Dear Head of Mathematics,

To further assist us in looking at possible relationships between school-related factors and post-16 participation in mathematics, please complete this questionnaire at a convenient time and return it with the student questionnaires. You can also complete this online, via the following link:

http://www.surveymonkey.com/s/UPMAP-school-maths

Your help so far with the project has been immensely appreciated. These questionnaires are the final stage of the project, and your input is crucial to help the project.

Contact telephone number: 
and/or email address:

<table>
<thead>
<tr>
<th>A. About you</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Your name:</td>
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<tr>
<td>2. Your position:</td>
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<tr>
<td>3. How many years' teaching experience do you have?</td>
</tr>
<tr>
<td>4. For how many of these years have you taught mathematics?</td>
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</tbody>
</table>
B. Opportunities for progression

1. Has your school taken part in any enrichment activities with a view to increasing AS and/or A2 participation in mathematics? No ☐ Yes ☐

2. How often would students in your school have the opportunity to participate in enrichment activities in mathematics of the following kinds?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Very frequently</th>
<th>Frequently</th>
<th>Occasionally</th>
<th>Rarely</th>
<th>Very rarely</th>
<th>Almost never</th>
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</thead>
<tbody>
<tr>
<td>a. Mathematics clubs</td>
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<td>b. Mathematics fairs</td>
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<tr>
<td>c. Mathematics competitions</td>
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<td>d. Extra-curricular mathematics projects</td>
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<tr>
<td>e. External mathematics experts coming into the school, engaging with students about mathematics</td>
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<td>f. Students going out of school to external mathematics organisations</td>
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<td>g. Research in mathematics education conducted by teachers in the school</td>
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<tr>
<td>h. Research in mathematics education led by external organisations</td>
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</tbody>
</table>
C. Is your school’s capacity to teach mathematics hindered by any of the following?

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Slightly agree</th>
<th>Slightly disagree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>A shortage of qualified mathematics teachers</td>
<td></td>
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<td>2.</td>
<td>A lack of Teaching Assistants or HLTAs</td>
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<td>3.</td>
<td>A lack of other support personnel</td>
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<td>4.</td>
<td>Shortage or inadequacy of teaching equipment</td>
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<td>5.</td>
<td>Shortage or inadequacy of library materials</td>
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<td>6.</td>
<td>Shortage or inadequacy of audio-visual resources</td>
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<td>7.</td>
<td>Shortage or inadequacy of computers for teaching</td>
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<td>8.</td>
<td>Shortage or inadequacy of computer software for teaching</td>
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<td>9.</td>
<td>Lack or inadequacy of Internet connectivity</td>
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<td>10.</td>
<td>Limited time for professional development for mathematics staff</td>
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<td>11.</td>
<td>Lack of appropriate supply cover</td>
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<td>12.</td>
<td>Shortage or inadequacy of textbooks</td>
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</tbody>
</table>
D. Participation

1. Which of the following factors do you believe contribute to AS and/or A2 participation in mathematics?

<table>
<thead>
<tr>
<th>Factor</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Slightly agree</th>
<th>Slightly disagree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. A student’s natural predispositions for mathematics</td>
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<td>b. How highly valued among students it is to be good at mathematics</td>
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<td>c. How good the student is at mathematics</td>
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<td>d. How good the student thinks s/he is at mathematics</td>
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<tr>
<td>e. The way mathematics is taught</td>
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<td>f. Whether the student’s parents/carers promote mathematics</td>
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<td>g. How relevant the student feels mathematics is to his/her life and career</td>
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<td>h. The content of the school mathematics curriculum</td>
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<tr>
<td>i. The school’s involvement in mathematics education research projects, e.g. through collaboration with universities</td>
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<td>j. The student’s psychological and personality traits</td>
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<td>k. The student’s involvement in extra-curricular activities in mathematics</td>
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<td>l. The student’s enthusiasm for and enjoyment of mathematics</td>
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<td>m. The importance attached by the school to mathematics</td>
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<tr>
<td>n. Their mathematics teachers’ personalities</td>
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</tbody>
</table>
E. About your school’s mathematics department

1. What percentage of your maths KS3 teaching staff are maths specialists?  

2. What percentage of your maths KS4 teaching staff are maths specialists?  

3. What percentage of your maths staff (KS3 & KS4) left the maths department in the academic year 2009-2010?  

4. What proportion of KS3 mathematics classes are taught by specialist mathematics teachers?  

5. What proportion of KS4 mathematics classes are taught by specialist mathematics teachers?  

6. For each of the questions please tick one choice that best represents your response to each statement.

   a. Your school’s mathematics department is much more important than the whole school in determining whether students go on to post-16 mathematics  

   b. Ensuring students are taught mathematics so that they enjoy it is more important than ensuring they are taught it simply to get through exams  

   c. Instilling students with the enthusiasm to enjoy mathematics as an end in itself is more important than ensuring they gain the knowledge to progress to mathematics-related careers  

   d. Our department ensures all students have the opportunity to discuss what they can do with a post-16 mathematics qualification  

   e. Our department ensures only those students who have the potential to go on to do post-16 mathematics have the opportunity to discuss what they can do with a post-16 mathematics qualification
7. In your department meetings, do you discuss the following?

