

Appendix E — Version 1: Manipulative List

Manipulative	ELA	Math	Science
Level I			
1 writing implement familiar to student	•		
1* blank piece of lined paper	•		
1 favorite, age-appropriate book	•		
5 yellow one-inch blocks	•	•	
1 cube		•	
1 ball		•	
4 markers (same color/size)		•	
3 red one-inch blocks		•	
2 small water bottles		•	
1 large water bottle		•	
6 pennies		•	
1 bottle of bubbles			•
1 device with push button			•
3 clear, resealable sandwich-size plastic bags			•
1 citrus fruit			•
7* cotton balls			•
1 green 5-inch square piece of construction paper			•
1 yellow 5-inch square piece of construction paper			•
1 blue 5-inch square piece of construction paper			•
3 clear plastic cups			•
1 cup of water			•
Level II			
1 crayon	•		
1 clear plastic cup	•		
1 spoon	•		
1 small box	•		
1 small ball	•		
1 photo of teacher	•		
1 photo of student	•		
1 photo of classmate	•		
1 bowl	•		

*Asterisk denotes a manipulative to be treated as a single-use item. These manipulatives should only be used on the task they are associated with and should be discarded after the task has been completed by the student.

Manipulative	ELA	Math	Science
1 toy car	•		
1* blank piece of lined paper	•		
1 favorite, age-appropriate book	•		
10 yellow one-inch blocks	•	•	
1 twelve-inch ruler		•	
1 scale familiar to student		•	
1 pencil		•	
1 twelve-inch piece of string		•	
1 full bottle of glue		•	
1 empty wallet/change purse		•	
2 pennies		•	
2 quarters		•	
2 one-dollar bills		•	
Level III			
1 favorite, age-appropriate book	•		
1 cube (at least 2 × 2 × 2 inches large)		•	
5 yellow one-inch blocks		•	
5 red one-inch blocks		•	
5 blue one-inch blocks		•	
1 calculator		•	
1 dark rock			•
1 smooth rock			•
1 rough rock			•
1 shiny rock			•
1 light-colored rock			•
1 metal spoon			•
1 wooden spoon			•
1 plastic spoon			•
1 plastic straw			•
1 steel nail			•
1 wooden stick			•
1 plastic bottle			•
1 piece of aluminum foil			•

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Manipulative	ELA	Math	Science
1 index card			•
3 identical clear plastic cups filled $\frac{3}{4}$ with water			•
1 three-section sorting structure			•
Level IV			
4* blank pieces of lined paper	•	•	
1 pencil	•	•	
1 calculator		•	
1 one-cup measuring cup		•	
1 $\frac{1}{4}$ -cup measuring cup		•	
1 twelve-inch ruler		•	
1 thermometer		•	
1 tablespoon		•	
1 teaspoon		•	
1 bucket		•	
1 gallon pitcher		•	
2 small plastic cups			•
2* ounces of water			•
2* ounces of mineral oil			•
2 small pipettes or eyedroppers			•
1 bottle of blue food coloring			•
1 sheet of coarse sandpaper			•
1 red one-inch block			•
1 blue one-inch block			•
1 set of assorted books that when stacked are at least 5 inches high			•
1 board at least 12 inches long			•
3 identical plastic bottles with caps			•
3 cups of sand			•
3 cups of flour			•
3 cups of cotton			•
1 road map			•
1 periodic table			•
1 newspaper			•
1 coin			•

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Manipulative	ELA	Math	Science
1 plastic straw			•
1 toothpick			•
1 rock			•
1 metal nail			•
1 cork			•
1 table tennis ball			•
1 steel paper clip			•
1 crayon			•
Level V			
7* blank pieces of lined paper	•	•	•
4 pencils	•	•	
1 bottle of blue food coloring		•	
1 half-gallon of water		•	
1 pitcher		•	
1 two-cup clear measuring cup		•	
10 one-dollar bills		•	
4 quarters		•	
3 $\frac{1}{4}$ -fraction tiles		•	
2 $\frac{1}{2}$ -fraction tiles		•	
2 $\frac{1}{3}$ -fraction tiles		•	
1 calculator		•	•
1 yellow marker			•
1 orange marker			•
1 thermometer			•
1 twelve-inch ruler			•
1 balance			•
1 magnifying glass			•
1 measuring cup			•
1 rock			•
3 clear plastic cups filled with water			•
1* sugar cube			•
1* teaspoon of granulated sugar			•
2* tablespoons of vegetable oil			•

