

USING ASSESSMENT TO INFORM INSTRUCTION



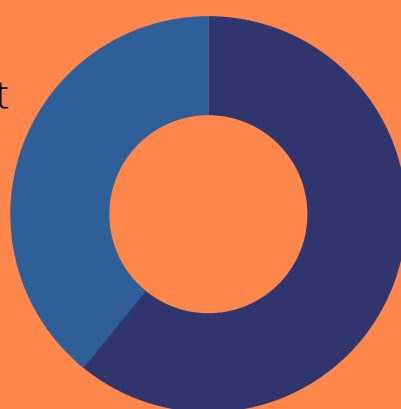
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Teachers should use data from both formative and summative assessments to inform their practice. After analyzing the raw data, I grouped it in order to best find ways in which to help and support students in the future. The data can be viewed [here](#).

OVERALL ACHIEVEMENT



Not Yet
39.1%



Pass
60.9%

A quick overview tells us that only around 60% of students are passing (a score of 60% or more).

ASSESSMENT TYPES



Pass



Fail

HOMEWORK



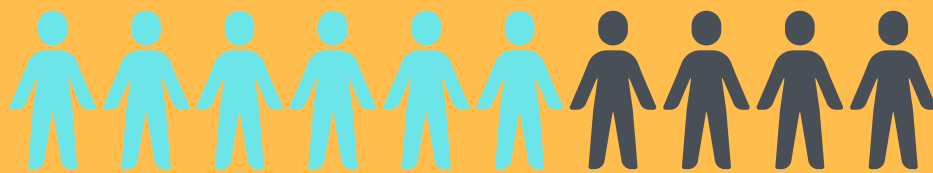
QUIZ



PROJECT



FINAL TEST



Students performed at similar levels across all types of assessment. The homework score should be much higher than it is and says to me that the teacher needs to let this data inform their practice.

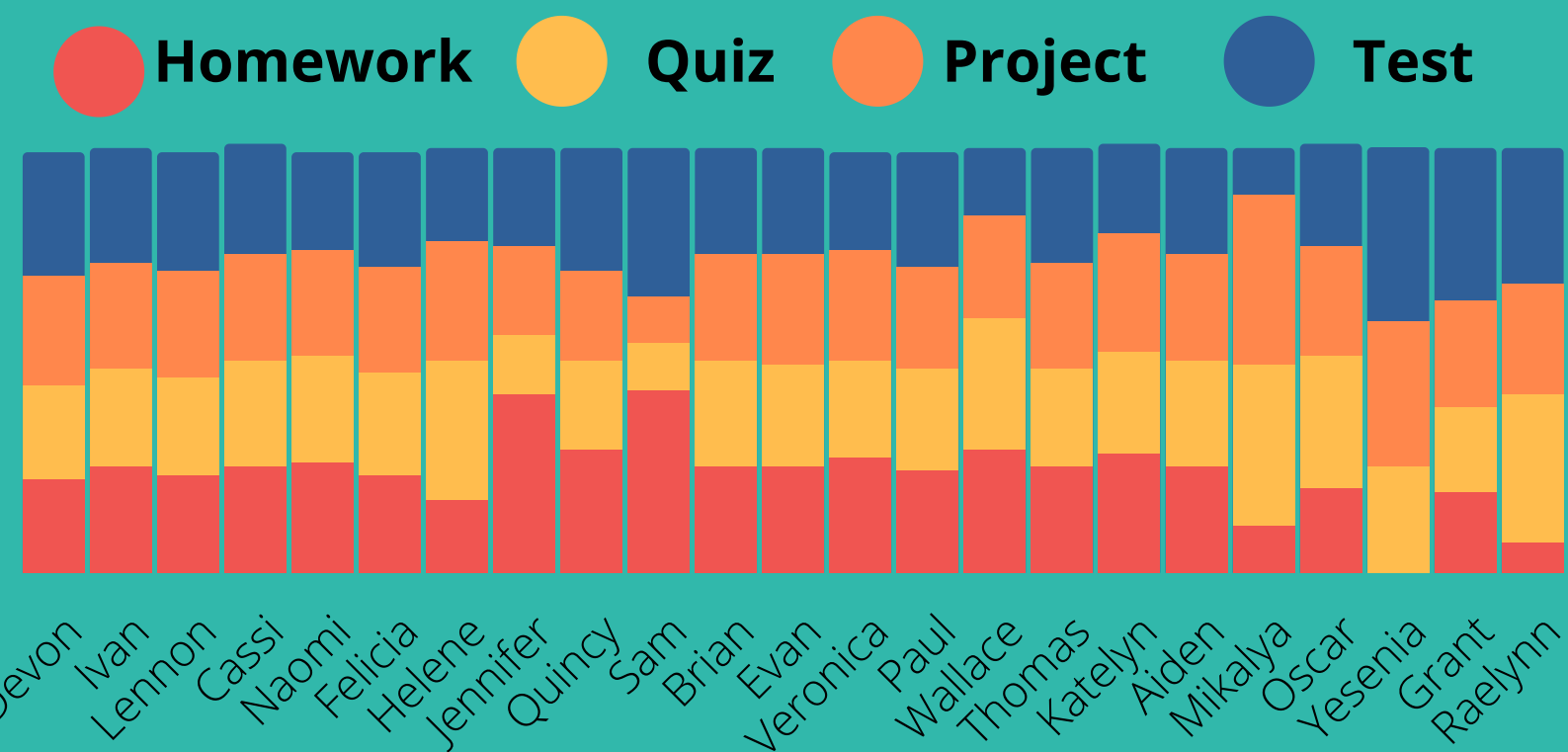
The teacher should check if students:

