



# Secondary

## *National Strategy*

### for school improvement

Guidance

Curriculum  
and Standards

Additional support for  
using the Key Stage 3  
design and technology  
(D&T) Framework and  
training materials

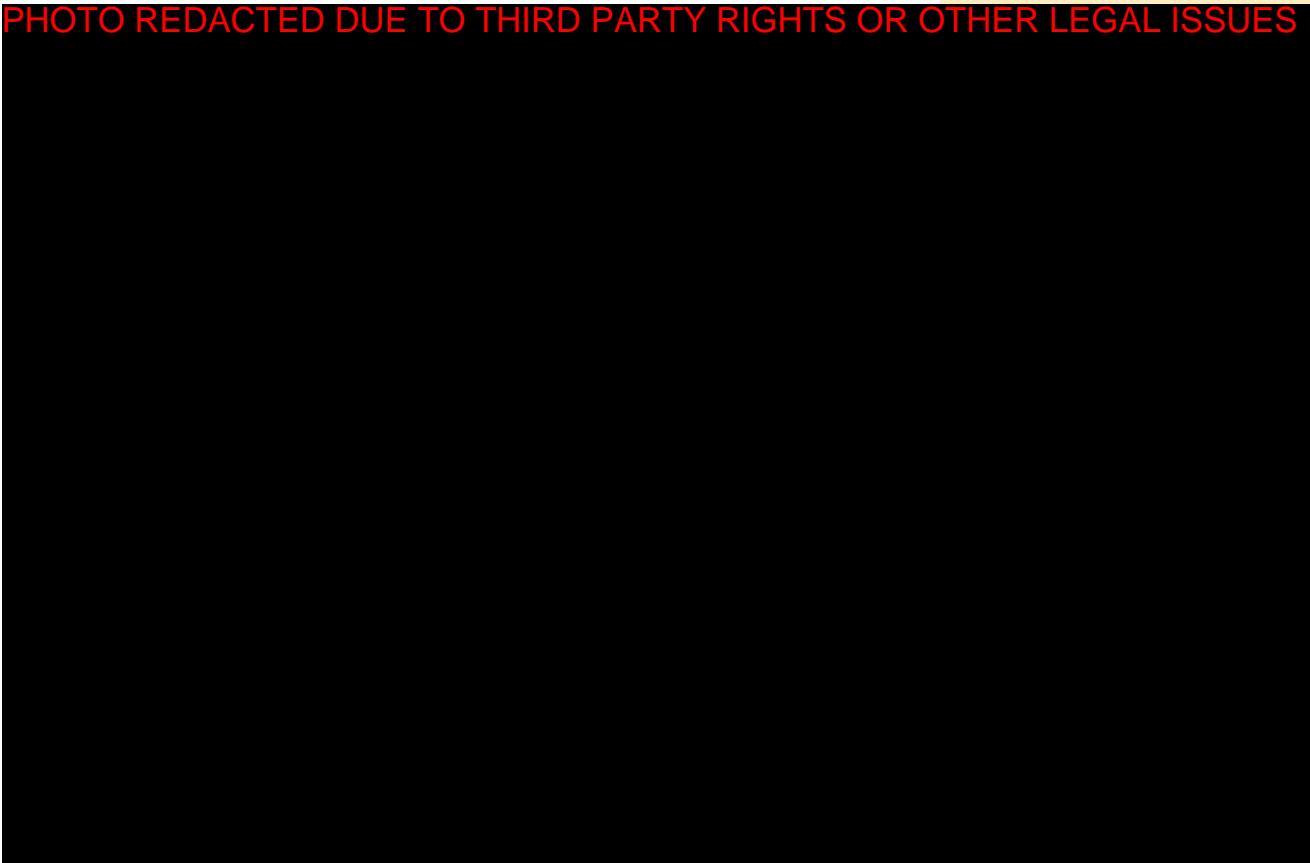
#### Teachers

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**Secondary**  
*National Strategy*  
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Additional support for using the Key Stage 3 design and technology (D&T) Framework and training materials

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# Introduction

The guidance in this leaflet is aimed at D&T subject leaders and teachers. The contents are drawn from pilot schools and D&T departments who have worked with the D&T Framework and materials since January 2005. The Secondary National Strategy has developed a range of complementary resources with subject-specific materials for D&T to support subject leaders in addressing a range of whole-school issues including:

## **Literacy and learning**

[http://www.standards.dfes.gov.uk/keystage3/downloads/ws\\_lal\\_dt066004.pdf](http://www.standards.dfes.gov.uk/keystage3/downloads/ws_lal_dt066004.pdf)

## **Assessment for learning**

[http://www.standards.dfes.gov.uk/keystage3/respub/afl\\_ws](http://www.standards.dfes.gov.uk/keystage3/respub/afl_ws)

## **Leading in Learning**

[http://www.standards.dfes.gov.uk/keystage3/downloads/ws\\_lil\\_ts003605slead.pdf](http://www.standards.dfes.gov.uk/keystage3/downloads/ws_lil_ts003605slead.pdf)

