Why do you, as a teacher, like to take part in Olympiad round 1?
We are quite an academic school, it’s a boy’s grammar school and we have a lot of students doing A-level chemistry. A lot of them like to challenge themselves — they really like to be stretched and challenged. So when I say to them that this is one of the most difficult things you will do, they really embrace that challenge. For me as a teacher, I don’t believe it’s adding anything to my teaching, but it’s giving them opportunities to see what’s out there and how chemistry can be developed and how it can be used. So yeah, it’s mainly for the challenge for the students.

Why do your students want to take part in the Olympiad?
They want to challenge themselves and they want a challenge against each other — they like to see who’s actually the best. It brings in lots of different areas, so they’ve got to actually be good at using maths in chemistry, and occasionally some physics stuff as well. I think they enjoy seeing how it all links together.

Do you use Olympiad past paper questions in any of your preparation or classes?
Yes. When we get the data for the Chemistry Olympiad, I work out what day we can do it on and tend to send an email out to the boys asking who wants to take part. In that email I’ll also send a link to the past paper questions to show them what they’re letting themselves in for. Occasionally, if we haven’t taught NMR and stuff before the Olympiad, I will actually use some past paper questions to explain NMR and how they might get challenged in it. The analysis topics are one of the last things we do so sometimes we’re just not up to there in the syllabus. So we have to do a bit of help for them.

And the other thing is that we run an A* preparation class, for boys who we think are going to get A*s (about 25% of our boys get A*s). We ask them to come along and we give them Olympiad questions as they’re more of a stretch and challenge than the usual A-level questions. We give them the question one week and we go over it the week after to see how they get on.

How do you prepare for round 1?
I don’t really feel like I give them preparation. Apart from the NMR stuff and any analysis things that they haven’t done, I don’t do a formal session on the Olympiad. We use the Olympiad questions to help with our A* preparation but it’s not really preparation for the Olympiad. I don’t say to the boys that are targeting an A*, ‘You are the only ones who can do the Olympiad.’ I don’t choose the boys who are going to do the Olympiad, I let them choose themselves. We have 85 students doing A-level chemistry and on average we’ll get 10-15 boys who will do the Olympiad. It’s open to anybody, anybody who wants to do it.

What do your students find most challenging and how do you overcome this?
The synthesis questions. There are fewer synthesis questions on the A-level syllabus now. We follow the AQA syllabus and it’s usually a two or three step synthesis question. So to be shown a 5, 6, 7 or 8 step synthesis, and having to look at what comes after as well as what comes before, to try and work out what you’ve got in the middle — that’s something that they really find difficult. Any of the boys that do look at the past paper questions beforehand; that will be the first thing they have to say to me, ‘Miss, how on earth do I do this?’ In the past I have spent some time with the boys who have asked for it to go through that sort of thing.

What advice would you give a school that was thinking of taking part in Olympiad round 1 for the first time?
I would say go through some past paper questions with the students, especially the synthesis ones. And also tell them not to worry about it, just to have a go. Because I think a lot of students look at the paper and go, ‘Oh no, I could literally answer one question,’ but we know that the grade boundaries are low and the paper is really hard and they should just have a go. It doesn’t make any difference for them if they don’t do well. The way I sell it is if they don’t do well nobody knows about it, it doesn’t matter. And if you do well, you can tell everybody about it and be really proud of yourself that you’ve done well on the paper. Every time we get any gold certificates, I always make a big deal out of it in assembly and things like that. They do Olympiads and things in other subjects, and they’re used to getting golds in those, and it seems that it’s much more of a big deal to get a gold in the Chemistry Olympiad. And we’ve never had anyone get higher than that so I think I’d like some help myself to get them through to the next round! But I don’t find that we’ve got the time in the curriculum to spend more time on it really.

The Chemistry Olympiad is the leading chemistry competition for students in the UK. To find out more about this opportunity to challenge your chemistry students visit rsc.li/olympiad