- understand the homework.
- get enough time to complete the homework.
- need a dedicated time to ask questions about homework.

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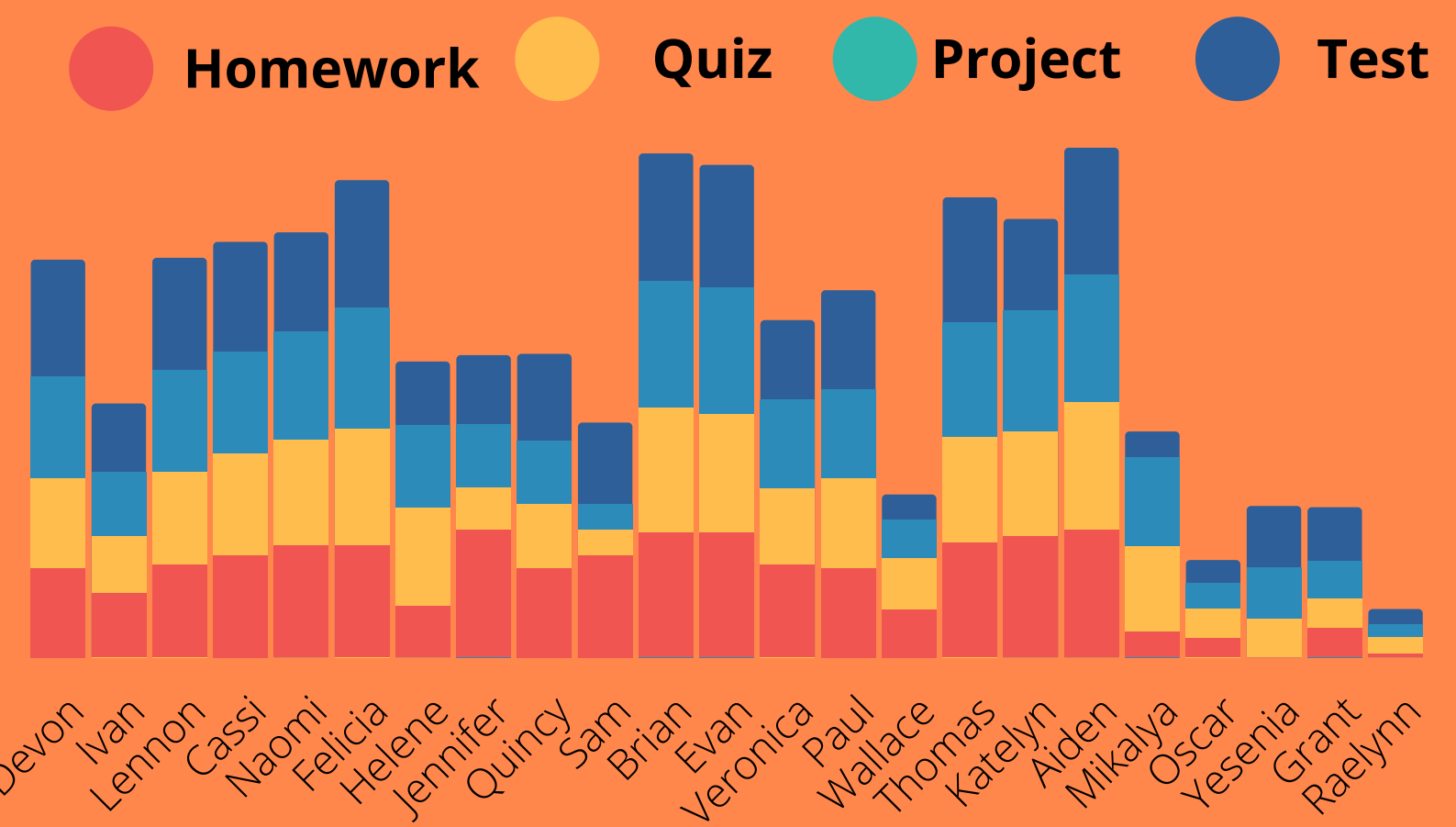
INDIVIDUAL DATA

It's important to analyze the data from an individual perspective as well.



