Developed in 2003, mathcentre (www.mathcentre.ac.uk) was originally designed to facilitate the transition from school mathematics to university mathematics. It has developed into an on-line mathematics support centre with over 1000 individual resources consisting of workbooks, leaflets, video and audio tutorials, exercises and diagnostics tests. These materials are used by both students and staff accessing material for their own needs and to teach or support others. The site receives on average 22,000 visitors a month, just over half of which are returning users.

There is very positive feedback from users who report that mathcentre contains the resources that they need most of the time [1].

“This is a very good bridge between A-level and University level and a huge support to weaker students as they can go right back to basics.”

“I have been using mathcentre for several years now both to support teaching and to support students with knowledge gaps. The resources are professionally produced.”

“mathcentre is an excellent example of the discipline working together to share resources. The approach should be rolled out to other subjects I think.”

Although many new resources have been developed over the years, there remain topics that are not covered. Users have requested more advanced materials, topics in greater depth, more examples with worked solutions and more mathematics for specific subject areas. At the same time, users have offered to contribute resources that they have developed. There has however not been a mechanism to enable this to happen. To respond to these requests and to facilitate sharing of mathematics resources within the academic community, the mathcentre Community Project was established with support from FETLAR [2].

The mathcentre Community Project

The mathcentre Community Project provides a means for the contribution of high quality mathematics related resources under a Creative Commons licence which allows the resource to be used and adapted non-commercially providing attribution is given [3]. Authors of resources configure their material to a mathcentre template which, for text based contributions, is provided in both LaTeX and Microsoft Word formats. To ensure the accuracy of contributions to mathcentre, authors are requested to ask a reviewer to check their resource before submission. Both the resource and accompanying source files including diagrams are placed on mathcentre so the resource is not only available for users but may also be further developed by the mathematics community. Contributors are responsible for ensuring that the contents...
of their resources do not contain copyright protected material. mathcentre operates a takedown policy.

To date a number of quick reference leaflets have been contributed to the mathcentre Community Project. An example may be seen in Fig 2. Quick reference leaflets are short two page resources which contain an accessible amount of information and may be easily photocopied in support centres onto one A4 page. Topics contributed include differential equations, Laplace transforms, proof, eigenvectors, forward prices and numeracy. To view these resources, please see the Communities page on mathcentre (www.mathcentre.ac.uk/communities/).

As users contribute other types of resources, new resource templates will be developed. mathcentre contains a huge variety of resources including text based resources, videos, online diagnostic tests and exercises and welcomes new resources in a variety of formats.

**mathcentre Taxonomy**

When a resource is deposited, it is accompanied by metadata – information such as keywords, topics covered, an indication of for whom the resource is intended, author and reviewer names and institutions. This data is used to help locate the resource once it is uploaded to the site. An item of metadata is the mathematics taxonomy index, a numerical reference corresponding to a mathematical topic. An example is 3.1.3.2 for *Quadratic functions* where the following are defined - 3 Algebra and number theory, 3.1 Algebra, 3.1.3 Functions. The mathcentre team have been involved in developing this taxonomy for mathematics. The “Core” Subject Taxonomy for Mathematical Sciences Education.
was adapted [4]. Further detail was added for resources contributed to the FETLAR project and the taxonomy was again expanded for the upgrade of mathcentre in 2009/10 so that all resources contained within mathcentre may be correctly referenced. A spreadsheet containing the current mathcentre taxonomy may be downloaded from www.mathcentre.ac.uk. (Search for “taxonomy”) Please contact us if you are developing a resource for which there is not an appropriate taxonomy reference.

The mathcentre Wish list

The ethos of the mathcentre Community project is to facilitate the sharing of excellent resources for post-16 mathematics learning. We are aware that many such resources have been developed and the Community Project provides a means for these resources to be shared within the academic community. We are compiling a wish list – a list of resources that users of mathcentre have requested. This will be published on the Communities page and will hopefully generate contributions and avoid duplication. It is the intention of the mathcentre team that through this initiative, students and staff will benefit from increased access to mathematics support materials. Authors will have a mechanism for ensuring that the resources they have developed both reach a wider audience and have a sustainable use into the future.

For further information on the mathcentre Community project, please see the Communities page of mathcentre (www.mathcentre.ac.uk) or email communities@mathcentre.ac.uk.

References

1. mathcentre user survey conducted January 2011
2. “Finding Electronic Teaching, Learning and Assessment Resources” www.fetlar.bham.ac.uk
3. http://creativecommons.org/licenses/