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Manipulative	ELA	Math	Science
1 stir stick			•
1 scale			•
1 250 mL graduated beaker with 150 mL of water			•
1 250 mL graduated beaker			•

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Appendix E — Version 2: Manipulative List

Manipulative	ELA	Math	Science
Level I			
1 writing implement familiar to student	•		
1* blank piece of lined paper	•		
1 favorite, age-appropriate book	•		
5 yellow one-inch blocks	•	•	
1 cube		•	
1 ball		•	
4 markers (same color/size)		•	
3 red one-inch blocks		•	•
1 book			•
1 small plastic cup			•
1 large plastic cup			•
3 clear, resealable sandwich-size plastic bags			•
1 citrus fruit			•
7* cotton balls			•
3 clear plastic cups			•
1 cup of water			•
Level II			
1 crayon	•		
1 clear plastic cup	•		
1 small box	•		
1 small ball	•		
1 bowl	•		
1 toy car	•		
1* blank piece of lined paper	•		
1 favorite, age-appropriate book	•		
9 plastic spoons	•	•	
10 yellow one-inch blocks	•	•	
1 pencil		•	
1 twelve-inch ruler		•	
1 scale familiar to student		•	
1 twelve-inch piece of string		•	

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Manipulative	ELA	Math	Science
1 full bottle of glue		•	
1 empty wallet/change purse		•	
2 pennies		•	
2 quarters		•	
2 one-dollar bills		•	
1 daily newspaper		•	
Level III			
1 favorite, age-appropriate book	•		
1 pencil		•	•
1* blank piece of lined paper		•	
1 cube (at least 2 × 2 × 2 inches large)		•	
5 yellow one-inch blocks		•	
5 red one-inch blocks		•	
5 blue one-inch blocks		•	
1 calculator		•	
1 dark rock			•
1 smooth rock			•
1 rough rock			•
1 shiny rock			•
1 light-colored rock			•
2 bowls			•
2* cups of flour			•
1 plastic cup			•
1* ½-cup of water			•
1 measuring cup			•
3 identical clear plastic cups filled ¾ with water			•
1 metal spoon			•
1 wooden spoon			•
1 plastic spoon			•
1 plastic straw			•
1 steel nail			•
1 wooden stick			•
1 plastic bottle			•

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Manipulative	ELA	Math	Science
1 piece of aluminum foil			•
1 index card			•
1 measuring spoon			•
1 tablespoon of sugar			•
1 paper towel			•
1 twelve-inch ruler			•
Level IV			
3* blank pieces of lined paper	•	•	
1 pencil	•	•	
1 calculator		•	
1 one-cup measuring cup		•	
1 ¼-cup measuring cup		•	
1 twelve-inch ruler		•	
1 thermometer		•	
1 tablespoon		•	
1 two-cup measuring cup		•	
1 teaspoon		•	
1 scale familiar to student		•	
1 one-inch block			•
3 identical plastic bottles with caps			•
3 cups of sand			•
3 cups of flour			•
3 cups of cotton			•
1 road map			•
1 periodic table			•
1 newspaper			•
1 feather			•
1 coin			•
1 plastic straw			•
1 toothpick			•
1 rock			•
1 metal nail			•
1 cork			•

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Manipulative	ELA	Math	Science
1 2-section sorting structure			•
1 crayon			•
Level V			
6* blank pieces of lined paper	•	•	•
1 pencil	•	•	
1 bottle of blue food coloring		•	
1 half-gallon of water		•	
1 pitcher		•	
1 two-cup clear measuring cup		•	
10 one-dollar bills		•	
4 quarters		•	
1 five-dollar bill		•	
1 calculator		•	•
1 yellow marker			•
1 orange marker			•
1 thermometer			•
1 twelve-inch ruler			•
1 balance			•
1 magnifying glass			•
1 measuring cup			•
1 rock			•

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Appendix E — Version 3: Manipulative List