## **Learning styles**

[http://www.standards.dfes.gov.uk/keystage3/downloads/ks3learnstyle\\_dt038602a.pdf](http://www.standards.dfes.gov.uk/keystage3/downloads/ks3learnstyle_dt038602a.pdf)

## **ICT across the curriculum**

[http://www.standards.dfes.gov.uk/keystage3/downloads/ictac\\_dt018204.pdf](http://www.standards.dfes.gov.uk/keystage3/downloads/ictac_dt018204.pdf)

## **Coaching**

[http://www.standards.dfes.gov.uk/keystage3/downloads/afl\\_ws110005wkg\\_coa\\_afl.pdf](http://www.standards.dfes.gov.uk/keystage3/downloads/afl_ws110005wkg_coa_afl.pdf)

## **Teaching and learning**

[http://www.standards.dfes.gov.uk/keystage3/respub/sec\\_pptl0](http://www.standards.dfes.gov.uk/keystage3/respub/sec_pptl0)

## ***The guidance in this leaflet makes links to the D&T Framework and materials:***

<http://www.standards.dfes.gov.uk/keystage3/respub/design/foreword/>

enabling D&T subject leaders to use them to support developments in their departments and to contribute to school improvement priorities.

## The principles for school improvement

The principles for school improvement underpin the delivery of the Secondary National Strategy in schools. Working with the D&T Framework and materials encourages D&T teachers to apply these principles in their department and contribute to the school's improvement priorities.

School improvement principle	D&T departments using the D&T Framework and materials apply this as they:
Focus systematically on teaching and learning	audit the range of projects they offer to pupils at Key Stage 3 and consider how they provide the opportunity for pupils to learn the knowledge, skills and understanding outlined in the National Curriculum importance statement;
Base improvement activity on evidence about relative performance	focus routinely on evidence about D&T standards, progress, teaching, learning, assessment, leadership, management and resources;
Build collective ownership and develop leadership	have clear roles and responsibilities for delivering the D&T curriculum. They meet regularly as a team to develop aspects of teaching and learning across all material areas in D&T and link this closely to the school improvement priorities;
Involve collaboration with other organisations	regularly attend LA D&T subject leader network meetings and D&T subject association conferences. Contribute to LA and subject association best practice publications;
Create time for staff to learn together	secure support from school senior leadership teams to meet regularly together to pursue D&T priorities, actively learn with and from each other and reflect on the impact of new approaches on pupil learning;
Embed the improvement in the school's systems and practices	contribute to and draw from whole-school teaching and learning groups, school subject leader and coaching networks. Ensure that D&T developments complement whole-school improvement priorities.

## The guidance in this leaflet will help you to:

- ensure that the D&T curriculum offer is robust, coherent and has progression routes for developing key competencies that allow pupils to become more independent and creative thinkers;
- interpret and use those elements of the D&T Framework and other Strategy materials that will have the most impact and raise standards for pupils in D&T;
- improve the way in which you self-evaluate the teaching and learning in your department and input into the school's self-evaluation form (SEF) accurately and authoritatively;
- establish shared and high levels of expectations across your department and with your pupils, using a common vocabulary and consistent attitudes to designing and making.

## So that your pupils will be able to:

- become owners of their own D&T progress and partners in their learning and assessment;
- see clear routes for progression in their own D&T learning;
- communicate their design ideas effectively using a wide variety of methods;
- experience designing and making within a range of flexible contexts that interest and motivate them;
- benefit from practical D&T learning experiences that promote success and raise attainment;
- contribute innovatively and creatively, be open to ideas and critical reflection;
- work collaboratively in groups, sharing ideas, exploring possibilities and evaluating

- ideas and products;
- make sense of how technology impacts on the environment and society.

The following pages focus on five key questions to ask about your D&T department.

- Do all teachers and pupils share a common vision for D&T?
- Do all teachers collaborate regularly on reviewing and planning?
- Do all teachers plan for progression and do all pupils recognise how their learning in D&T is progressing?
- Do all teachers and pupils enjoy designing, do pupils know how good they are at designing and have a range of designing strategies they can use?
- Do all teachers and pupils understand how learning in Key Stage 3 D&T builds on Key Stage 2 and prepares for Key Stage 4?

The following pages provide a diagnostic tool for D&T subject leaders to use with departments to identify whether they are Focusing, Developing, Establishing or Enhancing D&T developments and consider what they might do to move forward. There are also some suggested resources to help you.

The progression statements are based on what teachers and pupils in D&T have said about the stages of progression they have experienced.

A common progression thread is that D&T teachers are:

- becoming more familiar with the designing strategies in D&T Module 4;
- working more collaboratively as a department;
- developing a language to talk about progression;
- trialling new practice with just one year group to start with before modifying their planning, projects and assessment strategies across Key Stage 3.

As a result, pupils:

- are becoming more involved with their own assessment and seeing clearer routes for progression in their own D&T learning.

As progress continues teachers are planning more together, especially at classroom level, and pupils are working more independently and creatively.

# Do all teachers and pupils share a common vision for D&T?

## Focusing

### **What teachers said**

I'm a food teacher and I'm not sure exactly what they cover in the other areas of technology in my school. We meet once a term mostly to deal with day-to-day issues such as budget and resources. We haven't shared much of our work recently, it can be difficult because we teach different things and I only have an hour to get a practical done.

