## 1A - Class Results

# Diagnostic assessment summary for the class

★ The summary is automatically calculated from each student's last diagnostic assessment.

#### **ESSENTIAL:** What to prioritize

► The student needs to develop better understanding of the concept of **equal/more/less**. This concept is crucial for future understanding of relationships between numbers, numerical operations, and word problems.

Start by creating groups with the same number of objects by pairing them. Later, add or remove objects and describe verbally what has changed (e.g., "Is someone missing a chair? Are there more chairs or children? Does each child have their own cup? Is there anything missing or extra? What is there more of? What is there less of? Make it so there are more/fewer/the same number of cups.").



This is critical for mastering CCSS K.CC.C.6.

The student needs to acquire **vocabulary for navigating sequences** of pictures, which is essential for **future understanding of the number range**.

Practice words such as "after", "right after", "before", "right before", "between", and similar terms in real-life scenarios.



This is critical for mastering CCSS K.CC.B.4.

► The student needs more opportunities to understand **one-to-one correspondence in the range 1–5**.

Manipulate objects, count them and reinforce connections between a quantity and its corresponding numeral representation and number name.



This is critical for mastering CCSS K.CC.A.3.

► The student needs more learning opportunities for **creating and comparing groups of objects** using the concepts of 1 more than / 1 fewer than in the range 1–5. Without understanding this concept, they **will struggle to master addition and subtraction operations**.

Check for understanding of the concept of more/equal/less and create situations of 1 more than and conversely 1 fewer than. Ask the student to narrate the entire process aloud.

This is critical for mastering CCSS K.OA.A.2.

#### **DESIRABLE:** What to consider teaching

▲ The student needs to practise **creating and comparing groups of objects** using the concepts of **1 more than / 1 fewer than** in the range of **1–5**. This concept is key to future understanding of relationships between numbers, numerical operations, and word problems.

Check for understanding of the concept of more/equal/less and create situations of 1 more than and conversely 1 fewer than. Ask the student to narrate the entire process aloud.



This accelerates mastery of CCSS K.OA.A.2.

⚠ The student needs to develop a better understanding of **navigation within the number range 1–10 with visual scaffolding**. They may also not fully understand that **ordinal numbers** determine the position of an element and that the **last number** in the sequence represents the **total quantity**.

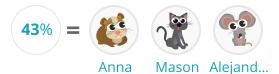
This is important for understanding number values. Practise the number range 1-10 as well as the vocabulary needed to navigate the range.



This accelerates mastery of CCSS K.CC.B.4.

▲ The student needs more opportunities to develop cognitive skills. They have not yet succeeded in **identifying the pattern within the sequence of objects**, which requires **analytical thinking**. This could limit their future development of mathematical concepts and problem-solving skills.

Students develop this skill gradually. Therefore, they are not expected to master these tasks at the beginning of schooling. It is recommended to strengthen their cognitive skills (by practising grouping according to given conditions, identifying conditions for grouped objects) and logical thinking (by practising deductive and inductive reasoning in problem solving).



⚠ The student needs to develop a deeper understanding of **relationships between numbers 1–10** to later comprehend numerical operations and word problems within this range.

The student was unable to navigate the number range 1-10 without the support of visual scaffolding. They could not compare the number of objects using the concepts of 1 more than / 1 fewer than. Practise the number range 1-10 as well as the vocabulary needed to navigate the range. Use visual scaffolding to support the student and fade it out gradually. Go back to comparing the number of objects in the range 1-5 using the concepts of 1 more than / 1 fewer than, revisit the number range 1-10 and only then move to comparing the number of objects in the 1-10 range.



The student was able to count the number of missing objects up to 5 and successfully compare groups of objects using the concepts of 1 more than / 1 fewer than in the range of 1-5. However, they need more learning opportunities to understand **navigation within the number range 1–5 with** visual scaffolding.







Emma

Tobias Alejand...

▲ The student needs to practise **navigation on a 3x3 grid** and acquire the necessary vocabulary (top right/middle left, etc.). These are essential skills for geometry, spatial perception, number order and operations, as well as working with graphs and diagrams.

This refers to concepts such as top right, middle left, etc. Start by practising spatial orientation in a real physical environment. Proceed to practising orientation using body parts, using a picture, on a 2x2, 3x3 grid.





The student needs more opportunities to understand one-to-one correspondence in the range 1-10.

Manipulate objects, count them and reinforce connections between a quantity and its corresponding numeral representation and number name.







Anna Alejand...