Manipulative	ELA	Math	Science
Level I			
1 writing implement familiar to student	•		
1* blank piece of lined paper	•		
1 familiar age-appropriate book	•		
5 yellow one-inch blocks	•	•	
1 cube		•	
1 small ball		•	
4 markers (same color/size)		•	
3 red one-inch blocks		•	
1 schedule familiar to student		•	
3 shape tiles (square, circle, triangle)		•	
1 large ball		•	
1 bottle of bubbles			•
1 device with push button			•
3 clear, resealable sandwich-size plastic bags			•
1 citrus fruit			•
7* cotton balls			•
1 green 5-inch square piece of construction paper			•
1 yellow 5-inch square piece of construction paper			•
1 blue 5-inch square piece of construction paper			•
3 clear plastic cups			•
1 cup of water			•
Level II			
1 crayon	•		
1 writing implement familiar to student	•		
1 clear plastic cup	•		
1 spoon	•		
1 small box	•		
1 small ball	•		
1 bowl	•		
1 toy car	•		
1 favorite, age-appropriate book	•		

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Manipulative	ELA	Math	Science
1 individual classroom schedule	•		
4* blank pieces of lined paper	•	•	
10 yellow one-inch blocks	•	•	
1 twelve-inch ruler		•	
1 scale familiar to student		•	
1 pencil		•	
1 12-inch piece of string		•	
1 full bottle of glue		•	
1 empty wallet/change purse		•	
2 pennies		•	
2 quarters		•	
2 one-dollar bills		•	
3* graham crackers		•	
1 thermometer		•	
1 straw		•	
1 cup of sand		•	
Level III			
1 favorite, age-appropriate book	•		
1 pencil		•	
1 cube (at least 2 × 2 × 2 inches large)		•	
5 yellow one-inch blocks		•	
5 red one-inch blocks		•	
5 blue one-inch blocks		•	
1 calculator		•	
1 dark rock			•
1 smooth rock			•
1 rough rock			•
1 shiny rock			•
1 light-colored rock			•
1 metal spoon			•
1 wooden spoon			•
1 plastic spoon			•
1 plastic straw			•

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Manipulative	ELA	Math	Science
1 steel nail			•
1 wooden stick			•
1 plastic bottle			•
1 piece of aluminum foil			•
1 index card			•
3 identical clear plastic cups filled $\frac{3}{4}$ with water			•
1 three-section sorting structure			•
Level IV			
1 crayon	•		•
3* blank pieces of lined paper	•	•	
1 calculator		•	
1 pencil		•	
1 one-cup measuring cup		•	
1 $\frac{1}{4}$ -cup measuring cup		•	
1 twelve-inch ruler		•	
1 thermometer		•	
1 tablespoon		•	
1 teaspoon		•	
1 clear plastic measuring cup		•	
1 bucket		•	
2 small plastic cups			•
2* ounces of water			•
2* ounces of mineral oil			•
2 small pipettes or eyedroppers			•
1 bottle of blue food coloring			•
1 sheet of coarse sandpaper			•
1 red one-inch block			•
1 blue one-inch block			•
1 set of assorted books that when stacked are at least 5 inches high			•
1 board at least 12 inches long			•
3 identical plastic bottles with caps			•
3 cups of sand			•
3 cups of flour			•

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Manipulative	ELA	Math	Science
3 cups of cotton			•
1 road map			•
1 periodic table			•
1 newspaper			•
1 coin			•
1 plastic straw			•
1 toothpick			•
1 metal nail			•
1 rock			•
1 cork			•
1 table tennis ball			•
1 steel paper clip			•
Level V			
7* blank pieces of lined paper	•	•	•
1 pencil	•	•	
1 calculator		•	•
1 bottle of blue food coloring		•	
1 half-gallon of water		•	
1 pitcher		•	
3 1-cup measuring cups		•	
1 two-cup clear measuring cup		•	
10 one-dollar bills		•	
4 quarters		•	
1 yellow marker			•
1 orange marker			•
1 thermometer			•
1 twelve-inch ruler			•
1 balance			•
1 magnifying glass			•
1 measuring cup			•
1 rock			•
3 clear plastic cups filled with water			•
1* sugar cube			•

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Manipulative	ELA	Math	Science
1* teaspoon of granulated sugar			•
2* tablespoons of vegetable oil			•
1 stir stick			•
1 scale			•
1 250 mL graduated beaker with 150 mL of water			•
1 250 mL graduated beaker			•

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Appendix E — Version 4: Manipulative List

