TSST Audit Form 2016-17

Introduction
This form is designed to allow community based panels of teachers to evaluate each other's course, facilitated by the Institute of Physics. Courses which meet the required standard will be deemed to have receive IOP approval, or to give it its full title, IOP enabled community approval.

Evaluators will be primarily looking at consistency between course objectives/outcomes and mode of delivery. The audit form is designed to test the coherence of the course as described. Individual courses may vary in length and it is for individual participants to decide which advertised length suits their needs best.

However, based on community feedback, it was felt that it would be helpful to provide some guidance as to specific aspects. Most specific recommendations are given in the Notes columns. In addition it was felt that a TSST course would normally be expected to take 30-50 hours to complete, excluding unmonitored independent learning time. Please note that a course submitted for auditing will not be penalised if it does not meet a stated guideline. However, the approval panel will expect to see some justification.

Institute of Physics will publish details of all community approved courses on the IOP website.

Contact Details
First Name
Geraint

Last Name
Evans

Email
devans@backwellschool.net

Telephone
01275 463371

Position
Head of Physics

School
Backwell School

School Address
Street
Station Road
City
Backwell
Postcode
BS48 3BX

Region
South West

Years of TSST funding granted
2

Introduction
This form is designed to allow community based panels of teachers to evaluate each other's course, facilitated by the Institute of Physics. Courses which meet the required standard will be deemed to have receive IOP approval, or to give it its full title, IOP enabled community approval.

Evaluators will be primarily looking at consistency between course objectives/outcomes and mode of delivery. The audit form is designed to test the coherence of the course as described. Individual courses may vary in length and it is for individual participants to decide which advertised length suits their needs best.

However, based on community feedback, it was felt that it would be helpful to provide some guidance as to specific aspects. Most specific recommendations are given in the Notes columns. In addition it was felt that a TSST course would normally be expected to take 30-50 hours to complete, excluding unmonitored independent learning time. Please note that a course submitted for auditing will not be penalised if it does not meet a stated guideline. However, the approval panel will expect to see some justification.
Course Summary

Short description of the course (e.g. objectives and expected outcomes)

Course objective is to improve teaching of Physics by attendees. The delivery is workshop based, with demonstrations of practicals and demos (including opportunities for students to perform/explore/try), discussions, Q&A and reviewing of experiences. Expected outcomes: Delegates feel more confident in their ability to teach Physics through enhanced understanding, teaching ideas, approaches, demo's and practicals, common misconceptions and support from the group. Delegates will be assessed throughout course on subject knowledge via subject knowledge TSST questions - outcome will be improvement in score.

Please provide the number of hours the course is intending to devote to each subject, per mode of delivery

<table>
<thead>
<tr>
<th>Subject</th>
<th>Mode of delivery</th>
<th>Face to Face</th>
<th>Practical</th>
<th>Coaching/ Mentoring</th>
<th>Monitored Independent Learning</th>
<th>Other, if any</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy</td>
<td></td>
<td>0.5</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>Motion &amp; Forces</td>
<td></td>
<td>0.5</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>Waves</td>
<td></td>
<td>0.5</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>Electricity &amp; electromagnetism</td>
<td></td>
<td>0.5</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>Matter &amp; Space</td>
<td></td>
<td>0.5</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td>0.5</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Please provide further brief detail on the following aspects of the course

Practical work

Specify what nature is - e.g. embedded in related session/standalone/skills focussed, work in pairs/groups. Also include Health and Safety measures in place.

Hands on experience following demonstrations. All H & S measures communicated explicitly. Particularly focusing on ways of engaging interest with 'fun' demos or practicals which link the science to real life contexts or model conceptual areas effectively. Practical aspects primarily in pairs or larger groups dependent on equipment availability.

Subject Knowledge

Please give more details on methodology of subject knowledge (e.g. lecture, practice questions, peer tutorial, diagnostic testing).

IOP (subject knowledge, TSST specific) diagnostic testing at start, specific testing prior to sessions, retesting at end of course. Combination of teaching teachers subject content, discussing & sharing current practice & 'top tips', practice questions in PowerPoints. Demonstrations of practicals with questions to ask them to explain what's happening. Practical experience for delegates where possible.

Pedagogical Content Knowledge

Give further details on methodology used (e.g. pupils, misconceptions/naïve conceptions).

Common misconceptions identified (including via analysis of testing) & measures to overcome them put in place.

Research informed Practice

...
How do you propose to embed the results of research informed best practice (e.g. access to research articles).

Referenced in handouts/PowerPoints & discussed in sessions. Use of TAP resources and IOP resources.

Handling of mathematical requirements

Handling of graphical techniques, proportionally, errors.

Use of equations, how to develop pupil understanding of the relationships via practical methods. HSW session at Bristol Uni.

Participant Assessment Arrangements

Use of various modes (e.g. lesson observation, portfolio, diagnostic testing, etc.).

On line tests prior & after teaching of a topic area. Assessment also via worksheets questions during session, work on whiteboards during session. Questions asked & answered during discussions of ideas behind practicals too. Where practical, formal observations on teaching physics-based lesson. Peer observations/HOD coordinated with schools where delegates are teaching.

Quality Assurance Mechanisms

Mention use of any form of quality assurance- use of validated material, external validation or accreditation. Please include qualifications of staff.

BSc Hons Physics & PGCE; research prior to delivery of current good practice & theory. Eg IOP, Lead provider has more than 17 yrs experience in teaching secondary Physics. Supported by Head of Physics (Mphys, PGCE, PhD, 5 yrs teaching experience). When required, we use Lawrence Cattermole, Teaching and Learning Coach, Stimulating Physics Network to advice, ideas and clarification.

Individualisation of Participants

Mention any separate routes possible, and how those routes are decided.

Information relevant to A-level supplied in PPT’s & explained for those wanting higher level understanding. Differentiated sessions to support KS5 new course requirements including FAQs and TAP activities. Individuals able to come in to observe lessons as desired.

Lifelong learning of Participants

The TSST courses are inevitably of limited duration. Explain how participants are enabled to acquire the skills for autonomous learning beyond the course itself.

Websites of benefit for explanations ideas are communicated to delegates for each topic area. Share course resources on Google Drive area. Encourage delegates to set-up social media network and publicise local science networking opportunities such as workshops from the Institute of Physics Teacher Network.

Please upload any supplementary file you think will aid the school’s audit submission (optional)