



SKILLS ASSESSMENT

For Children in the Primary Grades 1–2

OVERVIEW

The *AfterSchool KidzMath*™ program has three goals:

- Increase children’s enjoyment of mathematics
- Increase children’s mathematical understanding and skills
- Increase children’s ability to work with others

To help you identify how the children are doing in relation to the goals, Developmental Studies Center has developed two types of assessments: Math Skills Assessments to measure children’s math skills and an *AfterSchool KidzMath* Questionnaire to measure how they feel about math and working with others. Both tools can be used in several ways.

As we are all aware, children have to undergo quite a bit of testing these days. So we developed these assessments as not another test but a fun way to see where your kids are with their math skills, how they feel about math and working with others, and if they are progressing or need more time with skills. We do not recommend assessing children before grade 1.

CONTENTS

MATH SKILLS ASSESSMENTS	2
When to Use the Skills Assessment	2
How to Use the Skills Assessment	2
How to Score the Skills Assessment	3
AfterSchool KidzMath Skills Assessments:	4
Beat the Dice	4
Concentrate on Ten	6
Funny Bug	8
Zero Zone	10
AFTERSCHOOL KIDZMATH QUESTIONNAIRE	12

MATH SKILLS ASSESSMENTS

There are four primary assessments included in this packet. Each assesses one of the content areas that are covered in the *AfterSchool KidzMath* Games program.

NAME OF THE GAME	GRADE LEVEL	MATH CONTENT AREA
Beat the Dice	1–2	Number Relationships
Concentrate on Ten	1–2	Addition
Funny Bug	1–2	Addition
Zero Zone	1–2	Subtraction

WHEN TO USE THE SKILLS ASSESSMENTS

This assessment was designed for flexible use; for example, you can use it as an indicator of where a child is at any given time, to determine what a child needs to focus on, or as a pre- and posttest. There is an assessment using a game from each content area. You can use the assessment as a pre- and posttest by administering it at the beginning of the year, scoring it, administering it again at the end of the year, and then comparing the scores. Or you can use it just as a way to see where your kids are with their math in order to know what games you want to play next or play again, by looking at their scores.

Note that to see the most gains from *AfterSchool KidzMath* we recommend implementing the program at least twice a week for 6 months. Continue to play the *KidzMath* games with your children as usual and only use the assessments as a guide to see how the children are doing in each math content area. For children to get the most from the program, it is important that you facilitate the games as written: **model the game, play the game, and discuss the game.**

Before doing the assessment that accompanies a game, the children should have experience with the game from using the kit and know how to play it. If you administer the assessment well, the children will think they are just playing another fun game...after all, we want always to remember this is *after* school, not *more* school!

HOW TO USE THE SKILLS ASSESSMENTS

Each assessment is intended to feel and look to the child as if he or she is playing an *AfterSchool KidzMath* game. With that in mind, please make sure that your children know how to play each game before giving the accompanying assessment. The children can play the game in pairs, each completing their own assessment page or they can work alone.

Directions

1. For each assessment you are going to administer, print one copy for each child. You will use the first page to record your findings and the child will use the second page to help play the game and record his or her answers. You will use the materials from *AfterSchool KidzMath* to play each game, the only difference being that the children record their own answers.

2. Before giving an assessment, explain that it is similar to the game the children have previously played. Then walk through how the assessment is different and what the children will do. You may also want to explain that they are doing this so that you know how they are doing with math and what games they should play next.

3. Administer the assessment:

If the kids are working in pairs, each child should complete his or her own assessment page. It works best for you, the leader, to work with the pair and make sure they are playing correctly and recording their answers while you observe how they are completing the work. Pair the children and give each partner the second page of the assessment and the materials needed to play the game. Have the children play the game as described on the Assessment Sheet while you observe. While they are playing you can take notes of your observations in the observation notes box on the first page.

If the kids are working independently, explain the assessment directions and have them complete the second page of the assessment on their own. Make sure that you are observing their work and taking notes. You can do this also by gathering a small group and administering the assessment while observing and taking notes.