### **What pupils said**

D&T is good, we do lots of practical work but I don't enjoy all of the theory – I don't really see the link between making things and the writing we do.

### **To move forward**

Work with the LA consultant, AST or lead professional to focus the next department meeting on teaching and learning in D&T

D&T Module 1

[http://www.standards.dfes.gov.uk/keystage3/downloads/dt\\_framework\\_097104\\_trm01.pdf](http://www.standards.dfes.gov.uk/keystage3/downloads/dt_framework_097104_trm01.pdf)

Design and technology association (DATA) subject leader guidance

[http://web.data.org.uk/data/secondary/subject\\_leader.php](http://web.data.org.uk/data/secondary/subject_leader.php)

## Developing

### **What teachers said**

As a department we worked through D&T Module 1. We found... as we talked about teaching and learning in D&T [that] we shared a significant number of phrases and key words, yet we weren't using them consistently in our day-to-day practice. We came to a common agreement about the language we would use with students and what our vision for the department should be.

### **What pupils said**

I've noticed that the same words have started to be displayed in all the technology rooms.

### **To move forward**

Carry out a pupil questionnaire to establish how pupils view the subject. Use the outcomes to share with your Strategy manager and to contribute to your departmental vision for D&T

D&T Module 1

[http://www.standards.dfes.gov.uk/keystage3/downloads/dt\\_framework\\_097104\\_trm01.pdf](http://www.standards.dfes.gov.uk/keystage3/downloads/dt_framework_097104_trm01.pdf)

## Establishing

### **What teachers said**

We've developed a 'corporate image' so that we have a common format for worksheets, displays, use of technical vocabulary and assessment sheets and criteria. It's made a real difference, it's cut our workload and made teaching easier and more enjoyable.

### **What pupils said**

All our worksheets and assessments use the same layout. It's great because all the teachers share success criteria with us and give us targets to achieve for the next unit of work. Technology has changed a bit and I can see how it fits into the wider world. I'm

much better at working in a team and independently, my dad said I'll be really good when I start work as you have to do that a lot.

### **To move forward**

Focus on one year group to develop a designing task, which involves analysing past and present communicating technology with a view to developing a product using smart materials

D&T Module 4

[http://www.standards.dfes.gov.uk/keystage3/downloads/dt\\_framework\\_097104\\_trm04.pdf](http://www.standards.dfes.gov.uk/keystage3/downloads/dt_framework_097104_trm04.pdf)

QCA Key Stage 3 D&T schemes of work

<http://www.standards.dfes.gov.uk/schemes3/?view=get>

## **Enhancing**

### **What teachers said**

We've developed our corporate identity in all aspects of the subject. We work collaboratively on developing our shared vision for D&T. We plan and teach collaboratively and share objectives across all D&T material areas. We are developing extracurricular activities to support our vision.

### **What pupils said**

I really enjoy D&T. We work in a variety of material areas and use the same skills. The projects are really interesting and teach us about new materials, technologies and skills. It's really going to help us in the future as we are developing independence and abilities to solve problems. Sometimes our projects don't always work the way we wanted, but it's okay as we can learn how to improve them for the future.

### **To move forward**

Make links with the whole-school agenda on the 14–19 curriculum

[http://web.data.org.uk/data/secondary/14-19\\_curr.php](http://web.data.org.uk/data/secondary/14-19_curr.php)

Coaching materials

[http://www.standards.dfes.gov.uk/keystage3/downloads/afl\\_ws110005wkg\\_coa\\_afl.pdf](http://www.standards.dfes.gov.uk/keystage3/downloads/afl_ws110005wkg_coa_afl.pdf)

Develop strategies for inducting new D&T staff and ITT trainees

# Do all teachers collaborate regularly on reviewing and planning?

## Focusing

### **What teachers said**

We rarely get Key Stage 2 information so Year 7 is skills based, we focus on improving [pupils'] making skills. In Years 8 and 9 we focus on preparing them for GCSE.

Last year I attended a D&T launch. We tried some interesting designing strategies; I need to find a way of showing other teachers in the department. I could ask the LA consultant to come and help us to use the materials.

### **What pupils said**

Home economics and CDT are my favourite subjects. I like making things to take home. I don't like theory work in D&T and I don't like drawing things because the teachers know what they want us to make.

### **To move forward**

D&T Module 4

[http://www.standards.dfes.gov.uk/keystage3/downloads/dt\\_framework\\_097104\\_trm04.pdf](http://www.standards.dfes.gov.uk/keystage3/downloads/dt_framework_097104_trm04.pdf)

*Pedagogy and Practice Key Messages leaflet (DfES 0125/2003)*

D&T Module 7

[http://www.standards.dfes.gov.uk/keystage3/downloads/dt\\_framework\\_097104\\_trm07.pdf](http://www.standards.dfes.gov.uk/keystage3/downloads/dt_framework_097104_trm07.pdf)

D&T Module 8

[http://www.standards.dfes.gov.uk/keystage3/downloads/dt\\_trm08\\_ohts.pdf](http://www.standards.dfes.gov.uk/keystage3/downloads/dt_trm08_ohts.pdf)

If you start using the strategies it will give a clearer idea of what the D&T audit is about and how it is addressed in lessons. This process also gives a common focus for the department to work together

## Developing

### **What teachers said**

We had already reviewed our scheme of work using the D&T audit and review which gave us ideas about what we are offering at KS 3.

