

Computer Explorers®

**Ages & Stages *in Action!*
for the 3-Year-Old Child**

Ages & Stages *in Action!*

The ages and stages of development for preschool age children are skill milestones that give a teacher the tools to understand how the activities in our COMPUTER EXPLORERS classes relate to these developmentally appropriate skills. The teacher should use this information to design lessons that take advantage of the student's developmental abilities.

Ages & Stages *in Action!* for the 3-Year-Old Child

Fine & Gross Motor Skills	CE Application
feeds him/herself with some spilling	moves mouse to put pointer in a general area but may lack fine motor skills to pinpoint small targets
holds a glass in one hand	holds & moves mouse
holds a pencil in writing position	holds & uses stylus on a graphics tablet
folds paper, if shown how	when shown, replicates specific hand movements needed to manipulate peripherals
bends over easily without falling over	participates in body movement activities that coordinate with lessons
stacks blocks up to nine high	has the motor skills to use handheld objects to demonstrate on-screen concepts
tries to catch a large ball	Not Applicable to CE
dresses him/herself	has sufficient fine motor skills to manipulate input devices & peripherals
walks up steps, alternating feet	Not Applicable to CE
walks in a straight line	
jumps with both feet	
walks with an agile, almost adult style	
climbs ladders; uses slide independently	
assembles simple puzzles	understands concept of moving parts into matching empty locations to complete virtual puzzles
copies simple shapes such as a cross or circle	has fine motor skills to manipulate mouse or stylus; understands simple shapes &

Ages & Stages *in Action!*

	replicates both on & off the computer
opens doors	Not Applicable to CE
holds a crayon well	holds & uses stylus on a graphics tablet
makes vertical, horizontal & circular strokes with pencil or crayon	has fine motor skills to use a stylus to create lines, letters & shapes on a graphics tablet
hops on one foot	Not Applicable to CE
washes & dries hands by him/herself	
throws a ball overhead	
puts on shoes but not tie laces	
uses the toilet with some help	
walks on tiptoes if shown how	

Ages & Stages *in Action!*

Ages & Stages *in Action!* for the 3-Year-Old Child, cont.

Fine & Gross Motor Skills, cont.	CE Application
kicks a ball forward	Not Applicable to CE
pedals a tricycle	
runs around obstacles	
rides a tricycle	
manipulates clay; finger paints	
Language	CE Application
uses 3-5 word sentences	discusses concepts introduced in the lesson
asks short questions	formulates questions about the lesson content
understands now, sooner & later	relates to lesson timing
recognizes common everyday sounds	identifies & relates everyday sounds in software
uses plurals (dogs, cars, hats)	uses plurals appropriately as they relate to content of software; counts objects on-screen & uses appropriate plurals
imitates housework or help with simple task	Not Applicable to CE
asks to use the toilet almost every time	
demonstrates some shame when caught in a wrongdoing	understands disciplinary rules
tries to make others laugh	enjoys relating fun stories to classmates
follows a series of two to four related directions	follows teacher or program directions when grouped for a related action
understand size comparisons such as big & bigger	responds to lesson's size comparisons
understands relationships expressed by "if...then" or "because" sentences	sees relationships & cause & effect of computer actions; for example, <i>if</i> the mouse button is pressed, <i>then</i> an action is initiated on the screen <i>because</i> the mouse controls the pointer's action

Ages & Stages *in Action!*

tells simple stories from pictures or books	responds to storytelling lesson content
names at least 10 familiar objects	able to identify familiar objects in software
sing a song or repeat simple rhymes	sings songs introduced in software & by the teacher
names at least one color correctly	names a color in a program
enjoys being read to	enjoys stories within a program
talks about feelings & mental states	discusses feelings about class, programs & topics introduced
understands sentences with time concepts (Grandma is coming tomorrow)	understands time concepts in a program
makes themselves understood to strangers, despite some sound errors	Not Applicable to CE
understands most of what is said & 75 percent of speech is understandable	understands directions & discussions; shares thoughts with understandable speech

Ages & Stages *in Action!*

Ages & Stages *in Action!* for the 3-Year-Old Child, cont.