Manipulative	ELA	Math	Science
Level I			
1 writing implement familiar to student	•		
3* blank pieces of lined paper	•		
1 favorite, age-appropriate book	•		
1 classroom magazine	•		
1 toy car	•		
1 crayon	•		
3 red one-inch blocks	•	•	
1 cube		•	
4 markers (same color/size)		•	
1 ball		•	
4 unsharpened pencils		•	
5 yellow one-inch blocks		•	•
1 book			•
1 small plastic cup			•
1 large plastic cup			•
3 clear, resealable sandwich-size plastic bags			•
1 citrus fruit			•
7* cotton balls			•
1 cup of water			•
3 clear plastic cups			•
Level II			
1 crayon	•		
1 clear plastic cup	•		
1 spoon	•		
1 small box	•		
1 small ball	•		
1 bowl	•		
1 toy car	•		
1 favorite, age-appropriate book	•		
1* blank piece of lined paper	•		
10 yellow one-inch blocks	•	•	

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Manipulative	ELA	Math	Science
1 twelve-inch ruler		•	
1 scale familiar to student		•	
1 pencil		•	
1 twelve-inch piece of string		•	
1 full bottle of glue		•	
1 empty wallet/change purse		•	
2 pennies		•	
2 quarters		•	
2 one-dollar bills		•	
3 red color counters		•	
3 blue color counters		•	
3 yellow color counters		•	
Level III			
1 familiar toy	•		
1 unfamiliar, age-appropriate book	•		
1 favorite, age-appropriate book	•		
1 cube (at least 2 × 2 × 2 inches large)		•	
5 yellow one-inch blocks		•	
5 red one-inch blocks		•	
5 blue one-inch blocks		•	
1 calculator		•	
1* blank piece of lined paper		•	
1 pencil		•	•
1 dark rock			•
1 smooth rock			•
1 rough rock			•
1 shiny rock			•
1 light-colored rock			•
2 bowls			•
2* cups of flour			•
1 plastic cup			•
1* ½-cup of water			•
1 measuring cup			•

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Manipulative	ELA	Math	Science
3 identical clear plastic cups filled $\frac{3}{4}$ with water			•
1 metal spoon			•
1 wooden spoon			•
1 plastic spoon			•
1 plastic straw			•
1 steel nail			•
1 wooden stick			•
1 plastic bottle			•
1 piece of aluminum foil			•
1 index card			•
1 measuring spoon			•
1 tablespoon of sugar			•
1 paper towel			•
1 twelve-inch ruler			•
Level IV			
1 calculator		•	
2* blank pieces of lined paper		•	
1 pencil		•	
1 one-cup measuring cup		•	
1 $\frac{1}{4}$ -cup measuring cup		•	
1 twelve-inch ruler		•	
1 tablespoon		•	
1 gallon pitcher		•	
1 scale familiar to student		•	
1 teaspoon		•	
1 clear plastic measuring cup		•	
1 thermometer		•	
1 one-inch block			•
3 identical plastic bottles with caps			•
3 cups of sand			•
3 cups of flour			•
3 cups of cotton			•
1 road map			•

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Manipulative	ELA	Math	Science
1 periodic table			•
1 newspaper			•
1 feather			•
1 coin			•
1 plastic straw			•
1 toothpick			•
1 rock			•
1 metal nail			•
1 cork			•
1 2-section sorting structure			•
1 crayon			•
Level V			
5* blank pieces of lined paper	•	•	•
1 pencil	•	•	
10 one-dollar bills		•	
4 quarters		•	
1 calculator		•	•
1 bottle of blue food coloring		•	
1 half-gallon of water		•	
1 pitcher		•	
1 two-cup clear measuring cup		•	
5 number tiles (4, 16, 32, 53, 82)		•	
1 yellow marker			•
1 orange marker			•
1 thermometer			•
1 twelve-inch ruler			•
1 balance			•
1 magnifying glass			•
1 measuring cup			•
1 rock			•

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Appendix E — Version 5: Manipulative List

Manipulative	ELA	Math	Science
Level I			
1 writing implement familiar to student	•		
1* blank piece of lined paper	•		
1 favorite, age-appropriate book	•		
5 yellow one-inch blocks	•	•	
1 cube		•	
1 ball		•	
4 markers (same color/size)		•	
3 red one-inch blocks		•	
1 schedule familiar to student		•	
1 full, capped, plastic 1-liter bottle of water		•	
1 plastic spoon		•	
1 feather		•	
1 bottle of bubbles			•
1 device with push button			•
3 clear, resealable sandwich-size plastic bags			•
1 citrus fruit			•
7* cotton balls			•
1 green 5-inch square piece of construction paper			•
1 yellow 5-inch square piece of construction paper			•
1 blue 5-inch square piece of construction paper			•
3 clear plastic cups			•
1 cup of water			•
Level II			
1 photo of teacher	•		
1 photo of student	•		
1 photo of classmate	•		
1 crayon	•		
1 clear plastic cup	•		
1 spoon	•		
1 small box	•		
1 small ball	•		

*Asterisk denotes a manipulative to be treated as a single-use item. These manipulatives should only be used on the task they are associated with and should be discarded after the task has been completed by the student.

