

Appendix E

Assessment

There are many forms of assessment which can be used effectively in mathematics lessons. The samples provided here are just a few. Please see the Assessment in the Primary School Curriculum: Guidelines for Schools (NCCA, 2007) for more information and guidance in relation to assessment - available at <http://www.ncca.ie/uploadedfiles/publications/assess%20%20guide.pdf>.





Two assessment checklists for fractions are provided here – one for whole class assessment and one for individual pupil assessment. The individual pupil assessment checklist can be used to ‘track’ a number of pupils in the class over the course of a year. Similarly, it can be used to ‘track’ pupils from 1st to 6th class. It enables a dual-approach to assessment – assessment of the concepts of fractions and also assessment of the developmental mathematical experiences (concrete, pictorial, abstract).



Class Assessment: Fractions Learning Trajectory Level C




<p>Class Names:</p>	
<p>Concepts</p>	
<p>Level C.1 Identify, construct, compare, order and count improper fractions</p>	
<p>Level C.2 Express improper fractions as mixed numbers and vice versa</p>	
<p>Level C.3 Construct algorithm for equivalent and simplified fractions</p>	




Individual Pupil Assessment: Fractions Learning Trajectory





		Developmental Experiences		
				
Pupil's Name:		 Concrete	 Pictorial	 Abstract
Level A.1 Find $\frac{1}{2}$ of a set or shape				
Level A.2 Find $\frac{1}{4}$ of a set or shape				
Level A.3 Given $\frac{1}{2}$ or a $\frac{1}{4}$ find a whole unit				





Developmental Experiences







Pupil's Name:			
Concepts	 <p>Concrete</p>	 <p>Pictorial</p>	 <p>Abstract</p>
Level B.1 Compare, order, count and identify fractions and equivalent fractions with denominators 2,4,8,10			
Level B.2 Calculate a unit fraction (with denominators 2,4,8,10) of a whole number			
Level B.3 Calculate multiple fractions (with denominators 2,4,8,10) of a whole number			
Level B.4 Calculate the number given the unit fraction (with denominators 2,4,8,10)			
Level B.5 Calculate the number given the multiple fraction (with denominators 2,4,8,10)			

	 Concrete	 Pictorial	 Abstract
Level B.6 Compare, order, count and identify fractions and equivalent fractions with denominators 3,5,6,9,12			
Level B.7 Calculate a unit fraction (with denominators 3,5,6,9,12) of a whole number			
Level B.8 Calculate multiple fractions (with denominators 3,5,6,9,12) of a whole number			
Level B.9 Calculate the number given the unit fraction (with denominators 3,5,6,9,12)			
Level B.10 Calculate the number given the multiple fraction (with denominators 3,5,6,9,12)			

Developmental Experiences		
Pupil's Name:		
Concepts	 Concrete	 Pictorial
	 Abstract	
Level C.1 Identify, construct, compare, order and count improper fractions		
Level C.2 Express improper fractions as mixed numbers and vice versa		
Level C.3 Construct algorithm for equivalent and simplified fractions		

Developmental Experiences	
	
Pupil's Name:	
Concepts	Developmental Experiences
 Concrete	 Pictorial
 Abstract	
Level D.1 Add and subtract fractions (first with like denominators, then repeat with unlike denominators)	
Level D.2 Add and subtract mixed numbers	
Level D.3 Multiply a fraction by a whole number	
Level D.4 Multiply a fraction by a fraction	
Level D.5 Divide a whole number by a unit fraction	

Pupil's Name:	Developmental Experiences 		
Concepts	 Concrete	 Pictorial	 Abstract
Level E.1 Understand and use simple ratios			