4. Whether you administer the assessment to individuals or pairs, be sure the kids put their names on their sheet. Collect the sheets when they are done.

Things to keep in mind when administering the assessments

Is the child's answer correct? If the answer is not correct, does she know this? How far off is she? Is she close and maybe just counted wrong or is she way off, indicating that she probably doesn't understand what the answer should have been?

How is he working with his partner? If his partner is struggling, does he offer help? How do partners decide who is going to go first? How does one partner act if he doesn't get to go first or his partner is not playing fairly? Are partners playing fairly?

All of these are good questions to think about while you are watching each child play the games; it will help you record notes in the observation notes box to learn where they are with their math and social skills.

HOW TO SCORE THE SKILLS ASSESSMENTS

By giving a score to a child's work you can compare the child to the others in your group, see what the children need to work on, and also see how they have changed over time. If you wish to score the assessment, there is rubric to help you do so. Simply look at the completed task and your observations and choose the score that best describes the level of the work.

AFTERSCHOOL KIDZMATH™ SKILLS ASSESSMENT

BEAT THE DICE

Child's name: _____ Date: _____

Materials

- Each pair (or child, if working individually) being assessed will need 2 dice.
- Each child will need a copy of the Beat The Dice Assessment Sheet (next page).
- The leader will need a copy of this Beat The Dice skills assessment page.

Directions

Once you have played Beat The Dice (pages 35–39 of the *AfterSchool KidzMath Games Primary Leader's Guide*) and other number relationship games, and your kids know how to play the game, you are ready to assess their understanding of number relationships.

1. Print a copy of the Beat the Dice Assessment Sheet (next page) for each child.
2. Explain that this is similar to the *AfterSchool KidzMath* game, but they will be recording their score on a piece of paper instead of using the game board.
3. Show them the Assessment Sheet and model what they will be doing.
4. Hand out the materials needed and the Assessment Sheet.
5. While the children are playing, take notes in the observation notes box below; after they are finished playing, collect their Assessment Sheets and score their work according to the rubric.

Observation notes

What strategies is the child using? (e.g., counting fingers, using mental math, looking for the answer from a partner, etc.)
How automatic is the skill? Does the child have to think about it or does it come easily?
What kind of partner is the child? Bossy? Helpful? Not interested?
Does this child need a more or less challenging game?

Scoring rubric

INDICATOR	SCORE
The child is able to add the numbers on the dice and determine the correct answer four times.	4
The child is able to add the numbers on the dice and determine the correct answer three times.	3
The child is able to add the numbers on the dice and determine the correct answer two times.	2
The child is not able to add the numbers on the dice and determine the correct answer, or can do so one time.	1

BEAT THE DICE ASSESSMENT SHEET

Name: _____

Date: _____ Grade: _____


Materials needed

- 2 dice

Directions

1. Decide who will go first.
2. Take turns:
 - rolling two dice
 - adding the two numbers
 - deciding if the number is less than 6, more than 6, or equal to 6
 - recording the equation on the chart
3. Play four rounds each.



	LESS THAN 6	MORE THAN 6	EQUAL TO 6
Sample Round			 $2 + 4 = 6$
Round One			
Round Two			
Round Three			
Round Four			
	Total:	Total:	Total:

AFTERSCHOOL KIDZMATH™ SKILLS ASSESSMENT

CONCENTRATE ON TEN

Child's name: _____ Date: _____

Materials

- Each pair being assessed (or child, if working individually) will need a deck of cards with face cards removed.
- Each child will need a copy of the Concentrate on Ten Assessment Sheet (next page).
- The leader will need a copy of this Concentrate on Ten skills assessment page.

Directions

Once you have played Concentrate on Ten (pages 73–77 of the *AfterSchool KidzMath Games Primary Leader's Guide*) and other addition games, and your kids know how to play the game, you are ready to assess their understanding of addition.

1. Print a copy of the Concentrate on Ten Assessment Sheet (next page) for each child.
2. Explain that this is similar to the *AfterSchool KidzMath* game, but they will be recording their score on a piece of paper instead of just playing with cards.
3. Show them the Assessment Sheet and model what they will be doing.
4. Hand out materials needed and the Assessment Sheet.
5. While the children are playing, take notes in the observation notes box below; after they are finished playing, collect their Assessment Sheets and score their work according to the rubric.