The LA consultant provided an overview to the faculty of D&T Modules 1–4. It was useful to trial the designing strategies ourselves as it helped to build the team spirit. It inspired us to trial them with our Year 9 classes.

We used the overview to review progression across KS 3. We need to look at common transition between KS 2 and 3 and KS 3 and 4. At the end of the summer term we shared out Framework objectives into existing scheme of work for Year 7. We plan to review this at the end of the year.

### **What pupils said**

I have enjoyed D&T recently, we are clearer about what we are learning and we do designing activities together, our ideas are always better than what I come up with on my own.

### **To move forward**

D&T Module 2

[http://www.standards.dfes.gov.uk/keystage3/downloads/dt\\_framework\\_097104\\_trm02.pdf](http://www.standards.dfes.gov.uk/keystage3/downloads/dt_framework_097104_trm02.pdf)

D&T Module 3

[http://www.standards.dfes.gov.uk/keystage3/downloads/dt\\_framework\\_097104\\_trm03.pdf](http://www.standards.dfes.gov.uk/keystage3/downloads/dt_framework_097104_trm03.pdf)

Go into more detail than given in the initial overview. Come back to the audit at the end of the year when the language is more developed among all teachers.

*Pedagogy and Practice: Teaching and learning in secondary schools* Units 1 and 2, especially learning objectives and teaching models

[http://www.standards.dfes.gov.uk/keystage3/respub/sec\\_pptl0](http://www.standards.dfes.gov.uk/keystage3/respub/sec_pptl0)

D&T Module 4

[http://www.standards.dfes.gov.uk/keystage3/downloads/dt\\_framework\\_097104\\_trm04.pdf](http://www.standards.dfes.gov.uk/keystage3/downloads/dt_framework_097104_trm04.pdf)

Design and technology association (DATA) effective practice articles.

<http://web.data.org.uk>

## Establishing

### **What teachers said**

We realised that the D&T materials were describing what we already do at KS 4 and 5, but we have not tried these techniques at KS 3. We worked collaboratively to plan to launch and reinforce the Framework objectives in our existing Year 9 projects. We are basing pupil learning objectives on the Framework teaching objectives.

We have reviewed the impact on Year 9 and will repeat in Years 7 and 8. We have been using a common transition unit for the end of KS 3 and would like to work with our primary schools to develop an effective and common KS 2/3 transition unit.

Some teachers will start developing ideas for higher-order thinking in D&T so that pupils are achieving levels 7 and 8.

### **What pupils said**

Now when I go to food technology they know what we have done in resistant materials. I really understand what they mean when they talk about a specification. We used to answer lots of questions at the end of projects to evaluate our work, this time we did a ranking exercise and had to say why we put our products in that order.

I feel more involved in the assessment of my work. We have a front cover at the beginning of the project which tells us what we will be assessed on and each time we hand in work we get comments.

### **To move forward**

D&T Module 5

[http://www.standards.dfes.gov.uk/keystage3/downloads/dt\\_framework\\_097104\\_trm05.pdf](http://www.standards.dfes.gov.uk/keystage3/downloads/dt_framework_097104_trm05.pdf)

Leading in Learning

[http://www.standards.dfes.gov.uk/keystage3/downloads/ws\\_lil\\_ts003605slead.pdf](http://www.standards.dfes.gov.uk/keystage3/downloads/ws_lil_ts003605slead.pdf)

National Curriculum in Action website for standardised pieces of work

<http://www.ncaction.org.uk/subjects/design/index.htm>

## Enhancing

### **What teachers said**

We recognised that we were already doing many of the suggested ideas, we work collaboratively to plan units of work to ensure progression. We only need to focus on some aspects of the design process in each project. We have strong links with the university and so some of the designing ideas weren't new to us. Our headteacher actively promotes collaborative CPD and we have opportunities throughout the year to work together and with other schools.

Using the Framework has united the department in striving for success with pupils and has allowed all of us to take ownership rather than one person having to ask others to take on board their ideas.

### **What pupils said**

I really like D&T, I learn to work with other people and this makes my own work even better. Designing is really exciting, we are taught different strategies which we can use in all D&T subjects. Sometimes we are given a chance to be creative and develop whacky ideas together without having to worry about making them.

Now we seem to spend less time designing but get more done. We also model our ideas before we make them and I find that I make fewer mistakes in my final product.

We know what level we have achieved and help each other make progress to a higher level.

### **To move forward**

Coaching materials

[http://www.standards.dfes.gov.uk/keystage3/downloads/afl\\_ws110005wkg\\_coa\\_afl.pdf](http://www.standards.dfes.gov.uk/keystage3/downloads/afl_ws110005wkg_coa_afl.pdf)

Plan how to induct new teachers and teaching assistants

# Do all teachers plan for progression and do all pupils recognise how their learning in D&T is progressing?

## Focusing

### **What teachers said**

Our KS 3 scheme of work is a series of projects in each D&T material area. Each project has been carefully chosen because it delivers key making skills. On rotational courses it is hard to get progression over the three years, when you see each pupil for such a short space of time.

