



Hundredth Wheel

Stage	Strand	Strand Unit
4	Number	Place Value and Base 10

Learning Outcomes	Maths Concepts
Through appropriately playful and engaging learning experiences, children should be able to investigate how decimals and percentages (and fractions) can be compared, ordered and expressed in related terms.	- Fractions, decimals and percentages are three ways of expressing part-whole relationships. - A percentage is a way of expressing a fraction of one hundred or another way of writing hundredth. Per 'cent' means out of a hundred and uses the % notation.

Learning Maths

This learning experience provides learners with an area model, which can be used to represent fractions, decimals and percentages. Each learner needs two different coloured hundredth wheels. A slit is cut along the radius and the wheels are placed together. Learners use the wheel to show the fraction, decimal or percentage identified by the teacher or their peers, e.g. show me 60% on the hundredth wheel. What is that as a fraction or decimal?



Understanding and Connecting	Communicating	Reasoning	Applying and Problem Solving
<i>The learner</i>			
Identifies decimal and fraction equivalents for percentages.	Models, represents and expresses percentages as decimals and fractions and vice versa.	Orders fractions, decimals and percentages by their comparative value.	Poses problems for their peers, e.g. what is 37% as a decimal and fraction?

¹ <https://www.pdst.ie/sites/default/files/AGuidetoTeachingPlaceValuePercentagesandDecimals.pdf> p82



Teaching Maths	
Fostering Productive Disposition	Encouraging Playfulness with Mathematics
Assist learners to make connections between fractions, decimals and percentages using the area model. Create small mixed ability groups, to enable learners to collaborate and interact with peers.	Provide opportunities for learners to explore and experiment with the mathematical idea using other concrete materials, e.g. dienes blocks, geoboards, metre stick, blank hundred squares.
	Emphasising Mathematical Modeling
	Allow freedom for learners to record their findings in a way that makes sense to them. e.g. $\frac{1}{2} = 0.5 = 50\%$
Using Cognitively Challenging Tasks	Promoting Maths Talk
Encourage learners to express and communicate their ideas frequently and openly using sentence stems such as • I noticed that ____ • I predict that ____ • I think ____ because ____ • Something that is important to remember is ____	Promote active listening, respect and value for all contributions. Ask learners to explain the approach they followed when finding $\frac{1}{2}$, 0.75, 45% etc.
Assessing Maths	
• Can learners make connections between equivalent fractions, decimals and percentages? • Can learners identify a percentage as a way of expressing a fraction of one hundred or another way of writing hundredth? • Did learners record equivalent fractions, decimals and percentages in a way which could be understood by their peers?	
Source	
PDST Guide to Teaching Place Value, Decimals and Percentages page 81	