Manipulative	ELA	Math	Science
1 bowl	•		
1 favorite, age-appropriate book	•		
1* blank piece of lined paper	•		
1 toy car	•		
10 yellow one-inch blocks	•	•	
1 twelve-inch ruler		•	
1 scale familiar to student		•	
1 pencil		•	
1 twelve-inch piece of string		•	
1 full bottle of glue		•	
1 empty wallet/change purse		•	
2 pennies		•	
2 quarters		•	
2 one-dollar bills		•	
Level III			
1 favorite, age-appropriate book	•		
1 cube (at least 2 × 2 × 2 inches large)		•	
5 yellow one-inch blocks		•	
5 red one-inch blocks		•	
5 blue one-inch blocks		•	
1 calculator		•	
1 dark rock			•
1 smooth rock			•
1 rough rock			•
1 shiny rock			•
1 light-colored rock			•
1 metal spoon			•
1 wooden spoon			•
1 plastic spoon			•
1 plastic straw			•
1 steel nail			•
1 wooden stick			•
1 plastic bottle			•

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Manipulative	ELA	Math	Science
1 piece of aluminum foil			•
1 index card			•
3 identical clear plastic cups filled $\frac{3}{4}$ with water			•
1 three-section sorting structure			•
Level IV			
1 calculator		•	
3* blank pieces of lined paper		•	
1 pencil		•	
1 one-cup measuring cup		•	
1 $\frac{1}{4}$ -cup measuring cup		•	
1 twelve-inch ruler		•	
1 thermometer		•	
1 scale familiar to student		•	
1 tablespoon		•	
1 bucket		•	
1 teaspoon		•	
5 color counters		•	
2 small plastic cups			•
2* ounces of water			•
2* ounces of mineral oil			•
2 small pipettes or eyedroppers			•
1 bottle of blue food coloring			•
1 sheet of coarse sandpaper			•
1 red one-inch block			•
1 blue one-inch block			•
1 set of assorted books that when stacked are at least 5 inches high			•
1 board at least 12 inches long			•
3 identical plastic bottles with caps			•
3 cups of sand			•
3 cups of flour			•
3 cups of cotton			•
1 road map			•
1 periodic table			•

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Manipulative	ELA	Math	Science
1 newspaper			•
1 coin			•
1 plastic straw			•
1 toothpick			•
1 metal nail			•
1 rock			•
1 cork			•
1 table tennis ball			•
1 steel paper clip			•
1 crayon			•
Level V			
6* blank pieces of lined paper	•	•	•
1 pencil	•	•	
1 pitcher		•	
1 bottle of blue food coloring		•	
1 half-gallon of water		•	
1 two-cup clear measuring cup		•	
10 one-dollar bills		•	
4 quarters		•	
1 five-dollar bill		•	
1 penny		•	
1 calculator		•	•
1 yellow marker			•
1 orange marker			•
1 thermometer			•
1 twelve-inch ruler			•
1 balance			•
1 magnifying glass			•
1 measuring cup			•
1 rock			•
3 clear plastic cups filled with water			•
1* sugar cube			•
1* teaspoon of granulated sugar			•

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Manipulative	ELA	Math	Science
2* tablespoons of vegetable oil			•
1 stir stick			•
1 scale			•
1 250 mL graduated beaker with 150 mL of water			•
1 250 mL graduated beaker			•

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Appendix E — Version 6: Manipulative List

Manipulative	ELA	Math	Science
Level I			
1 writing implement familiar to student	•		
2* blank pieces of lined paper	•		
2 familiar, age-appropriate books	•		
5 yellow one-inch blocks	•	•	
1 cube		•	
1 ball		•	
4 markers (same color/size)		•	
2 green color counters		•	
2 yellow color counters		•	
1 green piece of construction paper		•	
1 yellow piece of construction paper		•	
3 red one-inch blocks		•	•
1 book			•
1 small plastic cup			•
1 large plastic cup			•
3 clear, resealable sandwich-size plastic bags			•
1 citrus fruit			•
7* cotton balls			•
1 cup of water			•
3 clear plastic cups			•
Level II			
1 crayon	•		
1 clear plastic cup	•		
1 spoon	•		
1 small box	•		
1 small ball	•		
1 bowl	•		
1 toy car	•		
1* blank piece of lined paper	•		
1 favorite, age-appropriate book	•		
10 yellow one-inch blocks	•	•	

*Asterisk denotes a manipulative to be treated as a single-use item. These manipulatives should only be used on the task they are associated with and should be discarded after the task has been completed by the student.