We rarely let pupils have a free rein over designing, as they do not have the knowledge to make their design ideas, the GCSE mark scheme allocates 60% to making so it's important to emphasise this early.

### **What pupils said**

I feel I am much better at making than designing, and I can see how my making skills have developed. I am able to use a range of materials, new equipment and CAM machines. I'm less confident at designing; I find it hard to keep coming up with new ideas because my first idea is usually my best!

### **To move forward**

D&T Module 2

[http://www.standards.dfes.gov.uk/keystage3/downloads/dt\\_framework\\_097104\\_trm02.pdf](http://www.standards.dfes.gov.uk/keystage3/downloads/dt_framework_097104_trm02.pdf)

D&T Module 3

[http://www.standards.dfes.gov.uk/keystage3/downloads/dt\\_framework\\_097104\\_trm03.pdf](http://www.standards.dfes.gov.uk/keystage3/downloads/dt_framework_097104_trm03.pdf)

D&T Module 4

[http://www.standards.dfes.gov.uk/keystage3/downloads/dt\\_framework\\_097104\\_trm04.pdf](http://www.standards.dfes.gov.uk/keystage3/downloads/dt_framework_097104_trm04.pdf)

Why consider these? Because if you start using the strategies it will give you a clearer idea of what the D&T audit is about and how it is addressed in lessons. This process also gives a common focus for the department to work together

## Developing

### **What teachers said**

Our LA consultant reviewed the projects in our scheme of work and we looked at the Framework of objectives for D&T.

We started by planning to the Framework for our Year 9 pupils. We allocated objectives to be taught in the different D&T material areas and looked at activities for designing.

We spent time discussing what it means to make progress over the key stage and how the projects and teaching might change from the start of the year to the end and from Year 7 to 9.

### **What pupils said**

In Year 9 we focus on learning just a few key things in each project, this is better, last year we tried to go through the whole design and make progress each time and the project felt rushed.

### **To move forward**

D&T Module 2

[http://www.standards.dfes.gov.uk/keystage3/downloads/dt\\_framework\\_097104\\_trm02.pdf](http://www.standards.dfes.gov.uk/keystage3/downloads/dt_framework_097104_trm02.pdf)

## Establishing

### **What teachers said**

We found from reviewing that there was a great deal of overlap of assessment in projects. We felt that pupils were confused by this assessment process and were trying to complete too much in each unit. We allocated each project two or three subskills of designing to teach and assess. We produced common assessment sheets at the start of each project so that teachers and the pupils were clear which subskills were to be assessed. Pupils are routinely given end of year targets.

### **What pupils said**

A lot of my work was similar to my last D&T project. Now my D&T teachers make it clear right from the start what the focus of the project is and which part is going to be assessed. We are given a target level, like in maths and English. I like working through projects now, it's much clearer.

### **To move forward**

Assessment for learning in D&T

[http://www.standards.dfes.gov.uk/keystage3/respub/afl\\_ws](http://www.standards.dfes.gov.uk/keystage3/respub/afl_ws)

Look especially at materials for self-assessment and peer assessment, curricular target setting and securing progression

## Enhancing

### **What teachers said**

We have worked hard as a department to create a comprehensive overview of Key Stage 3. We have also looked at Assessment for learning as a whole-school initiative and started to integrate this into schemes of work, particularly opportunities for developing oral and written feedback. We use data to plan collaboratively and focus teaching and learning in our classrooms. This helps us target pupils who are underachieving.

### **What pupils said**

My D&T teacher is really clear and concise about what each of us needs to learn during the lesson. I can also help set my own targets and for the project. I feel now that I can assess my friends' work as well.

### **To move forward**

Make links with the Key Stage 4 schemes of work

Coaching materials

[http://www.standards.dfes.gov.uk/keystage3/downloads/afl\\_ws110005wkg\\_coa\\_afl.pdf](http://www.standards.dfes.gov.uk/keystage3/downloads/afl_ws110005wkg_coa_afl.pdf)

Take part in a coaching conversation. This could mean working with someone outside the department to give a fresh view.

# Do all teachers and pupils enjoy designing, do pupils know how good they are at designing and have a range of designing strategies they can use?

## Focusing

### **What teachers said**

I'm not really sure how to teach designing, I give pupils time to create ideas, it's all about being creative but I'm not sure you can really teach that can you? Making is much easier to teach and that's really what D&T is all about isn't it?

### **What pupils said**

I think designing is really difficult – my teacher asks me to come up with six ideas but I know what I want to make after my first design.