Thinking Skills	CE Application
matches objects in hand or room to a picture in a book	relates physical objects used in lessons to objects seen on the computer screen
sorts objects by shape & color	sorts physical or virtual objects
understands concept of 'two'	uses concept of two in lessons
pays attention for about 3 minutes	new directions from teacher &/or program will help direct attention to stay on task
knows what is food & what is not food	understands food concepts in a program
matches circles & squares	matches circles & squares both on & off the computer
plays make-believe	engages in make believe play as relates to program's & teacher initiated content
completes puzzles of 3-6 pieces	completes 3-6 piece puzzles on the computer
recognizes sounds in the environment	recognizes familiar sounds generated from the program
remembers what happened yesterday	relates stories from own life to others
knows some numbers (but not always in the right order)	participates in number activities both on & off the computer
matches an object to a picture of that object	finds matching objects on & off the computer
matches objects that have same function (as in putting a cup & plate together)	matches objects by function within a program
understands concepts like grouping & matching	matches & groups like objects
shows awareness of past & present	understands past & present in stories & as relates to lessons
learns by doing & through the senses	uses sight, sound, touch & hearing to learn from teacher, peers & software
identifies common colors such as red, blue, yellow, green	identifies & uses red, blue, yellow & green in art activities
solves problems if they are simple, concrete, real, & immediate, & if wants to	participates in problem-solving of teacher or program introduced scenarios

Ages & Stages in Action!

interested in features of animals that make them unique	compares, discusses & learns about animals introduced by the program or teacher
counts 2 to 3 objects	participates in math activities that involve counting small sets of objects
organizes materials on their own	organizes daily take home papers
stacks 5-7 blocks	uses blocks as a manipulative that relates to the lessons
begins to understand cause & effect relationships	sees relationships between technical cause & effect
interested in similarities & differences	compares objects to see similarities & differences
distinguishes, matches, & names colors	identifies & matches colors

Ages & Stages *in Action!*

Ages & Stages *in Action!* for the 3-Year-Old Child, cont.

Social & Emotional	CE Application
understands I, you, he & she	understands when directions re given to self or others in group
plays spontaneously with two or three children in a group	relates to other children in the group
begins dramatic play	adds imaginative play to elaborate on computer stories & activities
accepts suggestions & follows simple directions	takes direction as related to program & lesson content
assigns roles in pretend social play	role plays as related to lesson content
completes simple task with food without assistance, such as spreading soft butter with a dull knife & pouring from a small pitcher	Not Applicable to CE
imitate or join in play with other children & make up games	
begins to recognize own limits – asks for help	asks for help as needed
begins to notice other people’s moods & feelings	relates to feelings & moods of others in the group
feels jealousy	may show jealousy if all students don’t get same program options
enjoys pretending & has a vivid imagination	uses imagination to enhance program’s stories & discussions
takes turns in games	take turns with mouse or peripherals
follows a series of simple commands	performs computer tasks when given a series of simple commands
shares toys, taking runs with assistance	shares peripherals but will need direction on turn taking
makes simple choices between two things	makes activity choices; decides next activity when teacher gives two options

Ages & Stages *in Action!*

believes everything centers around him/her (if I hide my eyes, no one sees me)	needs assistance to learn that he/she is part of a team
washes hands when assisted & blow nose when reminded	practices good hygiene to reduce spread of germs
begins dramatic play, acting out whole scenes	may dramatically relate to story content & can be encouraged to role play
likes to play alone, but near other children	needs to be encouraged to participate in group discussions
expresses anger verbally instead of physically	help discuss & understand anger, if occurs
may sometimes lie to protect him/herself, but understands the concept of lying	recognizes lies used for self preservation & be sensitive to feelings; initiate private discussions, if necessary

Ages & Stages in Action!