Manipulative	ELA	Math	Science
1 pencil		•	
1 twelve-inch ruler		•	
1 scale familiar to student		•	
1 twelve-inch piece of string		•	
1 full bottle of glue		•	
1 empty wallet/change purse		•	
2 pennies		•	
2 quarters		•	
2 one-dollar bills		•	
9 plastic spoons		•	
1 daily newspaper		•	
Level III			
1 favorite, age-appropriate book	•		
1* blank piece of lined paper		•	
1 cube (at least 2 × 2 × 2 inches large)		•	
5 yellow one-inch blocks		•	
5 red one-inch blocks		•	
5 blue one-inch blocks		•	
1 calculator		•	
1 pencil		•	•
1 dark rock			•
1 smooth rock			
1 rough rock			•
1 shiny rock			•
1 light-colored rock			•
2 bowls			•
2* cups of flour			•
1 plastic cup			•
1* ½-cup of water			•
1 measuring cup			•
3 identical clear plastic cups filled ¾ with water			•
1 metal spoon			•
1 wooden spoon			•

*Asterisk denotes a manipulative to be treated as a single-use item. These manipulatives should only be used on the task they are associated with and should be discarded after the task has been completed by the student.

Manipulative	ELA	Math	Science
1 plastic spoon			•
1 plastic straw			•
1 steel nail			•
1 wooden stick			•
1 plastic bottle			•
1 piece of aluminum foil			•
1 index card			•
1 measuring spoon			•
1 tablespoon of sugar			•
1 paper towel			•
1 twelve-inch ruler			•
Level IV			
1 crayon	•		•
1 calculator		•	
5* blank pieces of lined paper		•	
1 pencil		•	
1 two-cup clear plastic measuring cup		•	
1 one-cup measuring cup		•	
1 ¼-cup measuring cup		•	
1 twelve-inch ruler		•	
1 thermometer		•	
1 tablespoon		•	
1 scale familiar to student		•	
10 color counters		•	
1 one-inch block			•
3 identical plastic bottles with caps			•
3 cups of sand			•
3 cups of flour			•
3 cups of cotton			•
1 road map			•
1 periodic table			•
1 newspaper			•
1 feather			•

*Asterisk denotes a manipulative to be treated as a single-use item. These manipulatives should only be used on the task they are associated with and should be discarded after the task has been completed by the student.

Manipulative	ELA	Math	Science
1 coin			•
1 plastic straw			•
1 toothpick			•
1 rock			•
1 metal nail			•
1 cork			•
1 2-section sorting structure			•
Level V			
6* blank pieces of lined paper	•	•	•
1 pencil	•	•	
1 bottle of blue food coloring		•	
1 half-gallon of water		•	
1 pitcher		•	
1 two-cup clear measuring cup		•	
10 one-dollar bills		•	
4 quarters		•	
1 five-dollar bill		•	
1 calculator		•	•
1 yellow marker			•
1 orange marker			•
1 thermometer			•
1 twelve-inch ruler			•
1 balance			•
1 magnifying glass			•
1 measuring cup			•
1 rock			•

*Asterisk denotes a manipulative to be treated as a single-use item. These manipulatives should only be used on the task they are associated with and should be discarded after the task has been completed by the student.

Appendix E — Version 7: Manipulative List

Manipulative	ELA	Math	Science
Level I			
1 writing implement familiar to student	•		
1* blank piece of lined paper	•		
1 favorite, age-appropriate book	•		
5 yellow one-inch blocks	•	•	
1 cube		•	
1 ball		•	
4 markers (same color/size)		•	
3 red one-inch blocks		•	
2 small water bottles		•	
1 large water bottle		•	
6 pennies		•	
1 bottle of bubbles			•
1 device with push button			•
3 clear, resealable sandwich-size plastic bags			•
1 citrus fruit			•
7* cotton balls			•
1 green 5-inch square piece of construction paper			•
1 yellow 5-inch square piece of construction paper			•
1 blue 5-inch square piece of construction paper			•
3 clear plastic cups			•
1 cup of water			•
Level II			
1 favorite, age-appropriate book	•		
1 crayon	•		
1 individual classroom schedule	•		
1 writing implement familiar to student	•		
1 clear plastic cup	•		
1 spoon	•		
1 small box	•		
1 small ball	•		
1 bowl	•		

*Asterisk denotes a manipulative to be treated as a single-use item. These manipulatives should only be used on the task they are associated with and should be discarded after the task has been completed by the student.

