

Information sheet.

Differentiation. 4 common approaches.

Meeting the needs of all learners

It may be inconvenient, but it is an inescapable fact: all learners are different. There are many strategies that teachers use in order to try to ensure that every learner is given a challenge appropriate to their attainment and preferred ways of learning. The following four approaches are quite common.

(i) Differentiate by quantity

This strategy assumes that higher attaining learners will work more quickly and extra work should be held 'up one's sleeve' to cater for this. To us, however, 'more work' is unhelpful when this only means 'more of the same'. These learners need to explore ideas in more depth, not merely cover more ground.

(ii) Differentiate by task

In this approach, learners are given different problems or activities, according to their learning needs. This approach is difficult to implement well, because it presumes that the teacher can prejudge the attainment of each learner accurately and that there is also a bank of suitable problems or activities that may be drawn on. During trials of the Standards Unit resources for mathematics, some teachers decided in advance that some learners would not be able to cope with particular concepts and ideas and, when using 'card matching' activities, they removed all the cards that might be 'too difficult'. This was unsatisfactory as it denied learners the opportunity even to engage with these ideas. Teachers who used the activities 'as written', however, were often surprised when learners showed that they were able to learn and discuss even quite complex mathematical ideas. We would not recommend, therefore, that the activities be 'simplified' before giving them to learners.


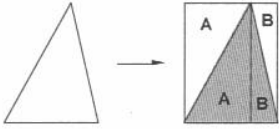
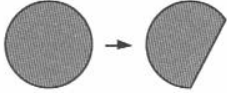
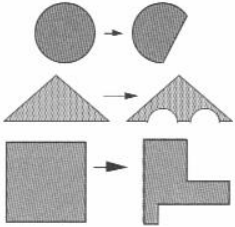
A second approach is to give learners some choice in the activities they undertake. For example, in one group, learners were asked to choose between a straightforward, a challenging and a very challenging task. Few chose the straightforward task; most preferred a challenge. This approach assumes that learners are able to make a realistic assessment of their own ability to solve the problem. It works less well with the less confident.

(iii) Differentiate by level of support

In this strategy, all learners are given the same task, but are offered different levels of support, depending on the needs that become apparent. If learners struggle with a task, then 'hints' cards may be given out to provide further help

without giving too much away. Of course carefully chosen hints may be given orally during any activity.

This avoids the danger of prejudging learners.

Statement cards	Hints cards
 <p data-bbox="284 748 643 898">Draw a triangle. There are three ways of drawing a rectangle so that it passes through all three vertices and shares an edge with the triangle. The areas of the three rectangles are equal.</p>	 <p data-bbox="703 799 1102 898">What fraction of each rectangle is the triangle? What happens when the triangle contains an obtuse angle?</p>
 <p data-bbox="277 1164 655 1218">When you cut a piece off a shape you reduce its area and perimeter.</p>	<p data-bbox="719 992 1086 1037">What happens to the area and perimeter with these cuts?</p> 

Card matching activities differentiate by allowing learners to take many different approaches. Learners who prefer visual images may decide to begin with cards that show diagrams, while those who prefer verbal representations may decide to begin with cards showing words. Learners who are finding the topic difficult may be given additional cards that show more accessible representations, while higher attaining learners may be asked to construct additional, more complex examples.

(iv) Differentiate by outcome

Open activities that encourage a variety of possible outcomes offer learners the opportunity to set themselves appropriate challenges. This approach is used in many of the activities. For example, some activities invite learners to create their own classifications or their own problems and examples. Teachers may encourage learners to 'make up questions that are difficult, but that you know you can get right'.