Observation notes

What strategies is the child using? (e.g., counting fingers, using mental math, looking for the answer from a partner, etc.)

How automatic is the skill? Does the child have to think about it or does it come easily?

What kind of partner is the child? Bossy? Helpful? Not interested?

Does this child need a more or less challenging game?

Scoring rubric

INDICATOR	SCORE
The child gets all the answers correct.	4
The child gets more answers right than wrong.	3
The child gets more answers wrong than right.	2
The child is unable to play the game.	1

CONCENTRATE ON TEN ASSESSMENT SHEET

Name: _____

Date: _____ Grade: _____

Materials needed

- 1 deck of cards with the face cards removed

Directions

1. Decide who goes first and who is going to be the dealer.
2. Place nine cards face down in three rows of three.
3. Take turns turning over two cards, trying to find a pair that equals 10. If the two cards equal 10, remove the cards, replace with two new cards, and record the equation below.
4. Play until there are no more combinations to make ten.

Ways to make 10:

8	2
---	---

$$\underline{8} + \underline{2} = \underline{10}$$

--	--

$$\underline{\quad} + \underline{\quad} = \underline{10}$$

--	--

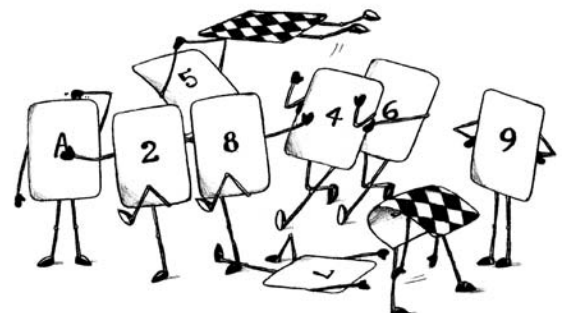
$$\underline{\quad} + \underline{\quad} = \underline{10}$$

--	--

$$\underline{\quad} + \underline{\quad} = \underline{10}$$

--	--

$$\underline{\quad} + \underline{\quad} = \underline{10}$$



AFTERSCHOOL KIDZMATH™ SKILLS ASSESSMENT

FUNNY BUG

Child's name: _____ Date: _____

Materials

- Each pair (or child, if working individually) being assessed will need a “Funny Bug Body Parts” game board and 2 dice.
- Each child will need a copy of the copy of the Funny Bug Assessment Sheet (next page).
- The leader will need a copy of this Funny Bug skills assessment page.

Directions

Once you have played Funny Bug (pages 79–83 of the *AfterSchool KidzMath Games Primary Leader's Guide*) other addition games, and your kids know how to play the game, you are ready to assess their understanding of addition.

1. Print a copy of the Funny Bug Assessment Sheet (next page) for each child.
2. Explain that this is similar to the *AfterSchool KidzMath* game, but they will be recording the game on a piece of paper and each making their own bug.
3. Show them the Assessment Sheet and model what they will be doing.
4. Hand out the materials needed and the Assessment Sheet.
5. While the children are playing, take notes in the observation notes box below; after they are finished playing, collect their Assessment Sheets and score their work according to the rubric.

Observation notes

What strategies is the child using? (e.g., counting fingers, using mental math, looking for the answer from a partner, etc.)

How automatic is the skill? Does the child have to think about it or does it come easily?

What kind of partner is the child? Bossy? Helpful? Not interested?

Does this child need a more or less challenging game?

Scoring rubric

INDICATOR	SCORE
The child is able to correctly add the numbers four–five times.*	4
The child is able to correctly add the numbers three times.*	3
The child is able to correctly add the numbers two times.*	2
The child is not able to correctly add the numbers or can do so one time.	1

*Add one point if the child is adding the numbers in his or her head—not using fingers, dots on the dice, etc.

