

Practical learning and interdisciplinary learning

The King Alfred School, London



www.kingalfred.org.uk

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Headlines

- Applied learning
- Culture of trust
- Exhibition of student work



About the school

The King Alfred School (KAS) is an independent co-educational day school in London taking pupils from aged 4 to 18.



Making learning whole

Since its foundation in 1898, KAS has focused on the education of the whole child. Academic success is something that all KAS students are expected to strive for, but the school also prepares pupils for their futures by developing skills to innovate, create and take risks, so they can have a positive impact on the world. This in turn:

'Requires that they have the right skills to innovate, create, and take risks. And it requires them to work effectively in teams, appreciate diversity, and manage a whole range of complex personal and professional relationships.'¹

KAS teachers embrace practical learning because it greatly helps achieve this vision.

'What can we do with what we've learned? Can we apply it to an authentic or a simulated authentic situation? In a nutshell, I think that's what we're aiming for here in Years 6 to 8.'

Julian Reed

As Miranda Socratous says: 'It is important to prepare pupils for the real world.'

Several international whole child education models have influenced the design of the KAS curriculum. These include Expeditionary Learning², Common Ground Collaborative³ and the International Baccalaureate Middle Years Programme⁴.



Embedding practical learning in the curriculum

This case study focuses mainly on practical learning opportunities embedded within the KAS curriculum in Years 6, 7 and 8. The four elements of this curriculum which combine to offer a whole education include Inter-disciplinary Enquiries (IE), single subject learning, co-curricular learning and a system of personal support called Crew.⁵

The IEs⁶ are built around two sets of subject combination, one covers the physical world that includes science, design and maths (often called STEM). The second covers the human world that includes humanities, English and art. IEs are structured through four stages:

Connect – a 'compelling question' is introduced which drives the inquiry, prompts pupils to connect to their existing knowledge and decide which new knowledge they need to connect to.

Construct – Pupils and teachers co-construct further questions to guide next steps in learning, and pupils construct new understandings.

Contribute – Pupils undertake the ‘exhibition task’, and redraft it after feedback from teachers and peers.

Re-connect – Pupils reflect on their learning and reconnect with the original ‘compelling question’ and explore its relevance to their own lives.

One of the IEs that pupils completed in the Autumn term 2021 concerned human survival and resourcefulness. This asked the questions:

- What is needed for humans to survive?
- How did early humans survive?
- How do you move from surviving to thriving?

The pupils had to imagine they were castaways on an uninhabited Scottish island and find out what they would need to know and do, in order to survive. The culmination of the IE was an exhibition to fellow pupils and parents in the new open plan learning space. This demonstrated how they had used science to understand fire, DT to design and create structures, plus maths and geography to read maps and draw scale plans⁷.

When designing this IE, it was important to ensure that it ended with an authentic, real world

exhibition. In addition, the subjects contributing to it, maths, science, geography and design, needed to be fully integrated during the project, at the right level and depth.

‘It is always a payoff, trying to find things that are tightly knitted together and things that they need to learn and at the right stage.’

Julian Reed

So, for example, in the first iteration of this IE, some of the science input was withdrawn when it was considered more appropriate for pupils to learn the science elements in greater depth later on, rather than risk misunderstandings by introducing them too early.

In Year 7, each IE has five hours a week of timetable time. The timetable also includes subject-based learning in traditional 50-minute lessons. The amount of timetabled subject-based learning increases in Year 8, in preparation for Year 9 when all teaching is within disciplines. So, within Design and Technology (D&T) in Year 9, KAS teachers aim to create appropriate learning environments that build on the holistic approach of the IEs. The aim is for the D&T curriculum to move away from more traditional teacher-led projects and more towards bringing real-life problems into the classroom. This changes the focus:

‘Let’s look at these problems that exist in the world and see

how we can design solutions for them.’

Miranda Socratous

Co-curricular learning, known as Choice, is embedded in the timetable and enables pupils to challenge themselves, learn new skills and develop a sense of community with the school. One of the more unusual Choice activities is blacksmithing. This is offered in the KAS forge.