Ages & Stages in Action! for the 4-Year-Old Child

Fine & Gross Motor Skills	CE Application
feeds his/herself	Not Applicable to CE
holds a pencil	holds a stylus
draws with the arm & not small hand movements	uses appropriate arm movements when using stylus
draws a face	draws a face with on a graphics tablet or on paper as directed by teacher or program
sometimes unbuttons buttons	Not Applicable to CE
brushes teeth with help	Not Applicable to CE
put together a simple puzzle of 4-12 pieces	understands concept of moving parts into matching empty locations to complete virtual puzzles of 4 – 12 pieces
uses the toilet alone	Not Applicable to CE
catches a bouncing ball	Not Applicable to CE
swings, starting by him/herself & keeping him/herself going	Not Applicable to CE
turns somersaults; hops on one foot; gallops	Not Applicable to CE
uses table utensils skillfully	Not Applicable to CE
tries to use a fork	Not Applicable to CE
tries to write name	writes name on CE Today Sheet
draw a circle	draws a circle with a stylus or on paper to demonstrate grasp of lesson's concepts
tries to cut paper with blunt scissors	cuts paper with blunt scissors for hands-on activities coordinated with computer lesson
tries to buckle, button, & laces even though probably needs help	Not Applicable to CE
builds a tower of 7-9 blocks	has the motor skills to use handheld objects to demonstrate on-screen concepts
pours from a small pitcher	Not Applicable to CE

Ages & Stages *in Action!*

	Not Applicable to CE
tries to skip	
walks downstairs using a handrail & alternating feet	
running is more controlled; can start, stop, & turn	
prints some letters	understands letter concepts & uses stylus or pencil to print letters
cuts on a line	cuts teacher created patterns for hands-on activities coordinate with computer lesson
Language	CE Application
retells a story but may confuse facts	contributes to group's retelling of stories seen on the computer
asks when, how & why questions	shows interest & asks appropriate questions about lesson's content
refers to causality by using because & so	sees & discusses connections in content
understands comparatives like loud, louder, & loudest	makes appropriate comparisons in both on- & off-computer activities

Ages & Stages *in Action!*

Ages & Stages *in Action!* for the 4-Year-Old Child, cont.

Language, cont.	CE Application
understands sequencing of events when clearly explained	completes sequencing activities when given specific directions
often talks about action in conversation (go, do, make)	describes program's action using appropriate language
uses regular past tenses of verbs (pulled, walked)	
asks direct questions (May I? Would you?)	asks appropriate questions as related to turn-taking & program contents
understands next to	locates & places objects next to directions
combines thoughts into one sentence	relates thoughts about lesson content
uses words like can, will, shall, should, & might	uses appropriate words in conversation
follows three unrelated commands appropriately	follows 3-part commands as given by teacher or program directions
listens to long stories but may misinterpret the facts	understands concepts in short stories but may need teacher's assistance to understand concepts in longer stories or directions
has a large vocabulary & uses good grammar often	describes program's action & participates in group discussions using appropriate language
enjoys rhyming & nonsense words	contributes to rhyming activities
uses articles when speaking (a, an, the)	appropriately uses articles to describe program's content & while participating in group discussions
relates a simple experience he/she had had recently	relates personal experiences to class content
uses 1,500-word vocabulary; speaks in relatively complex sentences	uses & expands vocabulary
Thinking Skills	CE Application
recognizes red, yellow & blue	accurately uses these concepts when introduced in lesson &/or software
understands big, little, tall, & short	

Ages & Stages *in Action!*

sorts by shape or color	
follows three instructions given one at a time (Put toys away, wash your hands, & come eat.)	follows instructions in software if allowed to breakdown into small parts
identifies situation that would lead to a happiness, sadness, or anger	participate in activities that require conjecture about feelings
understands taking turns & can do so without always being reminded	easily takes turns in CE sessions
wants to know what will happen next	anticipates next step in activities & stories
counts up to five objects	participates in activities that require counting
distinguishes between the real world & the imaginary or pretend world	identifies scenarios in programs that are real vs imaginary
identifies parts of a whole, like a slice of a pie	participates in activities that involve fractional parts

Ages & Stages *in Action!*

Ages & Stages *in Action!* for the 4-Year-Old Child, cont.