### **To move forward**

D&T Module 4

[http://www.standards.dfes.gov.uk/keystage3/downloads/dt\\_framework\\_097104\\_trm04.pdf](http://www.standards.dfes.gov.uk/keystage3/downloads/dt_framework_097104_trm04.pdf)

D&T Module 6

[http://www.standards.dfes.gov.uk/keystage3/downloads/dt\\_framework\\_097104\\_trm06.pdf](http://www.standards.dfes.gov.uk/keystage3/downloads/dt_framework_097104_trm06.pdf)

Ask for AST or LA consultant support to use D&T Modules 4 and 6 to develop designing strategies and creativity with one year group

## Developing

### **What teachers said**

We were able to get two half-days from our D&T AST who demonstrated some of the designing strategies from D&T Module 4, as a department we agreed to trial these in our Year 7 lessons and feed back at our next faculty meeting.

### **What pupils said**

It's been so good in D&T this week; we designed a clock using recycled materials. We used a designing strategy called 'deconstruction'; it was really weird we were given an old fashioned alarm clock and a range of sea shells to inspire us with our designs – we came up with some really unusual ones.

### **To move forward**

D&T Module 4

[http://www.standards.dfes.gov.uk/keystage3/downloads/dt\\_framework\\_097104\\_trm04.pdf](http://www.standards.dfes.gov.uk/keystage3/downloads/dt_framework_097104_trm04.pdf)

D&T Module 6

[http://www.standards.dfes.gov.uk/keystage3/downloads/dt\\_framework\\_097104\\_trm06.pdf](http://www.standards.dfes.gov.uk/keystage3/downloads/dt_framework_097104_trm06.pdf)

Assessment for learning in D&T

[http://www.standards.dfes.gov.uk/keystage3/respub/afl\\_ws](http://www.standards.dfes.gov.uk/keystage3/respub/afl_ws)

Concentrate on objective-led lessons

Plan a specific Year 8 and Year 9 unit of work as a team incorporating strategies for designing and creativity

## **Establishing**

### **What teachers said**

Our faculty collaborated on developing work for KS 3, identifying teaching objectives for all our projects to ensure progression. We needed to modify our projects to make them appropriate. We selected designing strategies to deliver these.

We then used the Framework to develop learning objectives for pupils, and identified and reduced repetition.

### **What pupils said**

I now know and can use a number of designing strategies and can use the same strategy in food and resistant materials. It's better as we don't always have to write a brief or specification for every project, sometimes we concentrate on developing our ideas as the teacher gives a brief and specification.

### **To move forward**

Assessment for learning in D&T

[http://www.standards.dfes.gov.uk/keystage3/respub/afl\\_ws](http://www.standards.dfes.gov.uk/keystage3/respub/afl_ws)

Ask your school Strategy manager to help you work with the LA consultant

Concentrate on self-assessment and peer assessment, curricular target setting and securing progression

## **Enhancing**

### **What teachers said**

Our pupils have responded really well to the designing strategies, especially the boys, who like the way it provokes their thinking and helps them improve.

We are working to ensure that there is a common language across the department to aid transferable skills and develop independent learning. We are also working on developing our questioning skills and promoting effective dialogue in lessons.

### **What pupils said**

I can modify designing strategies depending on what I'm designing. I also work in a group sharing my ideas because this helps me to see how I can improve my ideas.

### **To move forward**

Literacy and learning: D&T

[http://www.standards.dfes.gov.uk/keystage3/downloads/ws\\_lal\\_dt066004.pdf](http://www.standards.dfes.gov.uk/keystage3/downloads/ws_lal_dt066004.pdf)

D&T Module 9

[http://www.standards.dfes.gov.uk/keystage3/downloads/dt\\_framework\\_097104\\_trm09.pdf](http://www.standards.dfes.gov.uk/keystage3/downloads/dt_framework_097104_trm09.pdf)

Assessment for learning in D&T

[http://www.standards.dfes.gov.uk/keystage3/respub/afl\\_ws](http://www.standards.dfes.gov.uk/keystage3/respub/afl_ws)

Concentrate on the questioning and dialogue module

# Do all teachers and pupils understand how their learning in Key Stage 3 D&T builds on Key Stage 2 and prepares for Key Stage 4?

## Focusing

### **What teachers said**

We have over 40 link primary schools. During the first few lessons of each project on the rotation the teacher shows pupils the basic tools and equipment and asks them to draw a health and safety poster for the room.

Our headteacher has asked us to look into baseline assessment, so we have started to investigate a task that we could set the pupils when they arrive in Year 7 to tell us their National Curriculum level.

### **What pupils said**

We didn't do much making in the first few weeks because we had to learn about the safety rules. We followed the teacher's design rather than come up with our own ideas.

### **To move forward**

D&T Module 5

[http://www.standards.dfes.gov.uk/keystage3/downloads/dt\\_framework\\_097104\\_trm05.pdf](http://www.standards.dfes.gov.uk/keystage3/downloads/dt_framework_097104_trm05.pdf)

QCA scheme of work transition unit Year 6/7

<http://www.standards.dfes.gov.uk/schemes3/?view=get>

## Developing

### **What teachers said**

We wanted to make sure that pupils were excited about D&T when they arrived. I visited a local link primary school and was surprised how the pupils worked collaboratively and independently on D&T projects they had chosen.