A 100% stacked area chart is helpful to show us areas where individual students excel in, and areas where they need more support. The data informs us which students should be grouped together in order for them to best succeed.

For example, we can see that Jennifer does very well on the homework, but not so well on the Test. Yesenia has the opposite problem*. So grouping these two students together on certain tasks could let each child help each other in areas where they excel, as well as solidifying their own understanding.



This kind of chart lets us see which students need help overall, and where they need it. For example, from this chart we can see that Raelynn and Oscar struggle in all forms of assessment, while Brian and Aiden do well on all forms of assessment. It also lets us see that while Sam is struggling overall, he does quite well at homework, but needs more support with quizzes and project work.

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*I am assuming Yesenia doesn't understand the homework, but in a real class I would need to confirm whether there were any other reasons preventing homework completion.

TYPES OF GROUPINGS

Before we can suggest groupings, we must explore different types of groupings.

HETEROGENEOUS GROUPS

Heterogeneous groups are ones in which students of diverse ability levels work together.

PROS

- Students can learn from each other.
- Higher level students can solidify their understanding

- Lower level students can 'coast' and let others do the work.
- May hold back high level students.

CONS

ADVANCED

GRADE LEVEL

STRUGGLING

GROUP 1	FELICIA	EVAN	SAM	YESENIA	OSCAR
GROUP 2	LENNON	THOMAS	VERONICA	JENNIFER	MIKALYA
GROUP 3	CASSI	AIDEN	PAUL	WALLACE	RAELYNN
GROUP 4	DEVON	NAOMI	KATELYN	GRANT	
GROUP 5	BRIAN	QUINCY	IVAN	HELENE	

HOMOGENEOUS GROUPS

Homogeneous groups are ones in which students of similar ability levels work together.

PROS

- Different groups can move at their own pace.
- Assignment difficulty can be scaled.
- Emergence of unexpected leaders.

- Time consuming for the teacher to differentiate tasks.
- Some groups will need a lot more support.
- "Too many cooks" in high level groups

