read, play piano)
note others' features	compare & contrast others' features with respect	compare & contrast others' features with respect
identify self as boy/girl	identify others as boy/girl	identify gender as stable characteristic
identify family members understand family structure and roles	describe family traditions role play re: family and community	describe immediate culture (Pgh, neighborhood, religious community)
accept self and diverse others	accept self and diverse others	accept self and diverse others

B. SELF CONFIDENCE

3 ->	4 ->	5 ->
separate from parent comfortably		
show pride/confidence in ability	show pride/confidence in ability	show pride/confidence in ability
risk trying new things & solving problems	risk trying new things & solving problems	risk trying new things & solving problems
share experiences as they happen at school	share verbally with teachers & peers	share accomplishments with group
choose varied activities with supervision	choose varied activities with guidance	choose varied activities independently
do classroom jobs with supervision	do classroom jobs with guidance	do classroom jobs independently

C. SELF REGULATION

<u>3 -></u>	<u>4 -></u>	<u>5 -></u>
manage waiting patiently regulate emotions identify basic emotions	manage waiting patiently regulate emotions describe basic emotions control impulses empathize with others	manage waiting patiently regulate emotions describe emotion causes empathize with others
use calming strategies	use relaxation strategies	

D. SELF CARE

<u>3 -></u>	<u>4 -></u>	<u>5 -></u>
ask for help appropriately be independent for self-care regular toileting wash and dry hands hang up coat	ask for help appropriately be independent for self-care change clothes put on coat,hat put on mittens put on shoes, boots fill backpack pour liquid open door with handle	ask for help appropriately be independent for self-care put on gloves zip, tie, button, snap open lunch box cut with knife wash tables
feed self use utensils manage meal cleanup		

2. Interaction & Cooperation - promoting children's social skills for effective adjustment to school, group participation, classroom citizenship, and peer interactions.

A. ADJUSTMENT TO SCHOOL

<u>3 -></u>	<u>4 -></u>	<u>5 -></u>
follow daily routine manage routine transitions with help	follow simple weekly routine manage routine transitions	follow more detailed weekly routine manage transitions with less structure and help
cooperate with teacher respect adult authority use basic manners follow basic rules respond to correction	apply rules situationally	follow more complex rules (e.g., conditionals)
obey basic signs follow 2-3 commands in sequence (e.g., blocks, art project, finger play) persist with simple task with guidance	follow visual procedures reapply directions in other situations independently persist with small task to completion	use diverse visual cues follow complex directions (verbal and concrete sample) explain directions stay on task independ.

B. GROUP PARTICIPATION

<u>3 -></u>	<u>4 -></u>	<u>5 -></u>
understand role in and contribution to group sit with group appropriately for a short time listen for 10 minutes follow simple group directions respect group activity and materials handle self well when not participating	understand role in and contribution to group sit for a longer group time with more need to shift attention listen for 15 minutes follow group direction that is primarily verbal respect group activity and materials handle self well when not participating	understand role in and contribution to group sit for a long group disc. with multiple contributors listen for 20+ minutes follow more complex group direction respect group activity and materials handle self well when not participating

C. CLASSROOM CITIZENSHIP

3 ->	4 ->	5 ->
link actions to consequences inhibit impulses share / take turns show helpfulness use kind words help clean up toys	link actions to consequences inhibit impulses use table manners use table talk push in chairs use computer manners	link actions to consequences inhibit impulses polite interaction with visitors put supplies away do basic care for computers
care for school and natural environment use materials appropriately	care for school and natural environment use materials appropriately	care for school and natural environment use materials appropriately

D. PEER INTERACTIONS

3 ->	4 ->	5 ->
play in parallel	enter play groups play cooperatively with diverse playmates	synchronize with others do cooperative tasks and group projects
form relationships respect differences respect rights & feelings	form relationships respect differences respect rights & feelings	form peer relationships respect differences respect rights, feelings and belongings
stand up for rights	deal with hurt feelings learn not to tattletale understand fairness	respond well to winning and losing stand up for others' rights
seek adult help with conflict	take other's perspective use words to resolve conflict with teacher guidance	generate alternate perspectives negotiate and compromise

3. Communication - facilitating comprehension and expression skills beginning with oral language (listening & speaking) and progressing to written language (reading & writing).