Manipulative	ELA	Math	Science
1 toy car	•		
5* blank pieces of lined paper	•	•	
10 yellow one-inch blocks	•	•	
1 twelve-inch ruler		•	
1 scale familiar to student		•	
1 pencil		•	
1 12-inch piece of string		•	
1 full bottle of glue		•	
1 empty wallet/change purse		•	
2 pennies		•	
2 quarters		•	
2 one-dollar bills		•	
3* graham crackers		•	
1 thermometer		•	
1 straw		•	
1 cup of sand		•	
Level III			
1 favorite, age-appropriate book	•		
1 cube (at least 2 × 2 × 2 inches large)		•	
5 yellow one-inch blocks		•	
5 red one-inch blocks		•	
5 blue one-inch blocks		•	
1 calculator		•	
1 pencil		•	
1 dark rock			•
1 smooth rock			•
1 rough rock			•
1 shiny rock			•
1 light-colored rock			•
1 metal spoon			•
1 wooden spoon			•
1 plastic spoon			•
1 plastic straw			•

*Asterisk denotes a manipulative to be treated as a single-use item. These manipulatives should only be used on the task they are associated with and should be discarded after the task has been completed by the student.

Manipulative	ELA	Math	Science
1 steel nail			•
1 wooden stick			•
1 plastic bottle			•
1 piece of aluminum foil			•
1 index card			•
3 identical clear plastic cups filled $\frac{3}{4}$ with water			•
1 three-section sorting structure			•
Level IV			
1 pencil	•	•	
5* blank pieces of lined paper	•	•	
1 calculator		•	
1 one-cup measuring cup		•	
1 $\frac{1}{4}$ -cup measuring cup		•	
1 thermometer		•	
1 tablespoon		•	
1 twelve-inch ruler		•	
6 color counters		•	
2 small plastic cups			•
2* ounces of water			•
2* ounces of mineral oil			•
2 small pipettes or eyedroppers			•
1 bottle of blue food coloring			•
1 sheet of coarse sandpaper			•
1 red one-inch block			•
1 blue one-inch block			•
1 set of assorted books that when stacked are at least 5 inches high			•
1 board at least 12 inches long			•
3 identical plastic bottles with caps			•
3 cups of sand			•
3 cups of flour			•
3 cups of cotton			•
1 road map			•
1 periodic table			•

*Asterisk denotes a manipulative to be treated as a single-use item. These manipulatives should only be used on the task they are associated with and should be discarded after the task has been completed by the student.

Manipulative	ELA	Math	Science
1 newspaper			•
1 coin			•
1 plastic straw			•
1 toothpick			•
1 rock			•
1 cork			•
1 metal nail			•
1 table tennis ball			•
1 steel paper clip			•
1 crayon			•
Level V			
7* blank pieces of lined paper	•	•	•
1 pencil	•	•	
1 bottle of blue food coloring		•	
1 half-gallon of water		•	
1 pitcher		•	
1 two-cup clear measuring cup		•	
10 one-dollar bills		•	
4 quarters		•	
3 $\frac{1}{4}$ -fraction tiles		•	
2 $\frac{1}{2}$ -fraction tiles		•	
2 $\frac{1}{3}$ -fraction tiles		•	
1 calculator		•	•
1 yellow marker			•
1 orange marker			•
1 thermometer			•
1 twelve-inch ruler			•
1 balance			•
1 magnifying glass			•
1 measuring cup			•
1 rock			•
3 clear plastic cups filled with water			•
1* sugar cube			•

*Asterisk denotes a manipulative to be treated as a single-use item. These manipulatives should only be used on the task they are associated with and should be discarded after the task has been completed by the student.

Manipulative	ELA	Math	Science
1* teaspoon of granulated sugar			•
2* tablespoons of vegetable oil			•
1 stir stick			•
1 scale			•
1 250 mL graduated beaker with 150 mL of water			•
1 250 mL graduated beaker			•

*Asterisk denotes a manipulative to be treated as a single-use item. These manipulatives should only be used on the task they are associated with and should be discarded after the task has been completed by the student.