<table>
<thead>
<tr>
<th></th>
<th>Very frequently</th>
<th>Frequently</th>
<th>Occasionally</th>
<th>Rarely</th>
<th>Very rarely</th>
<th>Almost never</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>Movements of students between sets</td>
<td>☐ ☐ ☐ ☐ ☐</td>
<td>☑ ☑ ☑ ☑ ☑</td>
<td>☑ ☑ ☑ ☑ ☑</td>
<td>☑ ☑ ☑ ☑ ☑</td>
<td>☑ ☑ ☑ ☑ ☐</td>
</tr>
<tr>
<td>b.</td>
<td>Resources</td>
<td>☐ ☐ ☐ ☐ ☐</td>
<td>☑ ☑ ☑ ☑ ☑</td>
<td>☑ ☑ ☑ ☑ ☑</td>
<td>☑ ☑ ☑ ☑ ☑</td>
<td>☑ ☑ ☑ ☑ ☐</td>
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<tr>
<td>c.</td>
<td>Problems students have learning mathematics</td>
<td>☐ ☐ ☐ ☐ ☐</td>
<td>☑ ☑ ☑ ☑ ☑</td>
<td>☑ ☑ ☑ ☑ ☑</td>
<td>☑ ☑ ☑ ☑ ☑</td>
<td>☑ ☑ ☑ ☑ ☐</td>
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<td>d.</td>
<td>Revision sessions</td>
<td>☐ ☐ ☐ ☐ ☐</td>
<td>☑ ☑ ☑ ☑ ☑</td>
<td>☑ ☑ ☑ ☑ ☑</td>
<td>☑ ☑ ☑ ☑ ☑</td>
<td>☑ ☑ ☑ ☑ ☐</td>
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<td>e.</td>
<td>Exam booster sessions</td>
<td>☐ ☐ ☐ ☐ ☐</td>
<td>☑ ☑ ☑ ☑ ☑</td>
<td>☑ ☑ ☑ ☑ ☑</td>
<td>☑ ☑ ☑ ☑ ☑</td>
<td>☑ ☑ ☑ ☑ ☐</td>
</tr>
<tr>
<td>f.</td>
<td>Extra-curricular activities for mathematics</td>
<td>☐ ☐ ☐ ☐ ☐</td>
<td>☑ ☑ ☑ ☑ ☑</td>
<td>☑ ☑ ☑ ☑ ☑</td>
<td>☑ ☑ ☑ ☑ ☑</td>
<td>☑ ☑ ☑ ☑ ☐</td>
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<tr>
<td>g.</td>
<td>Liaising with outside organisations</td>
<td>☐ ☐ ☐ ☐ ☐</td>
<td>☑ ☑ ☑ ☑ ☑</td>
<td>☑ ☑ ☑ ☑ ☑</td>
<td>☑ ☑ ☑ ☑ ☑</td>
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<tr>
<td>h.</td>
<td>Professional development for staff</td>
<td>☐ ☐ ☐ ☐ ☐</td>
<td>☑ ☑ ☑ ☑ ☑</td>
<td>☑ ☑ ☑ ☑ ☑</td>
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<tr>
<td>i.</td>
<td>Teaching and learning mathematics</td>
<td>☐ ☐ ☐ ☐ ☐</td>
<td>☑ ☑ ☑ ☑ ☑</td>
<td>☑ ☑ ☑ ☑ ☑</td>
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<tr>
<td>j.</td>
<td>Assessment and monitoring students’ progress</td>
<td>☐ ☐ ☐ ☐ ☐</td>
<td>☑ ☑ ☑ ☑ ☑</td>
<td>☑ ☑ ☑ ☑ ☑</td>
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<td>☑ ☑ ☑ ☑ ☐</td>
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<tr>
<td>k.</td>
<td>Progression to AS and A2 mathematics</td>
<td>☐ ☐ ☐ ☐ ☐</td>
<td>☑ ☑ ☑ ☑ ☑</td>
<td>☑ ☑ ☑ ☑ ☑</td>
<td>☑ ☑ ☑ ☑ ☑</td>
<td>☑ ☑ ☑ ☑ ☐</td>
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</tbody>
</table>
F. Your department’s links with outside establishments