FUNNY BUG ASSESSMENT SHEET

Name: _____

Date: _____ Grade: _____



Materials needed

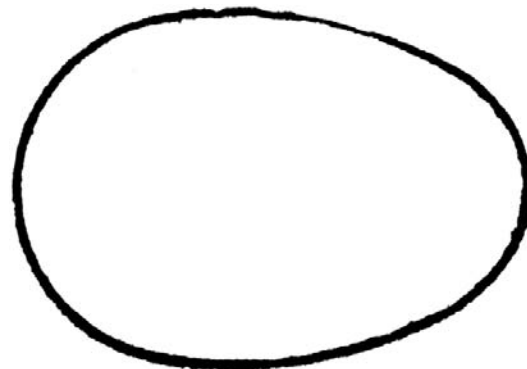
- 1 “Funny Bug Body Parts” game board
- 2 dice

Directions

1. Decide who will go first.
2. Take turns:
 - rolling two dice and adding the two numbers rolled
 - finding the bug body part for that number on the “Funny Bug Body Parts” game board
 - writing the problem and the answer below (for example, write $4 + 5 = 9$)
 - drawing the bug body part on the bug body below
3. Play for five rounds

Write your answers here:

ROUND	EQUATION
Sample:	$4 + 5 = 9$ (stinger)
Round 1:	
Round 2:	
Round 3:	
Round 4:	
Round 5:	



Bug Body

AFTERSCHOOL KIDZMATH™ SKILLS ASSESSMENT

ZERO ZONE

Child's name: _____ Date: _____

Materials

- Each child being assessed will need 1 die.
- Each child will need a copy of the copy of the Zero Zone Assessment Sheet (next page).
- The leader will need a copy of this Zero Zone skills assessment page.

Directions

Once you have played Zero Zone (pages 111–115 of the *AfterSchool KidzMath Games Primary Leader's Guide*) and other subtraction games, and your kids know how to play the game, you are ready to assess their understanding of subtraction.

1. Print a copy of the Zero Zone Assessment Sheet (next page) for each child.
2. Explain that this is similar to the *AfterSchool KidzMath* game, but they will be recording the game on a piece of paper instead of using the game board.
3. Show them the Assessment Sheet and model what they will be doing.
4. Hand out the materials needed and the Assessment Sheet. This assessment is easiest to administer to individual children but you can watch a few children at a time.
5. While the children are playing, take notes in the observation notes box below; after they are finished playing, collect their Assessment Sheets and score their work according to the rubric.

Observation notes

What strategies is the child using? (e.g., counting fingers, using mental math, looking for the answer from a partner, etc.)

How automatic is the skill? Does the child have to think about it or does it come easily?

What kind of partner is the child? Bossy? Helpful? Not interested?

Does this child need a more or less challenging game?

Scoring rubric

INDICATOR	SCORE
The child gets all the answers correct.	4
The child gets more answers right than wrong.	3
The child gets more answers wrong than right.	2
The child is unable to play the game.	1

ZERO ZONE ASSESSMENT SHEET

Name: _____

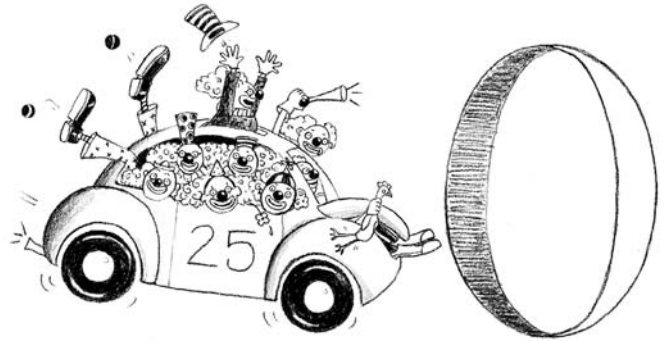
Date: _____ Grade: _____

Materials needed

- 1 die

Directions

1. Roll the die. Write the number that is rolled under "25" in the "Score" column.
 2. Subtract the number from 25.
 3. Write the new score.
 4. Make a tally mark under "Number of Rolls."
 5. Play until the score reaches 0; keep rolling until you reach exactly 0.
- Note: If you roll a larger number than you need to reach 0, decide how to end the game. One way is to subtract the number and keep rolling, adding or subtracting as needed until you reach 0 exactly.



