

Practice 2: Teaching and Learning

In the classroom, effective teaching and learning requires the teacher to acknowledge the individual learning differences among their students. Providing meaningful learning experiences that support student development at the varying learning rates. Effective learning takes place when the teacher has given themselves the knowledge and understanding of their students, to determine the best course of action in maximising student learning (O'Neill, 2009). It relies on implementing appropriate differentiation strategies and techniques, aligning pedagogies and school frameworks that support instruction and independent learning.

Learning expectations allow students to believe in their own ability and capabilities, building confidence in learning will provide our students with the motivation to be successful in their learning. Providing attainable learning opportunities for students is how we make learning meaningful (Rutherford, 1990).

Formative assessment

It can be assumed that this formative assessment was taken from lesson 3 and any 'in the moment' teaching and modifications to learning will be addressed in lesson 4.

Issues with dividing into equal parts is still evident.

Focus Student A

Figure 18. Focus Student A's Formative assessment worksheet.

Shows knowledge of partitioning.

Can articulate understanding when comparing fractions.

Mixed numbers have been represented clearly to show the improper fraction.

Student can represent fractions on a number line.

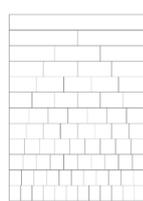
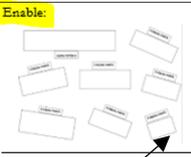
Representations are clear and have equal parts.

Figure 18 indicates that Student A has an adequate understanding of fraction concepts. The data highlights that the student has made progress with comparing fractions and placing them on a number line. This tells me that the student would benefit from extending their knowledge by moving away from simple fractions such as; quarters, halves, thirds, etc. By including number lines that go beyond *one as the whole*. As figure 18 outlines, the student is able to articulate understanding of how they solved a question, using words such as; *compare*. I believe that this student’s conceptual understanding of fractions could be further supported. In a focus group, I would build on the vocabulary and challenge student thinking on fractions. Doing so, by asking questions such as; “*Could you give me another example of...*”, “*Could you compare these two fractions and show me your thinking*”, “*What was different*”.

It is evident within the data that, Student A is able to partition a whole into eighths. However, the student still needs some assistance with equal spacing. I would work with the student by taking learning back one step to paper folding, this way the student is able to visibly create and see the equal parts. Discussing with the students that the fraction is incorrect if the parts are not equal. In this focus group, I would include students who are of a similar ability and those who still need extra support with partitioning.

Figure 19. Screenshot from Unit of Work. Highlighting the learning support for partitioning.

Drawing on prior knowledge about parts of a whole.

<p>Lesson 4 50 minutes Fraction Wall</p> <p>Learning Intention:</p> <p>We are learning to</p> <p>Identify and compare fractions.</p> <p>Success Criteria: I can:</p> <p>Use a fraction wall to represent fractions.</p> <p>Use symbols to show equivalence.</p>	<p>Introduction:</p> <ul style="list-style-type: none"> - Students will gather on the floor area as a group. The teacher will ask students if they have ever seen a fraction wall before. Ask students what they know about a fraction wall, what is it made up of? Responses will be written on the whiteboard. - The teacher will introduce a fraction wall via a website. The teacher will ask the students to: <ul style="list-style-type: none"> o Analyse the parts of the fraction wall. o What can you see? o How many parts can make up a whole? <i>What do we need to remember about parts of a whole?</i> - Ask students to come up and label parts of the fraction wall that they know of. <i>Drawing on prior knowledge from previous lessons.</i> Erase the student responses and leave the fraction wall up on the whiteboard. <p>Development and Questioning:</p> <ul style="list-style-type: none"> - The teacher will model to students the activity that they will complete. Students will be given a blank fraction wall 	<p>Enabling:</p> <ul style="list-style-type: none"> - Focusing on the top half of the fraction wall. - Teacher folds in half before supporting along the way to move down the fraction wall. - Use the paper folding strips from previous lesson to support understanding of equal parts. <p>Extending:</p>	<p>Observational Checklist – appendix 1.</p> <p>Formative assessment. Track and monitor student progress.</p> <p>Formative assessment: labelled fraction wall. Enabling focus group will be observed on their knowledge of the top half of the wall and extension will be observed on recognition of equivalent fractions.</p>	<p>Website: https://nrich.maths.org/4519</p> <p>Worksheet:</p>  <p>Source: https://www.twinkl.com.au/resource/t2-m-1065-blank-fraction-wall-sheet?sign_in=1</p> <p>Differentiation:</p>
<p>Compare the size of fractions.</p> <p>Identify improper fractions.</p>	<p>worksheet. Students will be labelling the fraction wall. This task will be completed individually by students.</p> <ul style="list-style-type: none"> - The teacher will write the following questions on the board, students are to respond to them in their workbooks: <ul style="list-style-type: none"> o How many halves in a whole? o How many quarters? o How many thirds? o How many tenths? o How many quarters in a half? 	<ul style="list-style-type: none"> - Matching fractions game: https://nrich.maths.org/8283 	<p>Enable:</p> 	

Reintroducing the paper folding technique to consolidate and support the understanding of equal parts.