1. Does your department have links with mathematics departments in other schools?  
   No ☐  Yes ☐

2. Does your department have links with any 16-19 institutions (e.g. FE or Sixth Form Colleges)?  
   No ☐  Yes ☐

3. Does your department have links with any higher education institutions?  
   No ☐  Yes ☐

4. How much is your department involved with external projects in maths education?  
   Very often ☐  Sometimes ☐  Occasionally ☐  Almost never ☐

G. Your school

1. Has there been any change of status of the school (e.g. you have become an Academy)?  
   No ☐  Yes ☐

2. Have there been any major changes of leadership in the school – in Senior Management (Head or Deputies)?  
   No ☐  Yes ☐
   a. If yes, what has been the impact on the organisation of mathematics?

3. Have there been any major changes of leadership in the department?  
   No ☐  Yes ☐
   a. If yes, what has been the impact on the organisation of mathematics?

4. Have there been any specific changes in the mathematics curriculum adopted in last 12 months?  
   No ☐  Yes ☐
   a. If yes, why and what are the effects to date?

5. Have there been any specific changes in mathematics teaching organisation and approaches (e.g. streaming) in the last 12 months?  
   No ☐  Yes ☐
   a. If yes, why and what are the effects to date?
**H. Mathematics-related careers**

In your opinion, to what extent do teachers in your school concentrate on developing in students the skills and knowledge that will help them progress towards mathematics-related careers?

1. **These skills and knowledge are incidental to the teaching of mathematics**
   - Strongly agree
   - Agree
   - Slightly agree
   - Slightly disagree
   - Disagree
   - Strongly disagree

2. **These skills and knowledge occur within the teaching of mathematics but are not emphasised**
   - Strongly agree
   - Agree
   - Slightly agree
   - Slightly disagree
   - Disagree
   - Strongly disagree

3. **These skills and knowledge are important aspects of the teaching of mathematics in our school**
   - Strongly agree
   - Agree
   - Slightly agree
   - Slightly disagree
   - Disagree
   - Strongly disagree

**I. Continuing Professional Development (CPD)**

How satisfied are the teachers of mathematics in your school with:

1. **their overall mathematics-specific CPD opportunities?**
   - Completely satisfied
   - Very satisfied
   - Somewhat satisfied
   - Somewhat dissatisfied
   - Very dissatisfied
   - Completely dissatisfied

2. **time to engage with CPD?**
   - Completely satisfied
   - Very satisfied
   - Somewhat satisfied
   - Somewhat dissatisfied
   - Very dissatisfied
   - Completely dissatisfied

3. **funds to support specific CPD?**
   - Completely satisfied
   - Very satisfied
   - Somewhat satisfied
   - Somewhat dissatisfied
   - Very dissatisfied
   - Completely dissatisfied

4. **the overall quality of the mathematics-specific CPD available?**
   - Completely satisfied
   - Very satisfied
   - Somewhat satisfied
   - Somewhat dissatisfied
   - Very dissatisfied
   - Completely dissatisfied

5. **the availability of a variety of professional development opportunities for teachers?**
   - Completely satisfied
   - Very satisfied
   - Somewhat satisfied
   - Somewhat dissatisfied
   - Very dissatisfied
   - Completely dissatisfied

6. **the overall focus of the mathematics CPD?**
   - Completely satisfied
   - Very satisfied
   - Somewhat satisfied
   - Somewhat dissatisfied
   - Very dissatisfied
   - Completely dissatisfied

7. **the time and opportunity teachers have to learn with colleagues within the mathematics department?**
   - Completely satisfied
   - Very satisfied
   - Somewhat satisfied
   - Somewhat dissatisfied
   - Very dissatisfied
   - Completely dissatisfied

8. **the time teachers have to engage in school-based research to improve the way they teach mathematics?**
   - Completely satisfied
   - Very satisfied
   - Somewhat satisfied
   - Somewhat dissatisfied
   - Very dissatisfied
   - Completely dissatisfied

9. **the time and opportunity teachers have to participate in networking with mathematics teachers in other schools?**
   - Completely satisfied
   - Very satisfied
   - Somewhat satisfied
   - Somewhat dissatisfied
   - Very dissatisfied
   - Completely dissatisfied

Thank You