Thinking Skills, cont.	CE Application
draws, names, & briefly explains somewhat recognizable pictures that are meaningful to him/her	elaborates & answers questions about pictures presented in lesson &/or program
attend to an activity for a longer stretch of time (between five & fifteen minutes)	focuses on tasks that require longer time to completion
show awareness of past & present	identifies & relates to past & present concepts in lessons
continues to learn through experience & the senses	benefits from activities that involves hands-on participation & the senses
understands number & space concepts	relates well to lessons that involve counting & relationships of numbers
begins to grasp that pictures & symbols can represent real objects	interprets symbols correctly as related to real objects
grasps the concept of past, present, & future but does not understand the duration	applies past, present & future to sequencing activities
tells full name & age	introduces self to CT & other students
learns by both observing & listening to adults explanations	learns by observations of other students actions & CE teacher explanations
understands red, yellow, & blue	recognizes colors & uses in activities & instructions
understands mostly the differences between reality & fantasy	distinguishes between computer programs with fantasy & reality; begins to realize CT puppet is a fantasy
thinks literally; starting to develop logical thinking	logically analyzes steps in a process
starts to recognize patterns in objects	recognizes & recreates program's patterning activities
Social and Emotional	CE Application
separates from a parent for a short time without crying	if parent drop-off – quickly adjusts to separation
likes to play dress-up	enjoys fantasy role playing as related to the lesson

Ages & Stages *in Action!*

acts out elaborate events which tell a story	relates stories with actions
often prefers playing with other children to playing alone, unless deeply involved in a solitary task	enjoys groups problem solving activities
tries to bargain (I'll give you this toy if you will give me that one)	may try to negotiate or bargain for turns or desired activity selections;
enjoys tag, hide-and-seek & other games with simple rules	understands & enjoys on-screen games such as concentration/memory games, spinner games, etc.
likes to do things for him/herself	more independent with choices
acts as though a doll or stuffed animal thinks & feels on its own	relates to & initiates CT's thoughts & feelings
compares themselves to others	compares self to other students choices, turns & special treats

Ages & Stages *in Action!*

Ages & Stages *in Action!* for the 4-Year-Old Child, cont.

Social and Emotional, cont.	CE Application
expresses more awareness of others feelings	recognizes others feelings both in CE teammates & on-screen characters
enjoys imaginative play with other children	enjoys on-screen fantasy activities
helps clean up toys at home or school when asked	will assist with clean up of CE materials
pretends to play with imaginary objects	able to perform show simulations of on-screen actions & tools, can simulate mouse or peripheral usage
sometimes cooperates with other children	builds cooperative skills in CE team
changes the rules of a game as he/she goes along	may become frustrated with inability to change on-screen rules but may try to change CE rules for taking turns or behavior
shares when asked	shares turns & manipulative materials
likes moderate rough & tumble play	Not Applicable to CE
knows his/her age & the town where he/she lives	able to share age, if asked, during CE introduction
shows some understanding of moral reasoning (fairness & good or bad behavior)	applies moral reasoning to behavior of self, peers & on-screen characters
develop friendships	builds friendships with other students in CE group
show interest in exploring sex differences	can identify sex differences as apply to on-screen characters
bring dramatic play closer to reality by paying attention to detail, time, & space	incorporates details from on-screen or teacher-told stories to his/her own dramatization of stories

Ages & Stages *in Action!*

Ages & Stages *in Action!* for the 5-Year-Old Child

Fine & Gross Motor Skills	CE Application
runs in an adult manner	Not Applicable to CE
walks on a balance beam	
hand preference is established	consistently uses same hand for mouse, , stylus, pencil etc.
grasps pencil like an adult	holds stylus in same manner as a pencil
cuts & pastes simple shapes	has developed more defined fine motor skills which will apply to smaller movements with mouse, stylus, etc.
swings & climbs	Not Applicable to CE
copies triangles & other geometric shapes	copies shapes simple shapes both on & off the computer
dresses & undresses on their own although they may still need help with tying shoelaces	Not Applicable to CE
eats with a fork, spoon, & possibly a knife	
may be able to skip	
draws recognizable pictures such as cars & houses	draws recognizable pictures with computer tools or as part of off-computer activities
walks on tiptoe, broad jumps	Not Applicable to CE
skates & jumps rope	
laces, but cannot tie, shoes	
colors within lines	has developed more defined fine motor skills which will apply to smaller movements with mouse, stylus, etc.
hops, somersaults, & possibly skips	Not Applicable to CE
stands on one foot	
draws a person with a head, a body, arms & legs	draws recognizable pictures of people with computer tools or as part of off-computer activities
writes some small & capital letters of the	has developed more defined fine motor skills