A. LISTENING

3 ->	4 ->	5 ->
Story Listening		
enjoy books with pictures (few words/pict) enjoy silly stories listen to story on tape recall main idea relate story to own exp. fill in missing words identify missing object from set of 4 or class identify missing part of picture	listen attentively to story identify characters ask questions recall plot in order (literal events) recall small details fill in missing actions (not saying thanks)	predict next events listen when peers read listen for meaning and answer comprehension questions draw conclusions use more abstraction in what's missing
Story Telling		
retell 2 or more facts from story read 2 times make up stories	retell story in own words identify beginning, middle, end use expressive language and sounds simple story grammar (beginning, middle, end)	retells in order with details borrowed stories (new twist on an old favorite) tell original story use descriptive words illustrate/write own books use standard story frame (once upon a time)
Story Analysis		
	real vs. imaginary identify characters identify setting ask what if questions predict outcomes	analyze characters analyze setting analyze author tone discuss cause/effect compare/contrast books by same author, same story by different authors apply theme or moral
understand simple moral	identify simple moral	apply theme or moral

B. SPEAKING

3 ->	4 ->	5 ->
Phonetics 70-80% intelligible all vowels some consonants simple rhyming	100% intelligible vary intensity & tone of voice	100% intelligible some blends (tr, bl, pr, gr, ng) rhyme words
Vocabulary 200-1000 words object naming focus on literal meaning	> 1000 words	> 1000 words adjectives consider implied & double meaning concrete metaphor concrete simile
Grammar simple sentences 3 or more words	complete sentences 4 or more words prepositions, plurals, some past tense	5 or more words pronouns
Oral Expression recite finger plays/songs use eye contact convey simple ideas ask why questions use body language tell about experiences answer questions participate in conversation	sing songs with verses convey more complex ideas ask who, what, where, when, how questions use words to express feelings explain events role play a situation converse with peers	sing solo share/sing on video discuss in group speak to a group ask meaning of words distinguish questions from statements express through puppets, dramatic play, art give simple verbal directions explain 1-2 step proc. e.g., computer use tell jokes / riddles participate in a group play

C. PRE-READING / READING

3 ->	4 ->	5 ->
<p>Pretend Reading</p> <p>hold book right-side up and tell made-up story to peers</p> <p>turn pages correct direction</p>		
<p>Sounds & Symbols</p> <p>recognize name in print</p> <p>identify sounds of animals</p> <p>exposed to A-Z (upper)</p> <p>identify simple rhyming words</p>		
<p>Print Formats</p> <p>standard text</p>		

D. PRE-WRITING / WRITING

3 ->	4 ->	5 ->
<p>Letter Recognition/Formation</p>		
<p>scribble to pretend write follow dot to dot letters begin to form upper case (letters in name)</p>	<p>print first name write upper case copy preprinted words</p>	<p>print full name write lower case ask for help if nec.</p>
<p>Writing Format</p>		
	<p>know top to bottom</p>	<p>know left to right use lines placement of salutations understand chapter format</p> <p>some punctuation, capitalization</p> <p>type name on computer</p> <p>compare/contrast formats (journal, letter, invitation, signs, etc.)</p>
<p>Writing to Communicate</p>		
<p>dictate story pretend write with scribbles</p>	<p>write through pictures and preprinted words</p>	<p>write words phonetically (invented spelling) associate spoken and written word ask for spelling make books / signs</p>

4. Discovery & Exploration - fostering a positive attitude toward learning through scientific and mathematical inquiry with varied materials to build strong concepts related to diverse themes.

