CURRICULUM, PEDAGOGY AND BEYOND









Aligning success criteria for mathematical proficiency: Questions to be considered

Eamon Light

Before we do some mathematics...



FORM A PAIR

COLLECT A WHITEBOARD MARKER

FIND A VERTICAL SPACE

Let's do some mathematics!

ADDING MULTIPLE DECIMALS

Directions: Use the digits 0 to 9, at most one time each, to fill in the boxes so that the sum is as close to 10 as possible.



Source: https://www.openmiddle.com/adding-multi-decimals

Learning intention

A short, specific statement of mathematical focus that outlines what students are expected to learn, understand or be able to do by the end of a lesson or sequence of lessons.

Success criteria

Clear, specific, measurable, proficiency-focused statements that outline what students need to demonstrate to show they have achieved the learning intention. They help students understand the expectations for a task, provide a basis for self-assessment, and support teachers in giving constructive feedback.



Learning intention What am I learning to do?

Success criteria

How am I going to show my understanding of what I have learnt?



Learning intentions & success criteria

Write the **learning intention** and success criteria for the task you just attempted.

Turn and talk



What are we learning?

Learning intention

We are learning to estimate and check the sum of multiple decimal numbers. **Success criteria**

- What does the word '**sum**' mean?
- How do you know your estimate is reasonable?
- What strategy allows you to accurately and efficiently calculate the answer?

ADDING MULTIPLE DECIMALS

Directions: Use the digits 0 to 9, at most one time each, to fill in the boxes so that the sum is as close to 10 as possible.



Source: https://www.openmiddle.com/adding-multi-decimals/



A provocation...

"Learning intentions without success criteria are hopeless."

"Students should know upfront what success looks like."

(Hattie, 2015)



Learning intention

We are learning to use our pedagogical reasoning to rewrite success criteria as questions.

Success criteria





DEPENDS

Success criteria questions



Success criteria had been...

UNDERVALUED INEFFECTIVE **NOT UNDERSTOOD**

Success criteria questions

HOW DOES THE TEACHER AND THE STUDENT KNOW? WHY SHOULD THEY CARE? Focus on feedback – what feedback are students getting about how they are going in the lesson. Not what information the teacher is getting, but how the student knows they are successful.

Learning intentions

Success criteria

What we are learning to do, not the task we are doing.

THINK...

What is the key mathematical focus of the lesson/task.

How I can demonstrate that I am successful.

THINK...

How are my students going to show proficiency in what they have learnt.

Before we do some mathematics...



FORM A TRIAD OR GROUP OF 4 COLLECT A PIECE OF A4, TWO 6-SIDED DICE & A PENCIL

FIND A PLACE TO WORK

Let's do some mathematics

• Count by $\frac{2}{5}$ until you reach 8

$$\frac{2}{5}, \frac{4}{5}, \frac{6}{5}, \frac{8}{5}, \frac{10}{5}, 2\frac{2}{5}, 2\frac{4}{5}, 3.2, \frac{18}{5}, 4, \dots$$

- Roll the sum of 7 = steal the pencil to be the counter
- Roll a double = swap paper

Time for you to try

Write the **learning intention** and success criteria question(s) for the task you just attempted.

as easy





What are we learning?

Learning intention

We are learning to skip count by fractions to a whole number and recognise patterns in the resulting sequence.

Success criteria

- Can you list the correct numbers in the sequence of $\frac{2}{5}$ starting from zero to 8?
- How do you know a fraction is equivalent to a whole number?
- What is the pattern when counting by $\frac{2}{5}$?



The question preparation in planning helps me to gear up for what I need to prepare for the lesson.



It keeps me on track, I know that I have to keep the mathematical focus clear throughout the lesson.



Success criteria questions guide each part of my lesson. They allow me to guide supporting questions and help the students to know if they are successful or not.

The questions reduce a step of explanation and get straight to the point. Instead of explaining what the success criteria are by asking a guiding question, I can spend my time explaining the question more.



The success criteria I used to write are more teacher language and need to be broken down into achievable steps for the students.



Success criteria questions help me to show students what success looks like from the beginning.

Implications for your school context



Implications for your school context





Implications

- Considering the key mathematical focus of the lesson
- Developing teacher capacity
- Time to plan collaboratively (do the task)
- Writing clearly for student use





Key takeaway

Reframing success criteria as questions has a positive impact on teacher planning and student achievement.



Questions





Event App

App Download Instructions

Step 1: Download the App 'Arinex One' from the App Store or Google Play



- Step 2: Enter Event Code: mav
- Step 3: Enter the email you registered with
- Step 4: Enter the Passcode you receive via email and click 'Verify'. Please be sure to check your Junk Mail for the email, or see the Registration Desk if you require further assistance.



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A02 - (Year 1 to Year 6) Supporting High Potential and Gifted Learners in **Mathematics**

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A≡ Speaker



Dr Chrissy Monteleone