The final element of the KAS 6-8 curriculum is Crew, timetabled daily meetings of pupils in groups with their Crew leader, a teacher. Crew functions as a family community for pupils, fostering identity and a sense of belonging. Meetings cover pastoral support, PSHE, team-building sessions, and weekly reflections on learning with skills development recorded in pupils’ learning portfolios.



Learning for the real world

In line with the aim of KAS to prepare its pupils for the future, the application of knowledge is just as important as knowledge acquisition. One of the most memorable IE experiences for pupils towards the end of Year 8 is The Village Project⁸. Pupils live for a week in a camp in the grounds of the school. They make their shelters, cook their meals, make the community rules, and apply all the skills and attributes they have developed.

When pupils participate in this kind of practical learning, they are using their brains, hands, eyes and ears.

‘Once you engage all those senses and you stimulate your whole body, not just your brain, then I’ve observed that the learning goes deeper, and it becomes more intrinsic.’

Chris Raymond

The sense of community developed through The Village activities encourages pupils to take responsibility for themselves and for others.

‘It excites kids so that they learn for themselves. They’re the ones that are trying to push their learning, their standards, so it’s an intrinsic thing.’

Chris Raymond

Building on the authentic learning experience they have had in years 7 and 8, D&T students in Year 9 engage in an inclusive design project in which they wear glasses and gloves simulating impairments. This enables them to develop empathy for clients when designing products to meet their needs.

‘They step inside the shoes of that person and then see things from a different perspective.’

Miranda Socratous

A focus on creativity and researching the needs of the end user, rather than just making products in the workshop, is leading to increased interest among girls to take D&T at GCSE. It also prepares pupils for their personal investigations by the time they reach A level.

‘So from Key Stage 3 to 4 we give them the skill to trust in their ideas when they reach A level. When you’re approached with a really open brief, with whatever you want to research, that’s quite a tricky task when you’re 17 or 18.’

Miranda Socratous

It would be hard to imagine a more authentic learning experience than the Choice activity of blacksmithing⁹. Pupils choose the forge activity for a variety of reasons, they may have an interest in the science, D&T, art, or because it offers a safe place away from the worries of the world. Nic Bevers is adamant that they get an authentic experience.

‘I’m very clear about the fact there’s no such thing as blacksmithing for children. Not a chance. We want the materials to be in their natural environment so when they’re outside in the forge, there’s the fire, there’s the language, it’s just relatable.’

Nic Bevers

Using a full range of teaching methods

There is no doubt that this complex curriculum, particularly the IEs, requires significant planning to ensure that the practical is aligned with the academic. To ensure that the driving questions are the right ones, that the conceptual knowledge taught helps to answer

the questions, that pupils build connections between concepts and that their skills are also developed. Teachers contributing to the IEs are subject specialists, so a critical success factor is to ensure that the team members are familiar with each other’s teaching schemes, since they need to be able to signpost to pupils what they are doing and why.

‘We point that out every time we go back to these big questions the pupils see the same question in all subjects, all the time, not assuming that they remember what those big questions are.’

Julian Reed

In the first iteration of the IE, teachers provided more structure to guide pupils than might be necessary in subsequent iterations.

‘We’re basically giving them a lot of structure. How I’m going to tell whether these foundations have been successful or not, is that later on in the programme, in the 3rd and the 4th iterations, there are going to be more open-ended enquiries.’

Julian Reed

Subject leads find that an ethos of trust and the sharing of ideas among teachers, fostered by the KAS school culture, is an important element in facilitating appropriate risk-taking.

‘You’ll have an idea and you can approach it and they’re

going to say OK, go for it, let’s see what happens. And I think that’s really important from your management of the school.’

Miranda Socratous

Cultivating learner agency

KAS teachers have seen how important the inclusion of practical learning within the curriculum is for enabling pupils to become creative, resilient, compassionate, to cultivate their passions and embrace uncertainty. Although the IEs are a new way of learning at KAS, teachers are confident that they will result in pupils developing curiosity and inquiry skills.

‘The curiosity to take their learning in a way which is meaningful, not producing something just to please your teacher. At the moment, we’re just getting them used to the way of learning and the skills that they will need, but by the end of Year 8, I’m hoping that they’ll be curious and skilled enough to lead their own learning in a more open-ended inquiry.’