A. APPROACH TO LEARNING

(self-directed, engaged learning with a growth mindset)

<u>3 -></u>	<u>4 -></u>	<u>5 -></u>
positive attitude curiosity explores new activities inddoors and outdoors		
age-appropriate attention	selective attention and focus/concentration	selective attention and focus/concentration
self-motivation / initiative	complete task with persistence	plan for task (e.g., gather materials)
accepting of mistakes as learning resourceful	aim for doing work with quality, care & timeliness	seek more than one solution, multiple possibilities

B. SCIENTIFIC THINKING

<u>3 -></u>	<u>4 -></u>	<u>5 -></u>
Collecting & Observing		
aware of all 5 senses describe basic features	describe characteristics and behaviors of present and imagined objects	more complex description
collect and sort objects compare and contrast basic dimensions count objects	classify and order added variation and # of dimensions estimate number measure with units create balance	use standard measure weigh objects
use observation tools magnifying glass, binoculars, etc. associate objects (e.g., bird with nest)	record observations with drawing, photo, camera or computer	use standard symbols use graphs
Geographic Thinking: recognize map	identify land and water relate personal experience to map	use simple map / globe relate to physical characteristics of local environment learn about city, state, country distinctions

Questioning & Predicting:		
sense of wonder ask questions	use who, what, why, where, and when	
apply info from one situation to another	make theme-related connections	make connections across themes
predict cause and effect	seek answers through exploration and problem solving teacher-directed experiments	explains cause / effect relationships pose experiments to pursue
Explaining & Reporting		
use science terms in context	base answers on observations	base answers on explorations
offer explanations / propose answers	increasing complexity and use of evidence	propose alternate theories

C. MATHEMATICAL THINKING

3 ->	4 ->	5 ->
NUMBER		
rote count 1-10	1-20	1-100, 10-1 backwards
1 to 1 correspondence	1 to 1 corr for 10 items	1 to 1 corr for 30 items
count objects 1-5	1-10	1-30
recognize numerals 1-5	1-10	1-30
	copy numerals 1-10	write numerals 1-30
	estimate 1-10	estimate 1-30
first, last	beginning, middle, end	ordinals (1st->10th)
		fractions (whole/ half/thirds/quarters)
OPERATIONS		
match equal sets to sample of 1-4 objects		understand quantity of a number add & subtract 1-10 with concrete materials (sets) and symbols skip counting (2s, 5s, 10s)
SPACE (Both 2- and 3-dimensional understanding)		
Lines		
line	straight vs. curve	zigzag, scallop thick/thin
corner in room	corner of simple shape	corner of complex shape
Shapes		
recognize & name (prototypes & instances) circle, square, triangle	draw prototypes	draw/trace/cut varied instances combine & break bounds
	recognize & name rectangle	draw prototypes
		recognize & name oval, diamond, trapezoid, hexagon plus 3 dimensional shapes, such as sphere, cube, pyramid
Position		
in, into, inside, through on, next, beside out, outside, around top, over, up bottom, under, down	between above below	across near, far, beyond "hotter", "colder"
front, back		left, right

PATTERNS		
recognize bilateral 3 cycles of ABAB	create bilateral recognize radial 3 cycles of ABC find simple patterns in environment	use combined shapes create radial 5 cycles of ABCDE combined media combined patterns find complex patterns
CLASSIFYING & DATA ANALYSIS		
Comparing Objects		
same, different more bigger, smaller opposites [hot-cold, on-off, light-dark, day-night]	similar, alike most biggest, smallest	equal (=), not-equal less, fewer greater than, less than (>, <)
Categorizing Objects		
1 attribute sorting color, shape, size	1 or 2 attributes thickness, number	2 or more attributes texture, composition pattern, function determine "rule" for sort
Ordering Objects (seriation)		
1 attribute - 3 items size (sm, med, lg) familiar sequences (story, daily schedule)	1 attribute - 4+ items length, number, part/whole sequence 3 events (plus weekly sequence, seasons)	1 attribute / both directions / many items color (tint & hue), pitch volume, tempo, temp. novel story sequences
Graphing		
	read pictograph make one with help	read bar graphs (horizontal & vertical) make graphs on own collect data on own make comparisons check name on chart when completes task

