ICAN includes two types of data collection instruments: the assessment tool and the contextual questionnaires.

**The ICAN assessment tool**

Definitions of foundational numeracy commonly include domains such as number knowledge, measurement, geometry and simple data display.¹

The **minimum proficiency level descriptor** for numeracy under SDG 4.1.1 for classes 2 or 3 also requires students to demonstrate skills in number sense and computation, shape recognition and spatial orientation.

Rather than focusing on specific education objectives in individual countries, ICAN assessment tasks align to UNESCO’s Global Proficiency Framework, which defines minimum proficiency levels that learners are expected to demonstrate more generally.

The ICAN assessment administration process includes recommendations regarding specific procedures to follow to ensure that the assessment results reflect the best that each child can do. The assessment process is adaptive to children’s ability, so that they do not have to attempt all levels of the tool. In addition, the child’s comfort and a commitment to accurately recording her best possible response are central to the administration process.

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Field enumerators are trained to build rapport with children to create a relaxed and encouraging environment, including elements such as:

- Speaking slowly and clearly to ensure that all children are able to fully understand the expectation from the task
- Giving children adequate time to complete each task
- Allowing children to use paper and pencil to work out problems, if they wish to do so

ICAN contextual questionnaires

ICAN’s contextual questionnaires are used to collect information on key socioeconomic indicators. Information is collected at three levels:

1. **For each surveyed child**
   - Past and current pre-school and school status
   - Enrolment in paid tuition classes
   - Parents’ education

2. **For each sampled household**
   - Basic infrastructure and assets
   - Availability of reading material in the household

3. **For each sampled community**
   - Basic infrastructure and facilities
   - Availability of schools and pre-schools

When used as part of a household-based assessment, these questionnaires generate valuable background information about the households and communities surveyed, enabling contextualisation of the results obtained from the assessment. Some examples of how assessment and contextual data generated from household-based implementation of ICAN can be used together are provided in Section 6 of this report.

When the ICAN assessment tool and household questionnaire are used together in a household survey, the process takes an average of 20-30 minutes to complete in each household.
**Spatial orientation**

**Task 1** In this picture, which cat is inside the box?

**Task 2** In this picture, which child is farthest from the tree?

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**Shape recognition**

**Task 1** Which of these is a straight line?

**Task 2** Look at these shapes. Which of these is a triangle?

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**Measurement**

**Task 1** In this picture, which is the shortest pencil?

**Task 2** Here are 4 balls of the same size. Now look at the box kept next to each ball. If we completely fill each box with the kind of balls shown, which box will have the most number of balls?

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**GIVE SET 1 TASKS TO ALL CHILDREN**

*ICAN assessment tool is available in 11 languages on the PAL Network website (www.palnetwork.org)*
GIVE SET 1 TASKS TO ALL CHILDREN

SET 1

Task 1

Counting objects

How many birds are there? Choose the correct number.

Task 2

Simple data display

How many apples are there? How many more bananas are there than oranges?

Task 1

Telling time

What is the time in this clock?

Task 2

Telling day and date

Look at the calendar given below.

What is the day on 5th March? What is the date on the second Monday of March?

Task 2

ICAN assessment tasks

Look at the chart given below carefully.

How are many apples are there? How many more oranges are there than oranges?
Solve the following questions.

**Number recognition**

<table>
<thead>
<tr>
<th>Task 1</th>
<th>Task 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recognise numbers.</td>
<td>Recognise numbers.</td>
</tr>
<tr>
<td>3 8 2 9 0</td>
<td>48 84 22 97 30</td>
</tr>
</tbody>
</table>

At least 4 out of 5 numbers must be correct.

**Addition**

<table>
<thead>
<tr>
<th>Task 1</th>
<th>Task 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 2 + 1 5</td>
<td>5 6 + 1 7</td>
</tr>
</tbody>
</table>

**Subtraction**

<table>
<thead>
<tr>
<th>Task 1</th>
<th>Task 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 6 - 2 1</td>
<td>7 8 - 2 9</td>
</tr>
</tbody>
</table>

**Multiplication**

<table>
<thead>
<tr>
<th>Task 1</th>
<th>Task 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 x 4 =</td>
<td>4 2 x 6</td>
</tr>
</tbody>
</table>

**Division**

<table>
<thead>
<tr>
<th>Task 1</th>
<th>Task 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 ÷ 3 =</td>
<td>7 (\text{\underline{9 3}})</td>
</tr>
</tbody>
</table>

**Word problem**

**Task 2a - Subtraction**

Listen to the question carefully, solve and answer.

There were 43 children in the park. Out of these, 25 of them have gone home. How many children are left in the park now?

**Task 2b - Division**

Listen to the question carefully, solve and answer.

A shopkeeper has 48 apples. He keeps 3 apples in each box. How many such boxes will he need to keep all the apples?

**GIVE SET 2 TASKS TO ALL CHILDREN. SET 3 TASKS TO BE GIVEN TO ONLY THOSE CHILDREN WHO COULD DO THE CORRESPONDING SET 2 TASK CORRECTLY.**

For example, Task 2 on addition will only be given to children who could do Task 1 on addition correctly. Similarly, the subtraction word problem will only be given to children who could do Task 1 on subtraction correctly.