SCORE	NUMBER OF ROLLS
Example: $\begin{array}{r} 25 \\ - 4 \\ \hline 21 \\ - 3 \\ \hline 18 \end{array}$	
25	

AFTERSCHOOL KIDZMATH™ QUESTIONNAIRE

The *AfterSchool KidzMath* Questionnaire is intended to give you an idea of how your kids feel about math. You can also find this questionnaire in the appendix section of your *Leader's Guide*.

WHEN TO USE THIS QUESTIONNAIRE

.....

You can use this questionnaire at any time during the year. If you want a record of how your children's attitudes have changed, you may want to give the questionnaire at the beginning, middle, and end of the year. After you give the questionnaire the first time, play *AfterSchool KidzMath* games at least twice a week for 3–4 months with the same group of children before giving the questionnaire again. If you decide to compare the results, be sure that you assessed the same children both times.

HOW TO USE THIS QUESTIONNAIRE

.....

This tool can be used in a variety of ways. Here are some ideas:

- Use the questionnaire with a group of children. Gather the children together, read a question, read the responses, and have the children raise their hands to choose their response. When doing this with the group, choose the answer that indicates how the majority of the group feels. (For example, if you have ten children in the group and eight say they enjoy math, you would mark the response “a lot” for the first question.)
- Have each child complete the questionnaire to learn about how each one views his or her skills. Fluent readers (usually in grades 4–6) can fill out the questionnaire on their own. For less fluent readers (usually grade 3 and below), read the questions and responses aloud as the children follow along with you and mark their choices. Have very young children or children with special needs answer verbally or point to the picture that shows their responses. In this case, you may need to work with only one or two children at a time.
- Use the questionnaire with just some of the children. You may want to know how a particular group of children sees themselves. Or you may want an overview of the group. To get a balanced view, pick some children who work well with others, some doing well in math, some with average skills, and some children who are struggling.
- If you use the questionnaire as a pre- and posttest, use the scoring rubric on page 15 to score each child's response. Note that the rubric is for the leader to complete, not the children.

In any case, after giving the questionnaire, talk about it with the children. Use questions like:

- What did you learn about yourself from this questionnaire?
- What does this questionnaire tell you that you might work on?
- How can we help one another work even better together?

AFTERSCHOOL KIDZMATH™ QUESTIONNAIRE




These questions will help us understand how you think and feel about mathematics and about working with others. Read or listen to each question. Mark the picture that shows your answer. If you are not sure of which answer to pick, choose the one that is closest to how you think or feel.

Date: _____ Grade level(s): _____




Child's/children's name(s): _____

Leader's name: _____


How much do you enjoy math?

Not at all 	A little 	A lot 
--	--	---




How good are you at math?

Not very good 	So-so 	Very good 
---	---	---




How good are you at counting?

Not very good 	So-so 	Very good 
---	---	---




How good are you at adding?

Not very good 	So-so 	Very good 
---	---	---


How good are you at subtracting?

Not very good 	So-so 	Very good 
---	---	---




How well do you work in a group?

Not very well 	So-so 	Very well 
---	---	---




When you work in a group, how good are you at asking others what they think before making a decision?

Not very well 	So-so 	Very well 
---	---	---




How good do you feel about asking other children to help you if you need help?

Not very good 	So-so 	Very good 
---	---	---




How good are you at helping others without just telling them the answer?

<p>Not very good</p> 	<p>So-so</p> 	<p>Very good</p> 
---	---	---

How good are you at taking care of the materials (like games and balls) at our site?

<p>Not very good</p> 	<p>So-so</p> 	<p>Very good</p> 
---	---	---

Scoring rubric

INDICATOR		SCORE
<p>Most answers</p>	<p>Very good</p> 	<p>3</p>
<p>Most answers</p>	<p>So-so</p> 	<p>2</p>
<p>Most answers</p>	<p>Not very good</p> 	<p>1</p>