



Designed to Succeed

THERE ARE MANY REASONS TO FEEL POSITIVE ABOUT THE NEW PROGRAMMES OF STUDY FOR DESIGN AND TECHNOLOGY, SAYS ANDY MITCHELL – NOT LEAST THE AMOUNT OF SUPPORT THAT'S ON HAND TO HELP YOU DELIVER THEM...

The Design and Technology Association, of which I am Assistant Chief Executive, is very positive about the new programmes of study (PoS). Well it would be wouldn't it? With the help of a range of stakeholders, it coordinated the complete rewrite of the infamous 'February 2013 draft' consultation document, published by DfE and universally condemned. To give them their due, DfE and Ministers listened to what we were saying and granted us the opportunity to create something better and something that reflected the needs of young people and the country. What emanated is being viewed as one of the best subject programmes of study within the new National Curriculum Framework, providing a sound basis for teaching and learning D&T at KS1 to 3. Together with the Minister Elizabeth Truss we are justly proud of it, a view shared by the Association – not least, as it is being well received in schools.

That's not to say it's perfect, and there are some glaring omissions. For instance the complete lack of reference to sustainability or thinking about using resources in a systems way and no explicit requirement set out to ensure pupils engage in planning. Even though longer than some other subjects' PoS, some

things had to be missed out in the stringent 'slimming down' process.

Whilst not wishing to dwell on the frenetic period that led up to its eventual publication last summer, it is worth just remembering for one minute how we got to where we are and what an achievement it was. As far back as December 2012, the subject was at risk with the distinct possibility that it would not even appear as a subject in the reworked curriculum. Consigned by the Secretary of State's Expert Panel to the 'Basic Curriculum' (as opposed to inclusion in the National Curriculum), prompted the first D&T Association's 'Believe in D&T' campaign. Rallying the support of industry and an impressive list of dignitaries ensured it was retained, but the work had only just begun. Stakeholders came together and in a way that had never happened before, representatives from schools, universities, industry esteemed institutions and bodies resolved their differences and produced under the D&T Association's leadership, a statement that moves the subject forward into the 21st century.

Teachers should now work together with the D&T Association's associated resources being produced to support implementation. We recommend that all schools in England,

including academies, free schools and independent schools, use the document as a basis for curriculum planning. The new PoS is designed to build on existing good practice. If you are currently meeting the requirements of the 2007 key stage 3 curriculum then you have a good basis from which to work. Whatever the standard of D&T in your school, it is extremely inadvisable to abandon your existing curriculum planning without first seeing if it can be adapted to include the new requirements.

No single curriculum can meet the requirements of all schools and accommodate their specific local circumstances, and available specialisms. However the National Curriculum PoS should be considered as representing a 'minimum entitlement' for all pupils and as a sub set of the school D&T curriculum. The D&T Association believes it is important that schools develop their distinct versions but ensure that all aspects are covered.

The transition toward adopting the new PoS should be evolutionary with time spent exploring the bigger picture for D&T in your school, focusing in on specific teaching and learning activity as the year progresses. However it should be that by September 2014,



provided as a short printable book so all D&T staff in your school should have a copy to refer to. This annotated version of the PoS helps schools accurately interpret words and phrases that need further explanation and provides initial advice on effective implementation to ensure good quality teaching and learning.

You might also find it helpful to take a look at the **School Curriculum Principles for D&T** chart- six principles describing the essential features of a D&T project. It can be used to check whether the experience pupils are receiving in D&T has all the necessary ingredients – user, purpose, functionality, innovation, design decisions and authenticity. The guidance enables teachers to evaluate practice in relation to each of the principles, reflecting on the experience they are providing. Each principle is defined and illustrated through examples of practice in each key stage. The new National Curriculum is consistent with these principles so they give a good indication of whether D&T in your department is heading in the right direction

The D&T National Curriculum 2014 – progression framework provides steps for progression in pupils' knowledge, understanding and skills. Age-related expectations have been developed for each key stage. These will help teachers plan projects which build on children's previous learning and ensure an appropriate level of challenge. The framework can also be used to formatively assess children's performance in D&T as they progress through school. With the removal of levels and level descriptors, schools are free to use their own approaches to formative assessment, to support pupil attainment and progression. The assessment framework should be built into the school curriculum, so that schools can check what pupils have learnt and whether they are on track to meet expectations at the end of the key stage.

Pupils' ability to design and make, together with evaluating skills and the development of technical knowledge, should be developed as a connected, coherent whole when they are designing and making products. Small tasks that concentrate on a single aspect only should only be used to inform larger designing and making tasks. Reference is made to an

'iterative' designing and making process. This relates to pupil's ideas being communicated and clarified through action. This is in contrast to a rigid design-make-evaluate process. Through an iterative process thought leads to action, resulting in further thought and action as pupils create their products.

Providing an opportunity for pupils to design and make starting from a range of contexts is an essential element of D&T. The list of contexts for each key stage, provide useful age appropriate examples but schools can add their own examples to fit their local circumstances.

How does 'cooking and nutrition' fit into D&T? The D&T Association's advice is that 'cooking and nutrition' should be linked with 'designing and making'. This means that as part of their food technology projects, pupils will apply the principles of healthy eating and nutrition and learn how to prepare dishes.

Finally it is worth considering the two-way relationship between the computing PoS and D&T. Learning control technology in D&T can fulfil some of the computer science in computing requirements. D&T provides tangible contexts for computer science through physical control and the development and application of knowledge and skills while addressing genuine design briefs. D&T makes learning experiences in computing authentic and meaningful.

We also know that the current review of GCSE and GCE D&T to be consulted on this summer is going to build on the new curriculum. These will be for first teaching in September 2016 so it is all the more important that we implement the changes at KS3 now.



at least year 7 pupils are on course to meet all the requirements by the time they reach the end of key stage 3.

Everything in the new curriculum is important. It is written very succinctly and packed tightly with curriculum content. To make sense of both the structure and text in the document we have published a number of resources that are freely downloadable from our website (data.org.uk). The resources are geared towards helping schools get to grips with the changes. Let's look at three of them:



Scan the QR code, left, with your smartphone or tablet and you can download the related files in this article.

Start with the annotated version of the programmes of study. **D&T National Curriculum 2014 – key messages, advice and explanatory notes for schools**. If ever you need to check what a word or a phrase means, this is the first place to look. It is

TOP TIPS FOR IMPLEMENTATION

- Spend time with colleagues discussing the purpose of study statement and aims and consider how well your current provision addresses them.
- Identify where you are providing real opportunities for pupils to design and make starting from a context rather than a set brief. Be honest and self critical.
- Consider where and how you are teaching designing skills and methods and encouraging an iterative approach.
- User-centred design is highlighted as important. Develop opportunities for pupils to work with clients in developing their designs.
- Use the free resource available at data.org.uk to help plan your school D&T curriculum and build in progression.

ABOUT THE AUTHOR



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