Julian Reed

An increase in pupils’ ability to reflect and adopt a more critical, questioning approach is observed as a result of the IEs, that benefits pupils’ performance in D&T and other subjects:

‘Because they’re going through this iterative approach, it allows for more self-reflection, and I feel that has a really good impact when they go into other subjects.’

Miranda Socratous

Pupils develop the ability to trust in their own judgements, have confidence in putting forward their own ideas, and can move on when things don’t go right first time. These are all dispositions enhanced by practical learning where:

‘They’re OK with “this didn’t go right, I’m going to move on now.” I think that sums it up for me and that’s quite a hard thing to do, to wait to see what happens, but it’s this safe place that you create for those conversations.’

Miranda Socratous

The Choice programme and events like The Village contribute to pupils developing attributes including resilience and teamwork, that:

‘...is quite hard to do in a classroom, but when you’re doing it practically, it happens without trying, because if you want to move an enormous log with just a few of you, then you need to work together.’ Chris Raymond

The blacksmithing Choice activity in the forge is an experience that teaches pupils adaptability, resilience and the confidence to question experts.

'I'm constantly saying to kids, you know, when you hold something in your hand, examine it, can it be better? Ask me a question, it might have been like that for years, I don't know, ask me the question.'

Nic Bevers

As with other Choice activities, the pupils drive the agenda. Becoming proficient with blacksmithing skills develops their self-esteem.

'They're able to share learning on the spot and they feel valued, so it's really good'

Nic Bevers

There is a kind of anonymity in the way the pupils put on the gear for blacksmithing that enables them to engage in the moment and put aside worries they might be experiencing elsewhere.

'You put on your Holy Trinity of gloves, goggles and leather apron. Nobody knows who anybody really is in that moment and it's kind of great, you know. They leave themselves somewhere else to engage quite naturally, and it is all about what we're doing'

Nic Bevers



Tracking learner progression

Assessing the outcomes of practical holistic learning is

challenging and KAS teachers have to resolve many tensions caused by needing to meet the requirements of high stakes testing while wanting to recognise pupils' wider achievements:

'When you have a test and the grade, it's black and white, it's really straightforward. I think, with these more holistic approaches to education, it's hard, even for yourself as a teacher, and even as a student, to really see what's going on.'

Miranda Socratous

So, in the KAS 6 to 8 curriculum, a range of assessment approaches are used to assess all three types of outcomes, pupils' knowledge, skills and attributes. For the IE, the final exhibition is a presentation by pupils to the public. Feedback helps pupils refine their work and present their best version.

'When we get to the final exhibition, we're not really assessing them in that way. We are giving feedback when they present it to their fellow students, then they're improving what they've done and then presenting to the public.'

Julian Reed

The 'public' for the first exhibition in January 2022 was actually pupils' parents. They were clearly impressed by their children's achievements as they recognised that pupils had solved problems, worked collaboratively, had applied

their learning and reflected on what they had learnt¹⁰.

Traditional assessments are also used during the IE, for example, in design and maths. Just as important at KAS is the use of a learning portfolio within which pupils record evidence of their progress, sharing feedback and reflections with teachers and their parents.

'We're tracking the skills and looking at evidence from applying those skills in different areas. They're producing a portfolio of evidence in terms of pieces of work or snapshots that they work with feedback and self-evaluation of their work.'

Julian Reed

KAS is a member of the Rethinking Assessment group. This body is leading a high-profile argument for change to the national assessment system in England and is contributing its expertise to the building of a model Learner Profile¹¹.



Endnotes

1. www.kingalfred.org.uk/about-us/our-philosophy-aims
2. <https://eleducation.org>
3. <https://commongroundcollaborative.org>
4. www.ibo.org/programmes/middle-years-programme
5. www.kingalfred.org.uk/upper-school/curriculum-in-years-7-8-9
6. The King Alfred School 6-8 Curriculum, 2021/22 www.kingalfred.org.uk/wp-content/uploads/2021/11/KAS_6_8_curriculum_v6_web.pdf
7. www.kingalfred.org.uk/2022/01/24/y7-exhibition-a-new-way-of-learning
8. www.kingalfred.org.uk/upper-school/the-village-project
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