Appendix E — Version 8: Manipulative List

Manipulative	ELA	Math	Science
Level I			
1 writing implement familiar to student	•		
1* blank piece of lined paper	•		
1 favorite, age-appropriate book	•		
5 yellow one-inch blocks	•	•	
1 cube		•	
1 ball		•	
4 markers (same color/size)		•	
3 red one-inch blocks		•	•
1 book			•
1 small plastic cup			•
1 large plastic cup			•
3 clear, resealable sandwich-size plastic bags			•
1 citrus fruit			•
7* cotton balls			•
3 clear plastic cups			•
1 cup of water			•
Level II			
1 crayon	•		
1 clear plastic cup	•		
1 spoon	•		
1 small box	•		
1 small ball	•		
1 bowl	•		
1 toy car	•		
1 favorite, age-appropriate book	•		
1* blank piece of lined paper	•		
10 yellow one-inch blocks	•	•	
1 twelve-inch ruler		•	
1 scale familiar to student		•	
1 pencil		•	
1 twelve-inch piece of string		•	

*Asterisk denotes a manipulative to be treated as a single-use item. These manipulatives should only be used on the task they are associated with and should be discarded after the task has been completed by the student.

Manipulative	ELA	Math	Science
1 full bottle of glue		•	
1 empty wallet/change purse		•	
2 pennies		•	
2 quarters		•	
2 one-dollar bills		•	
3 red color counters		•	
3 blue color counters		•	
3 yellow color counters		•	
Level III			
1 familiar toy	•		
1 unfamiliar, age-appropriate book	•		
1 favorite, age-appropriate book	•		
1 cube (at least 2 x 2 x 2 inches large)		•	
5 yellow one-inch blocks		•	
5 red one-inch blocks		•	
5 blue one-inch blocks		•	
1 calculator		•	
1* blank piece of lined paper		•	
1 pencil		•	•
1 dark rock			•
1 smooth rock			•
1 rough rock			•
1 shiny rock			•
1 light-colored rock			•
2 bowls			•
2* cups of flour			•
1 plastic cup			•
1* ½-cup of water			•
1 measuring cup			•
3 identical clear plastic cups filled ¾ with water			•
1 metal spoon			•
1 wooden spoon			•
1 plastic spoon			•

*Asterisk denotes a manipulative to be treated as a single-use item. These manipulatives should only be used on the task they are associated with and should be discarded after the task has been completed by the student.

Manipulative	ELA	Math	Science
1 plastic straw			•
1 steel nail			•
1 wooden stick			•
1 plastic bottle			•
1 piece of aluminum foil			•
1 index card			•
1 measuring spoon			•
1 tablespoon of sugar			•
1 paper towel			•
1 twelve-inch ruler			•
Level IV			
4* blank pieces of lined paper	•	•	
1 pencil	•	•	
1 calculator		•	
1 one-cup measuring cup		•	
1 ¼-cup measuring cup		•	
1 twelve-inch ruler		•	
1 thermometer		•	
1 tablespoon		•	
1 teaspoon		•	
1 bucket		•	
1 gallon pitcher		•	
1 one-inch block			•
3 identical plastic bottles with caps			•
3 cups of sand			•
3 cups of flour			•
3 cups of cotton			•
1 road map			•
1 periodic table			•
1 newspaper			•
1 feather			•
1 coin			•
1 plastic straw			•

*Asterisk denotes a manipulative to be treated as a single-use item. These manipulatives should only be used on the task they are associated with and should be discarded after the task has been completed by the student.

Manipulative	ELA	Math	Science
1 toothpick			•
1 rock			•
1 metal nail			•
1 cork			•
1 2-section sorting structure			•
1 crayon			•
Level V			
6* blank pieces of lined paper	•	•	•
1 pencil	•	•	
1 bottle of blue food coloring		•	
1 half-gallon of water		•	
1 pitcher		•	
1 two-cup clear measuring cup		•	
10 one-dollar bills		•	
4 quarters		•	
1 five-dollar bill		•	
1 calculator		•	•
1 yellow marker			•
1 orange marker			•
1 thermometer			•
1 twelve-inch ruler			•
1 balance			•
1 magnifying glass			•
1 measuring cup			•
1 rock			•

*Asterisk denotes a manipulative to be treated as a single-use item. These manipulatives should only be used on the task they are associated with and should be discarded after the task has been completed by the student.