MEASUREMENT		
Length long/short tall/short	longer/shorter taller/shorter use different forms of measuring (e.g., steps) use ruler/yardstick, etc.	longest/shortest tallest/shortest inch/foot use different forms of measuring (e.g., steps) use ruler/yardstick, etc. horizontal/vertical
Weight & Volume heavy/light	heavier/lighter use a balance full/empty measure ingredients cups, 1/2, 1/4 T, t (whole and 1/2) quart, gallon	heaviest/lightest tell why one side goes down most/least measure ingredients cups, 1/2, 1/4 T, t (whole and 1/2) quart, gallon choose container of appropriate size
Temperature hot/warm/cold	hotter/colder	hottest/coldest use thermometer to determine warm/cold apply to taste, weather, climates
Speed fast/slow	faster/slower	fastest/slowest motion (people vs. motor) role of food/fuel role of weight and slope in speed
Time today daily schedule and routines birthday	yesterday, tomorrow night/day weekly schedule days of the week monthly calendar cycle of seasons holidays	before/after last week, next week clocks - time in hours and half hours predict time to complete a task (hours - weeks) yearly calendar cycle of holidays
Money coins/bills = money understand simple economics (e.g., play store, etc.)		understand use of money for buying

D. CONCEPT / FACT LEARNING

- **Retains Age Appropriate Personal Facts** (e.g., name, age, family members, address, phone number)
- **Retains Age Appropriate Common Facts** (colors, shapes, letter & numeral names, etc.)
- **Understands Thematic Concepts and Retains Facts re: Domains of Study, Books Read, Activities & Experiences, etc.**
(See Unit Guides for specific conceptual content.)

Living & Non-living

Life cycles of Plants & Animals

Dinosaurs

Insects, Birds, Mammals ...

Habitats such as Ocean, Desert, Rainforest ...

Our Bodies

Health

Personal Safety

Ecology & Environment

Nature

Seasons

Air, Water, Rainbows

Color, Light & Shadow

Waves & Sound

Sink & Float

Magnets

Machines & Electricity

Art, Music, Theatre

Senses

Food & Nutrition

Fire Safety

Recycling

Conservation

Weather

Earth & Rocks

Sea

Outer Space

Building & Woodworking

Tools & Inventions

Transportation & Wheels

Pittsburgh, USA, World

5. Physical Capabilities / Health & Safety - giving children opportunities to develop small and large motor skills, healthy living habits, and essential safety practices.

A. SMALL (Fine) MOTOR SKILLS

3 ->	4 ->	5 ->
Eye-Hand Coordination		
do 6 piece puzzles stack 5 blocks	do 12 piece puzzles stack 10 blocks build buildings copy small block design	do 30 piece puzzles stack to own height build cities copy large block design
put pegs in holes	string beads use digital technology	
finger paint	represent with paint	detail in painting copy paint design
Tool Use		
cut a line draw with markers	cut outside curves draw/write with pencils	cut inside curves draw/write with crayons use eraser
use paintbrush for paint and glue	wipe edges when painting	sew with large needle use stapler, paper punch, hammer, drill, saw
	type on digital tools (e.g., keyboard, iPad, etc.)	greater facility with digital tools
Combined Actions		
simple fingerplays	fingerplays with well- defined movements	more complex fingerplays
clap rhythm	finger counting	snap
	trace inside/outside of simple stencils	trace complex stencils
	tear paper	mold, fold materials