CONS

ADVANCED

GRADE LEVEL

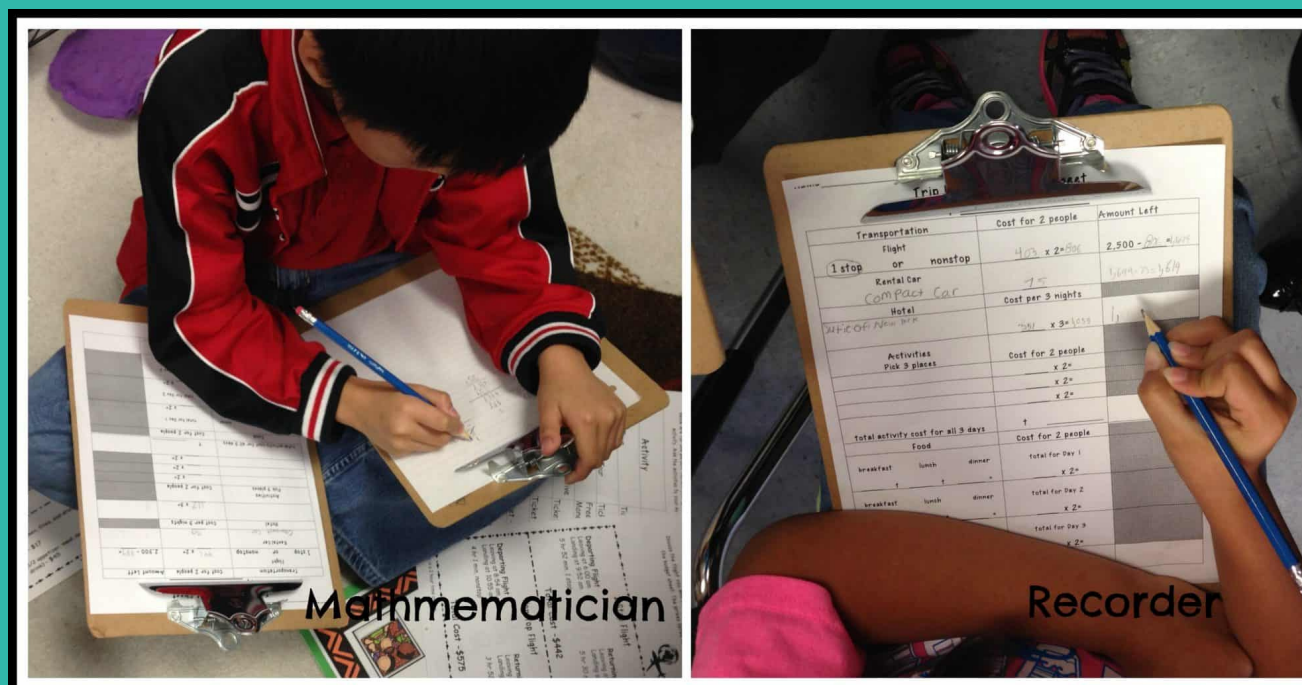
STRUGGLING

1	2	3	4	5	6
DEVON	THOMAS	NAOMI	PAUL	HELENE	IVAN
FELICIA	AIDEN	QUINCY	KATELYN	WALLACE	JENNIFER
BRIAN	LENNON	VERONICA	SAM	MIKALYA	OSCAR
EVAN	CASSI			YESENIA	GRANT
				RAELYNN	

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HETEROGENEOUS ACTIVITY

Plan a vacation is a maths project that works well for students in mixed-ability groups. The project is multifaceted, so it allows for students who don't think of themselves as 'good at maths' to succeed. It also forces gifted students to rely on and collaborate with peers. The project allows students to learn from each other in a fun way.



Students are assigned specific roles for the duration of the project, so all students are engaged. The teacher could assign a student a role they are good at, in order to get more practice and show others how to do it; or the teacher could assign a student a role in an area they struggle, so they can improve their ability with the help of their peers.

ONLINE LEARNING

Students can be put into their groups in breakout rooms while the teacher jumps between groups. Students could collaborate using the same google doc and submit it at the end of the lesson. The teacher would be able to give feedback for students to rectify before submitting their final project.

STUDENTS WITH SPECIAL NEEDS

Depending on the needs of the child, the following strategies can help: use of calculator, teacher support, group with a positive role-model, more time to complete work, larger font. Students with special needs could still be a part of a team, but could be assigned a role which suits their needs.

GIFTED STUDENTS

The activity can even be extended by having students use the Internet to research real prices. Tax can be added to practice percentages. Students can also be asked to calculate the vacation for different times of the season and work out when the cheapest (and most expensive!) time to travel is.

HOMOGENEOUS ACTIVITY

In the question game is an activity where the teacher thinks of a number and the students have X number of questions to use maths to find out what the number is. The game can be differentiated to suit students' needs.

Advanced – Students get 5 questions each turn. A student takes the role of teacher. Students may only ask one kind of each question-type each round.

Grade level – Students get 10 questions each turn and the student takes the role of a teacher.

Struggling – Students are combined. They have unlimited questions each turn. After a few rounds, students are split into two groups while the teacher monitors.

ONLINE LEARNING

The activity can be easily adapted for online learning. First the teacher models the activity to the whole class. Next students play in their groups in small breakout rooms while the teacher monitors and provides support when needed.


5-Question Guessing Game

Kids will love a few brisk rounds of this fun 3rd grade math activity.

You will need:
A bunch of kids

Instructions:

- Tell the kids that you are thinking of a number between 1 and 100.
- Now they must figure out what your number is by asking 5 questions.
- Have them take turns but no one is allowed to ask more than 5.
- As soon as someone asks, "Is it ___?", the game is over, whether the answer is right or wrong.



STUDENTS WITH SPECIAL NEEDS

Depending on the needs of the child, the following strategies can help: use of calculator, teacher support, group with a positive role-model, more time to complete work.

Students may want to play the game over a series of classes, or even days. Eg the student gets asked a question, then may need a long time to consider the answer. If so, the next round; the game could be played the following class or day.

GIFTED STUDENTS

Students would have more autonomy within the activity as they would be both asking and answering. Students would have fewer questions to ask to ensure they are thinking creatively. Students would not be allowed to ask more than 1 of each kind of question for the same reason. There could also be a time-limit to further push students.

References

Data:https://docs.google.com/spreadsheets/d/1Eztax1AC_h7B1L9hKF_CdQRbegGyd9VMDsSlwM-dxbU/edit?usp=sharing
Plan a vacation:<https://loveteachingkids.com/math/plan-a-vacation/>
Question game:<http://www.mathblaster.com/parents/math-activities/view-all-math-activities/5-question-guessing-game-view>