



1: Counting Objects Assessment

Linking Assessment to instruction

The following charts outline suggested activities for each instructional level of the *Counting Objects* assessment. They refer you to particular activities from the *Developing Number Concepts* (DNC) series of books. The DNC series includes both teacher-directed and independent activities specifically designed to meet the varied needs of students. The suggested activities are coded for easy access. For example, “1:2-23” refers to Book 1, Chapter 2, Activity Number 23.

Please note that these charts provide a quick-overview of activities for instruction. For complete background information, please refer to these other helpful resources:

Math Time: The Learning Environment by Kathy Richardson

Developing Number Concepts by Kathy Richardson

For Professional Development Opportunities

Contact Math Perspectives Teacher Development Center: www.mathperspectives.com

Suggested Reading

For additional information that will support your instruction, read the following sections from *Developing Number Concepts Book One: Counting, Comparing and Pattern*:

- What You Need to Know About Beginning Number Concepts (p. 2-4)
- Goals for Children’s Learning (p. 6-7)
- Meeting the Range of Needs (p. 8-11)
- Classroom Scenes (p. 12-21)
- About the Activities (p. 22-23)

Providing Appropriate Instruction

When helping children develop proficiency with counting objects, it is important to recognize that competency develops over time. Present a variety of activities, allowing children to experience counting in many ways over several weeks. This will help them make generalizations and integrate their ideas about counting. Let their responses dictate the amount of time you spend before moving on.

- **Teacher-Directed Small-Group Work**

Choose 3 or 4 activities and present them in a 10-15 minute small-group session to provide the children with a variety of experiences. Do the same tasks for several days. Occasionally, replace one of the tasks

with a new one. Adjust the size of the numbers according to the children’s responses. Usually work with just one group a day so you have time to interact with the children while they work at the Independent Stations.

- **Independent Station Work**

Give children opportunities to choose from among several activities. These choices should be available for several weeks. During this time, the children will be developing proficiency and moving to larger numbers, as they are able. Interact with the children as they work, supporting them and challenging them as needed.

COUNTING OBJECTS

Part 1, Task One: Counting a Pile (of 4, 7, 12, 21, 32)

Needs Instruction (I, I-)

(I) – Is unable to keep track of what they counted.

(I-) – Is unable to count one-to-one.

Focus on one-to-one counting. Help the children see the need to keep track by working with numbers that are small enough for them to be bothered when they arrive at different answers when they count and recount groups of objects. Discuss: What do we need to do so we know which ones we have counted and which ones we have not yet counted?

TEACHER-DIRECTED ACTIVITIES				
		To 7	To 12	To 21+
1: 1-1	Slide and Check	•	•	
1: 1-2	Count and Dump	•	•	
1: 1-3	Making Towers	•	•	
1: 1-4	Counting Stories, Level 1	•	•	•
1: 1-5	Creations	•	•	•
1: 1-7	Grab-Bag Counting	•	•	•
1: 1-8	Grow and Shrink, Level 1	•	•	•
1: 1-9	Hide It	•	•	
1: 1-10	Hunt for It, Levels 1 and 2	•	•	•
1: 1-11	Peek and Count, Level 1	•	•	
1: 1-12	Find a Match, Levels 1 and 2	•	•	•
1: 1-13	Tell Me Fast	•	•	
1: 1-14	Break It Up	•	•	•

INDEPENDENT ACTIVITIES				
		To 7	To 12	To 21+
1: 1-22	<i>Creations Station</i>	•	•	•
1: 1-23	<i>Cover the Dots, Level 1</i>	•	•	•
1: 1-24	<i>Counting with the Number Shapes</i>	•	•	•

Needs Practice (P)

(P) – Counts and recounts to find out how many, or loses track and is off by one or two, or keeps track with difficulty. (May need to line up the counters first to keep track.)

To develop more facility, provide ongoing practice with activities requiring the children to determine how many in a variety of situations.

TEACHER-DIRECTED ACTIVITIES					
		To 7	To 12	To 21	To 32 & Beyond
1:1-2	<i>Count and Dump</i>	•	•	•	•
1:1-3	<i>Making Towers</i>	•	•	•	•
1:1-6	<i>Finger Counting</i>	•	•		
1:1-7	<i>Grab Bag Counting</i>	•	•	•	•
1:1-8	<i>Grow and Shrink Level 2</i>	•	•	•	
1:1-9	<i>Hide It</i>	•	•	•	
1:1-10	<i>Hunt for It, Level 2</i>	•	•	•	
1:1-12	<i>Find a Match Level 2</i>	•	•	•	
1:1-14	<i>Break It Up</i>	•	•	•	•
1:1-15	<i>Tall and Short</i>	•	•	•	

INDEPENDENT ACTIVITIES					
		To 7	To 12	To 21	To 32 & Beyond
1:1-29	<i>Grab-Bag Counting Station</i>				
1: 1-30	<i>Shape Puzzles</i>	Use 3-6 Puzzles	Use 3-10 Puzzles	Use 10-20 Puzzles	Create Puzzles holding more than 20
1: 1-31	<i>Line Puzzles</i>	Use 3-6 Puzzles	Use 3-10 Puzzles	Use 10-20 Puzzles	Create Puzzles holding more than 20
1: 1-33	<i>Grab a Handful</i>	•	•	•	•
1: 1-34	<i>Hide-It Station</i>	•	•	•	
1: 1-36	<i>How Long Is It?</i>	•	•	•	•
1: 1-37	<i>How Many Does It Hold?</i>	•	•	•	•
1: 1-38	<i>Sorting Colors</i>	•	•		
1: 1-39	<i>Sorting Collections</i>	•	•	•	•
1: 1-40	<i>Sorting Shape Puzzles</i>	•	•	•	•
1: 1-41	<i>Sorting Line Puzzles</i>	•	•	•	•

Ready to Apply (A-, A)

(A-) – Keeps track with ease but leaves out a number in rote counting sequence, **or** forgets how many they counted.