Ages & Stages *in Action!*

alphabet	which will apply to smaller movements with mouse, stylus, etc.
stands on one foot for ten seconds or longer	Not Applicable to CE
usually cares for own toilet needs	if needs to use toilet during CE class should be able to do so without assistance
hit a ball with a bat or stick	Not Applicable to CE
Language	CE Application
speaks fluently; correctly uses plurals, pronouns, tenses	should be encouraged to use forms of speech correctly
understands & names opposites	easily participates in activities using opposites
carries on a meaningful conversation with another person	participates in group conversations
uses the future tense, such as "Let's go to the zoo tomorrow."	uses correct grammar to relate future events both real or within computer activities

Ages & Stages *in Action!*

Ages & Stages *in Action!* for the 5-Year-Old Child, cont.

Language, cont.	CE Application
talks about or tells stories; has little or no trouble being understood by others	tells stories about own experiences
speaks in sentences of more than five words	should be encouraged to use full sentences & discuss thoughts, creative ideas, & experiences with the group
makes fewer mistakes & starts using language as a means of getting along with others	
enjoys telling jokes & stories	
very interested in words & language; seeks knowledge	interested in new technical words
uses complex language	should be encouraged to use more complex language in reference to technical elements
says name & address	introduces self at start of class
Often calls people (or objects) by their relationship to others, such as "Bobby's mom: instead of "Mrs. Smith."	recognizes relationships in computer stories or among peers
recalls part of a story	retells stories from home, the classroom, computer activities or previous CE classes
recognizes most letters of the alphabet	actively participates in alphabet related computer activities
vocabulary is about 5000 words	enjoys learning & using new words
Thinking Skills	CE Application
still confuses fantasy & reality at times	may be confused with fantasy in activities
thinking is still naïve; doesn't use adult logic	may need assistance to reason out complex scenarios in computer problem solving activities
understands the basic concepts of time	participates well in time themed activities
understands a whole object or concept, but not always the relationship of the parts to the whole	needs assistance seeing how computer parts work together; may not always pick up details of more complex cause & effect
traces numbers & capital letters on his/her	knows shapes of numbers & capital letters

Ages & Stages *in Action!*

own	
counts up to 20 objects	uses more advanced counting skills in both on- & off-computer activities
matches symbols	adept at matching activities & distinguishing similarities & differences
understands relationships between objects, such as “the boy who is jumping rope”	relates objects to actions
knows what most household objects are used for, such as money, food, or appliances	participates in activities that related to household objects
uses simple logic, begins to understand cause & effect relationships	sees simple cause & effect relationships
memorizes things but does not yet have strategies such as rehearsing lists	can memorize songs, poems & sequences of events or actions required
names eight colors	names colors in on- & off-screen activities

Ages & Stages *in Action!*

Ages & Stages *in Action!* for the 5-Year-Old Child, cont.

Social and Emotional	CE Application
distinguishes right from wrong, honest from dishonest, but does not recognize intent	can identify right & wrong or honest & dishonest behavior but may not recognize why he/she or peers were wrong or dishonest
mimics adults & seeks praise	will copy teacher's movements, phrases & behavior & works well in an a positive setting
plays with both boys & girls but prefers same sex	will work well in mixed sex groups but may gravitate toward members of own sex within the team
wants to please friends	may base actions or decisions on their friend's reactions
more likely to agree to rules	works well with simple class rules & structure
shows more independence	independently tries new activities & actions
able to distinguish fantasy from reality	sees reality more clearly
starts to make close friendships with other children	builds stronger bonds with CE teammates & the teacher
plays make-believe & dresses up	makes up fantasy (make-believe) stories
seeks to play with others rather than be alone; friends are important	enjoys group dynamic
wants to conform; may criticize those who don't	should be encouraged to make creative choices & to respect others creativity
wants to be like his/her friends	will make choice & interact based on the dynamics of the group & choices of others
likes to sing, dance & act	actively participates & enjoys music & dramatic activities in lessons
aware of sexuality	sees gender differences
sometimes demanding, sometimes eagerly cooperative	may display erratic behavior in group
expresses him/herself in terms of his/her achievements, such as "Look at me. I can ride a tricycle now."	proudly relates new experiences; should be encouraged to see CE accomplishments