B. LARGE (Gross) MOTOR SKILLS

3 ->	4 ->	5 ->
Legs and Feet age-appropriate gait walk forward and back walk a wide beam balance on one foot tiptoe march run jump from 12" height crawl through a tube		
	walk lines walk narrower beams march to rhythm gallop, skip hop	walk curves switch direction on beam march to rhythm w/drum
Arms and Hands throw/catch beanbag and koosh roll ball		
	throw/catch large ball kick ball	throw/catch small ball throw with direction roll and kick with direction bounce ball hit ball with bat
Coordinated Movements roll sideways singular body moves negotiate stairs with help climb slide feet first pull wagon push and turn buggy ride tricycle		
	crab walk free body movement to rhythm use alternate feet on stairs run simple relays	tumbling (somersaults) body twists jumping jacks toe touches climb-alternate hands slide-varied positions hang upside down jump rope run relays with passing

C. HEALTHY HABITS

3 ->	4 ->	5 ->
make healthy food choices with guidance avoid putting non-food objects into mouth	understand “allergy” and manage personal allergies by avoiding triggers	make healthy food choices independently empathize with others’ health issues, allergies
follow handwashing, eating & toileting routines, sneezing & coughing procedure	understand roles of health providers identify good hygiene practices for school and home (e.g., bathing, dental care)	understand the role of germs and use strategies to avoid spreading germs
appropriately dispose of waste	reuse and recycle as appropriate	explain the process and rationale for recycling
make healthy activity choices with supervision	make healthy activity choices with guidance	make healthy activity choices independently

D. SAFETY PRACTICES

3 ->	4 ->	5 ->
obey open/closed signs	obey safety symbols, such as Mr. Yuk	obey traffic symbols, such as walk signs
stay in prescribed space stay with the group as directed	follow safe procedures for walking, stairs, street crossing,	follow safe procedures for walking, stairs, street crossing,
follow safety directions	carseats, etc. with guidance	carseats & bus rules, etc. independently
follow playground safety rules with supervision	follow playground safety rules with guidance	follow playground safety rules independently
use age-appropriate tools safely	seek safety equipment, such as goggles, smocks, etc. as needed	
seek help from appropriate sources (e.g., teacher, police officer, firefighter)	follow safety precautions re: strangers	
follow signals & procedures for fire drills and lockdown drills with supervision	follow signals & procedures for fire drills and lockdown drills independently	explain varied safety procedures and help other children follow them

6. Artistic Expression & Appreciation - cultivating each child's ability to express ideas and emotions through art, drama, and music and movement, as well as to appreciate the artistic expressions of others.

A. VISUAL ARTS EXPRESSION

3 ->	4 ->	5 ->
explore visual materials basic scribbles, placement, and shapes use varied media	basic designs combining shapes begin to plan and then illustrate generate digital art	pictorial representation participate in group art project express emotion / idea
use imagination to create new combinations or elements in art		
Attributes understood and used in Art:		
Color		
primary	primary/secondary	shades and tints
Size		
big, little long, short	large, small tall, short hi, low	huge, tiny deep, shallow
Thickness		
	thick, thin	wide, narrow
Composition		
paper, wood, cloth, metal	plastic, cardboard, stone	cork, styrofoam, brick
Texture		
hard, soft	rough, smooth	shiny/dull fluffy/flat

B. DRAMATIC ARTS EXPRESSION

3 ->	4 ->	5 ->
do role play do dramatic play do standard finger plays use felt board / puppets	create new stories enact stories without guidance more cooperative drama	group oriented drama interest in direction / production
use imagination to create new combinations or elements in drama		

C. MUSIC & MOVEMENT EXPRESSION

<u>3 -></u>	<u>4 -></u>	<u>5 -></u>
listen & watch group sing participate in group alter songs use instruments	perform simple songs in front of audience add silly verses	more complex performance
mirror movement	match movement to tempo	use standard rhythms
use imagination to create new combinations or elements in music and movement		

D. ARTISTIC APPRECIATION

<u>3 -></u>	<u>4 -></u>	<u>5 -></u>
learn to be an audience pay attention remain quiet clap, etc. respond emotionally and verbally to the art of other children & adults	compare & contrast art forms from different cultures	identify style of music, drama, illustration, etc.