I thought that we should change our first Year 7 projects to be more like those they experienced in primary school and I invited some Year 6 pupils to come to use our food room in the summer term. I have also seen a D&T 'passport' system, where the pupils record their achievements in primary D&T and bring this to their new school.

### **What pupils said**

The D&T projects we do at our new school are quite different from my primary school. We work on our own projects to make things that we can take home.

### **To move forward**

D&T Module 5

[http://www.standards.dfes.gov.uk/keystage3/downloads/dt\\_framework\\_097104\\_trm05.pdf](http://www.standards.dfes.gov.uk/keystage3/downloads/dt_framework_097104_trm05.pdf)

D&T Module 4

[http://www.standards.dfes.gov.uk/keystage3/downloads/dt\\_framework\\_097104\\_trm04.pdf](http://www.standards.dfes.gov.uk/keystage3/downloads/dt_framework_097104_trm04.pdf)

*Pedagogy and Practice: Teaching and learning in secondary schools*

[http://www.standards.dfes.gov.uk/keystage3/respub/sec\\_pptl0](http://www.standards.dfes.gov.uk/keystage3/respub/sec_pptl0)

Concentrate on Units 10 and 11 on group work and active engagement techniques

## **Establishing**

### **What teachers said**

As a result of completing the D&T audit we wanted a transition project that was common to the whole department and that they would teach over the first few weeks of Year 7 to establish a baseline measure of D&T capability.

We wanted to give pupils a consistent message about D&T and what it is about. We planned the project as a team and based it around designing a chair; this collaborative planning supported some of the team who were working outside their material area.

### **What pupils said**

When I started the secondary school I had done very little D&T at my primary school. We worked through a D&T booklet with a cover sheet listing what we would learn. I could talk to my friend in a different class and compare what they were doing.

### **To move forward**

D&T Module 5

[http://www.standards.dfes.gov.uk/keystage3/downloads/dt\\_framework\\_097104\\_trm05.pdf](http://www.standards.dfes.gov.uk/keystage3/downloads/dt_framework_097104_trm05.pdf)

Assessment for learning in D&T

[http://www.standards.dfes.gov.uk/keystage3/respub/afl\\_ws](http://www.standards.dfes.gov.uk/keystage3/respub/afl_ws)

Concentrate on curricular target setting and securing progression units

Plan a D&T project that you can share with your link primary schools.

## **Enhancing**

### **What teachers said**

We wanted pupils coming to our school to have a similar D&T starting point that we could build on as soon as they started their D&T rotations.

We put together a pack for our link primary schools to use with all the worksheets and resources needed for a basic torch project. Key Stage 2 teachers worked through the project with the pupils over three weeks then we picked the pack up. We now find that pupils come to us in Year 7 with a more consistent basic knowledge and common understanding of D&T.

Having successfully built this up with Year 7 we are now looking at bridging units for Year 9 to prepare and encourage pupils to take D&T at GCSE.

### **What pupils said**

In Year 6 we made a small torch with our teacher and we put a display together. When I went to secondary school I did not feel that D&T was a new subject and was looking forward to making other projects where I could use some of the things I know about health and safety, using materials and tools and the design process.

### **To move forward**

D&T Module 5

[http://www.standards.dfes.gov.uk/keystage3/downloads/dt\\_framework\\_097104\\_trm05.pdf](http://www.standards.dfes.gov.uk/keystage3/downloads/dt_framework_097104_trm05.pdf)

Curriculum continuity

[http://www.standards.dfes.gov.uk/keystage3/downloads/ws\\_cur\\_cont011604.pdf](http://www.standards.dfes.gov.uk/keystage3/downloads/ws_cur_cont011604.pdf)

*Bridging plans: from Key Stage 3 to Key Stage 4 Design and technology (DfES 0116-2005 G)*

# **Additional ideas for activities from D&T departments working with the D&T Framework and materials over the past year**

- Resistant materials – Year 7: developing a ‘T’ puzzle project ‘make only’ for pupils to look at basic tools and introduction to materials (four-week project)
- Designing strategy ‘Access FM’ being used with a food technology GCSE group
- Textiles – Year 7: developing a juggling project using Module 4 activities
- Year 7 four-week foundation course where all material areas departments follow through one project looking at chairs
- Developing a new format for the scheme of work and sharing it between sessions on food technology and resistant materials in Year 7
- Year 7/8 project linking assessment strategies into the project and to the National Curriculum level ladders
- Detailed tracking of Year 7 pupils using the pupil achievement tracker (PAT) to determine additional support groups
- Three-week foundation course based on shoes for Year 7 pupils
- Four-week foundation course for Year 7 pupils based on measuring, design and health and safety
- Filming food technology practical demonstrations to be used as a resource for regular food demonstrations played through an interactive whiteboard
- Developing a ‘level wall’ of work to help support Year 9 pupils and teachers
- Developing a booklet and distributing it at a D&T network meeting to give guidance on ways to raise the attainment of boys in D&T, with some adapted activities from D&T Module 4
- Developing creative projects for Years 8 and 9 where the focus is more on designing than making and pupils make with modelling materials
- Developing assessment criteria for projects which are recorded on front covers to involve pupils in their assessment
- Developing very basic ‘level ladders’ which capture the essence of each National Curriculum D&T level in a few words to support the project specific criteria on the front covers
- Trialling the use of D&T Framework objectives and how to translate to learning objectives with Year 7