The student has successfully compared groups of objects using the concepts of 1 more than / 1 **fewer than** in the range of **1–10**, but they need to practise vocabulary **navigation within the number** range 1-10 and related vocabulary without visual scaffolding.

This indicates lack of fluency in the 1-10 number range. Practise navigating the 1-10 number range as well as the vocabulary needed to navigate the range. Use visual scaffolding and fade it out gradually.







Emma

Mason

▲ The student has mastered basic **grouping** but needs more learning opportunities to understand **the combination of positive and negative conditions**. This is a significant indicator of the level of logical and verbal thinking, which is important for mathematics.

Check for understanding of each instruction and repeat if necessary. Gradually increase the difficulty by adding negative conditions (e.g., "does not have a hat"). Start with one or two pieces of information and add more later.



⚠ The student needs to develop deeper understanding of **numbers and relationships between numbers** to later comprehend numerical operations and word problems in the range of 1–5.

The student was unable to navigate the number range 1-5 using ordinals, count the missing objects up to 5 and compare the number of objects using the concepts of 1 more than / 1 fewer than. Practise intuitive insight into the structure of quantity, i.e., partition the number of objects up to 5 into two groups. You may start from groups of 3 or 2 objects. Compare the quantity using the concepts of 1 more than / 1 fewer than. Practise all numbers within the 1-5 number range as well as the vocabulary needed to navigate the range.



▲ The student has demonstrated understanding of the **number range 1–10 even without visual scaffolding**, but they need to develop a better understanding of the concept of **comparing 1 more than / 1 fewer than**. This concept is also crucial for **future word problem solving**.

There is a risk of formalism in skill acquisition. Go back to comparing the number of objects using the concepts of 1 more then / 1 fewer than in the 1-5 range. Then briefly review the number range 1-10 and move on to comparison in the 1-10 range.



▲ The student was able to **compare groups of objects** using the concepts of **1 more than / 1 fewer than** in the range of **1–5**. However, they need more learning opportunities to understand **navigation within the number range 1–5 with visual scaffolding** and to grasp how to **count the number of missing objects up to 5**.

Practise navigating the number range using the concepts of before, after, between, etc. Manipulate objects to practise intuitive insight into the structure of quantity, i.e., partition the number of objects up to 5 into two groups. You can start with groups of 3 or even just 2 objects.

⚠ The student was able to **count the number of missing objects up to 5**, but they need to master **comparing groups of objects in the range 0-10** using the concepts of **1 more than / 1 fewer than**. This concept is important for understanding word problems related to addition and subtraction.

Go back to comparing the number of objects in the range 1-5 using the concepts of 1 more than / 1 fewer than, revisit the number range 1-10 and only then move to comparing the number of objects in the 1-10 range.



## MASTERED: What students can already do

✓ The student has mastered all the tasks regarding **grouping**, which is the foundation of **mathematical thinking**.



The student understands **one-to-one correspondence** (linking quantity to numeral and number name) in the range **1-5**.



☑ The student has mastered **navigation on a 3x3 grid**. These skills are necessary for geometry, spatial perception, number line, numerical operations as well as for working with graphs and diagrams.

This refers to concepts such as top right, middle left, etc.



✓ The student understands the one-to-one correspondence in the 1-10 number range.



☑ The student was able to apply **analytical thinking** on order to **identify the pattern within the picture sequence**. These skills help them develop mathematical concepts and problem solving.

Great! Some students reach this skill only later in their schooling.



☑ The student has mastered all the **essential skills** to begin learning in the first grade.



The student understands the **vocabulary** needed for **navigating sequences of pictures**. This vocabulary is essential for the student to **grasp the concept of number line in the future**.

These are words such as "after", "right after", "before", "right before", "between", etc.



☑ The student is ready to grasp the concept of **numerical operations** in the **1-5** range.

The student understands that numbers express quantity, ordinals express the position of an element in a series and that the last number in a series represents the total (cardinality). They can count the number of objects up to 5. In this number range, the student can compare the number of objects using the concepts of 1 more than / 1 fewer than.

✓ The student was able to **navigate the number range 1-10 with the support of visual scaffolding**. They understand that **ordinals** determine the position of an element in the series and that the **last number** in the series determines the **total**.

The student was able to **create and compare groups of objects** using the concepts of **1 more than /1 fewer than** in the **1-5** number range, including situations where **inverse relationship** between 1 more than and 1 fewer then must be applied. This concept is key to future understanding of relationships between numbers, numerical operations, and word problems.

Even though the student hears "1 more than" in the instruction, they understand that objects must be removed in order to complete the task.

### **LIST OF STUDENTS:**



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