Continue to provide opportunities to emphasize the counting sequence from 10 to 20:

- Counting the days of the month on a calendar*
- Lunch count*
- Days of school (represented by placing a dot each day on ten frames)*
- Library books to return*
- Children in line*

(A) – Knows the rote counting sequence, is able to keep track of the counters with ease, remembers what was counted, but does not line up the counters first. (We are determining the child’s ability to keep track of an unorganized group of objects that is not lined up.)

If children are ready to apply the skill of counting, provide a variety of opportunities for them to use what they know. The following are examples of ways you can involve children in counting.

- Working with Numbers to 12:*
- “How many books do we have about turtles?”*
 - “How many red buttons are in the button box?”*
 - “How many children are in your row?”*

- Working with Numbers to 21 or more:*
- “How many children brought their lunch today?”*
 - “How many paper clips long is your desk?”*

Part 1, Task Two: Making a Pile (of 5, 9, 18)

Needs Instruction (I)

(I) – Counts past the number asked for but doesn’t notice. (Is unable to hold the number in mind.)

Provide opportunities for children to count out a number of objects, beginning with numbers small enough for them to keep in mind as they count. Gradually increase the number, as the children are able.

TEACHER-DIRECTED ACTIVITIES				
		To 5	To 9	To 18
1: 1-4	Counting Stories	•	•	•
1: 1-5	Creations	•	•	•
1: 1-8	Grow and Shrink	•	•	Use two working space papers

INDEPENDENT ACTIVITIES				
		To 5	To 9	To 18
1: 1-21	Counting Boards	•	•	•
1: 1-22	Creations Station	•	•	•
1: 1-25	Roll-a-Tower Race	•	•	•

Needs Practice (P)

(P) – Counts out the requested number but makes an error, such as leaving out a number or losing track of an object.

Provide opportunities for children to count out a number of objects until they have developed meaning for the numbers and can hold them in their mind and count without making errors.

TEACHER-DIRECTED ACTIVITIES				
		To 5	To 9	To 18
1: 1-2	Count and Dump	•	•	Extend numbers as needed
1: 1-4	Counting Stories	•	•	Extend numbers as needed
1: 1-5	Creations	•	•	•
1: 1-8	Grow and Shrink	•	•	Use two working space papers

INDEPENDENT ACTIVITIES				
		To 5	To 9	To 18
1: 1-21	Counting Boards, Level 1	•	•	•
1: 1-25	Roll-a-Tower Race	•	•	•
1: 1-26	Make-a-Train Race	•	•	•
1: 1-28	Build a City	•	•	•
1: 1-32	Pick a Number	•	•	•

Ready to Apply (A-, A)

(A-) – Counts past the quantity asked for but self-corrects. The student realizes s/he has counted past the number, stops, and takes away any extra counters.

Continue to provide experiences counting out a number of objects as described in the previous charts.

(A) – Counts out the quantity asked for with ease and accuracy.

When children are ready to apply the skill of counting out a particular number, provide a variety of opportunities for them to use what they know. The following are examples of ways you can involve them.

“You need to get straws for everyone at your table. How many do you need to get?”

“Can you get a small whiteboard for everyone in the group? How many do you need?”

“We have 26 children in our class. Each child needs one piece of red paper. Would you count out 26 pieces of paper? “

Part 2, Tasks Three and Four: One More/One Less

(to/from 8, 12, 21, and over the decades to 100)

The Instructional Levels for the Part 2 Tasks, while determined separately, all use the same criteria.

Needs Prerequisite (N)

(N) – Counts to find out 3 (out of 3) times, or makes 3 errors.

Needs Instruction (I)

(I) – Knows without counting, or uses the rote sequence (counts under their breath) for 1 (out of 3).

Needs Practice (P)

(P) – Knows without counting 2 (out of 3) times, but counts to figure out one number, or makes one error.

Ready to Apply (A–, A)

(A–) – Knows without counting 2 (out of 3) times, but says the rote sequence (counts under his or her breath) 1 time, with no errors.

(A) – Knows one more without counting 3 (out of 3) times, with no errors.

The following experiences can be used for Task 3 and Task 4.

Provide ongoing experiences determining one more and one less, sometimes in sequence and sometimes not in sequence.

TEACHER-DIRECTED ACTIVITIES					
		To/From 8	To/From 12	To/From 21	To/From 100
<i>1: 1-3</i>	<i>Making Towers</i>	•	•	•	Provide opportunities for children to count large numbers using models like Ten Frames.
<i>1: 1-16</i>	<i>One More/One Less</i>	•	•	<i>EXT.</i>	
<i>1: 1-17</i>	<i>Give and Take</i>	•	•	•	
<i>1: 1-18</i>	<i>Hiding One More</i>	•	•	•	
<i>1: 1-19</i>	<i>Hiding One Less</i>	•	•	•	
<i>1: 1-20</i>	<i>Towers, Towers, Towers</i>	•	•	•	

INDEPENDENT ACTIVITIES				
		To 6	To 10	To 15
1: 1-27	<i>Build a Staircase</i>	•	•	
1: 1-35	<i>Give-and-Take Station</i>	•	•	•

Ready to Apply (A)

(A) – A child may be ready to apply for numbers to 8 but not for numbers to 12 and 21. Go on to the next level until the children are ready to apply for numbers to 32 and eventually to 100.