## **The following are selected comments from D&T subject leaders.**

- We have made extensive use of D&T Module 4 activities which results in all teachers saying that they are enjoying teaching more and that design ideas are more imaginative. Pupils are also more imaginative because they are not thinking too much about the consequences of their ideas but generating them quickly to evaluate later.
- All teachers in the department are new over last two years. Schemes of work are being trialled with LA consultant support for introducing new activities and focusing on learning. There is a planned review in the summer term to draw together ideas and plan for 2006–07.
- LA moderation activities have led to better understanding of National Curriculum D&T levels by teachers, pupils and parents/carers because the department has

gone on to use front covers, comment-only marking on specific focus areas and peer assessment. Assessment is more structured across the year and has cut down on staff marking loads. The front cover sheets have been circulated to other departments via the SLT as an exemplar way to involve pupils in assessment. These cover sheets are project specific not generic, so pupils know exactly what is expected of them – Year 9 are involved in writing the criteria.

- A D&T AST helped us create a new scheme of work for Year 9 where pupils are working in groups to design and not make, so that pupils are thinking at higher levels. Pupils are more creative and keen to modify their ideas than before. This work has really raised the profile of our department. Teachers feel ownership of the new changes and are in agreement regarding the success of the changes made. The D&T Key Stage 3 coordinator is now a leading teacher.
- Assessment criteria are shared more with pupils. It is difficult to make use of the volume of information available, but we are moving on all the time and we have more structure around which to plan our work. We use the D&T materials as a kind of dictionary, having had some initial input from the LA to know what is there we can dip into it as reference material. Our Year 9 mirror project continues to evolve, with pupils making more of their own decisions and teachers trialling activities and the outcomes and sharing resources.
- We developed a seven-week Year 8 scheme of work focusing on the designing strategies in D&T Module 4 to increase awareness and impact of improved designing for both teachers and pupils.
- Our whole department worked on developing a long-term plan with units of work of varying lengths. Time has been allocated for a transition unit in Year 7 which will be developed next academic year. A Year 8 seating project has been written by the NQT and LA consultant together with supporting material. This project includes a visit to the design museum which is planned for the end of the summer term. We have also trialled a Year 9 project focusing on the school environment and how it can be improved. This was taught by all teachers at the same time as challenge tasks. The response to this has been very positive. D&T AST support has also been involved in the review of existing schemes of work, which have been adapted as a result of the review.
- We reviewed our Key Stage 3 D&T provision, focused on Year 8 and a group has been selected who are trialling some of designing strategies. ACCESS FM, 4 x 4 and morphology have been trialled with success. Pupils can explain the designing process they have used. This will be followed up in the summer term to incorporate the use of D&T Framework objectives and supporting strategies for autumn 2006.
- Work has only just begun. Our school is a technology college. Some pupils are entered for early entry design and technology at GCSE level. The department are currently developing an enhancement programme for Year 9 to support their D&T capability. They have developed a transfer project for Year 7 pupils and trialled it this year.
- We were involved in the initial D&T pilot. We are now reviewing Year 7 and 8 groups as the next step and as our school is involved in the Assessment for learning whole-school initiative we are developing units of work in Year 9 which incorporate the use of self-assessment and peer assessment.
- We have a D&T AST as a member of the department who has reviewed our Key Stage 3 D&T provision. A mapping exercise has been completed detailing the learning that will take place in each unit of work. The mapping exercise has also incorporated literacy, numeracy and ICT links. The benefit of this method of working is that progression can be planned for. The learning objectives lead the pupils' learning, not the product they will make. We have also trialled designing strategies with pupils, with lots of success. We have increasingly been using modelling as a means to design products.

## Useful links to further resources

[http://www.standards.dfes.gov.uk/keystage3/downloads/dt\\_framework\\_097104.pdf](http://www.standards.dfes.gov.uk/keystage3/downloads/dt_framework_097104.pdf)  
[www.standards.dfes.gov.uk/schemes](http://www.standards.dfes.gov.uk/schemes)  
[www.naaidt.org.uk](http://www.naaidt.org.uk)  
[www.nc.uk.net](http://www.nc.uk.net)  
[www.ncaction.org.uk](http://www.ncaction.org.uk)  
[www.ncaction.org.uk/creativity](http://www.ncaction.org.uk/creativity)  
[www.nc.uk.net/ld](http://www.nc.uk.net/ld)  
[www.nc.uk.net/gt](http://www.nc.uk.net/gt)  
[www.web.data.org.uk](http://www.web.data.org.uk)  
[www.nc.uk.net \(click on Design and Technology\)](http://www.nc.uk.net (click on Design and Technology))  
[www.nc.uk.net \(click on ICT\)](http://www.nc.uk.net (click on ICT))  
[www.cornwall.gov.uk/education/dmc](http://www.cornwall.gov.uk/education/dmc)  
[www.cadinschools.org](http://www.cadinschools.org)  
[www.ectinschools.org](http://www.ectinschools.org)  
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