

SATIPS

Support and training in Prep, Primary and Senior Schools

Design
Technology

Editorial

Firstly, it's a huge delight and honour to be asked to help contribute and support the Design Technology broadsheet of the SATIPS. Thank you to Paul Jackson and Gary Brown for allowing me to share what we get up to at Bilton Grange, and I hope in turn to get you all thinking about this great subject!

To give you a brief background to my credentials, I was first taught CDT by my late Art Teacher Mrs Paddy Scott-Clarke and also my father, Mr Richard Tovey- Vice President of SATIPS, who didn't put me off! The seed was then sown and I wanted to learn and do more of this great subject. I went onto senior school and university where Design Technology was a major part of my schooling and degree. In 2000 I was appointed as a DT teacher at Bilton Grange and I have since enjoyed 15 wonderful years teaching and, I hope, inspiring the next generations of designers!

So now you know a bit about me, back to the department and more importantly what the pupils get up to in their DT lessons. We are a resistant materials department situated in the heart of the school, delivering DT to pupils from Year 3 through to Year 8. At the grass root level, we introduce pupils to the workshop and how to use hand-held tools safely and carefully working in a range of materials. At the senior end of the school, pupils love using a range of machines, tools and materials as well as using our CAD/ CAM room, in which we proudly have a Roland milling machine and Roland vinyl cutter linked to 2D design software. Our scholarship success over the years speaks for itself, with awards to many of the top senior schools that offer a DT scholarship; Rugby, Oakham, Bloxham, Malvern are a few of the schools to which awards have been gained. We continue to have excellent links with the DT departments at the senior schools. A recent initiative with Oakham has seen us borrow a laser cutter to use for half a term, which was great fun for pupils and staff alike!

Anyway that's enough writing for now, here are some photos of what our pupils have designed and manufactured over the last few terms to give

you all a snapshot of what we do. I look forward to hearing and seeing what you are all up to!

In a bid to help with logistics and offer our central location, it would be a pleasure to run and host a DT SATIPS training day at Bilton Grange. At this stage, I throw the door open to suggestions, topics and subjects of interest. I am also fully aware that, like me, many of us run departments of one and finding the right time is vital. An indication of when the best time of the year would be would also be very helpful. I can be contacted on: mgt@biltongrange.co.uk

I hope over the weeks, months and years ahead that we can really develop the DT SATIPS network and try and get more of us together to share good practice and promote excellence within our subject.

Mark G Tovey
Head of Design Technology
Bilton Grange Preparatory School, Rugby.

Inter-House Design Technology

Ever thought of having an Inter-house D and T competition?

I have just run a most successful one to coincide with Science and Technology Week. Here is an outline of how it works. I hope it will be useful for other heads of DT as it might inspire you to do something similar.


The Challenges

Each year group were given a challenge with a fixed set of materials, time frame and clear success criteria. Each class's time frame allowed for public testing at the end of the lesson and points were awarded.

Year 3: Task, Materials and Success Criteria

Make a tool which draws with the largest number of pens at one time when operated by one person.

Materials

- Wood strip
- Masking tape
- Pens
- Cardboard 

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Success Criteria

- Each house will submit their best design. I will draw with each writing tool in exactly the same way.
- The house whose tool draws the most lines wins 4 points, the next largest number of lines wins 3 points etc.

Year 4: Task, Materials and Success Criteria

- Start with 60g of plasticine, make a boat to carry the largest number of penny weights without sinking.
- Sharing plasticine is against the rules, 60g per boat.

Materials

- plasticine
 - Penny weights
 - Bowl of water for testing
- #### Success Criteria
- Each house submits their best boat which will be tested; we will record the weight it can hold.
 - The house whose boat held the heaviest weight wins 4 points, the next heaviest wins 3 points etc.

Year 5: Task, Materials and Success Criteria

Design a tool to draw circles of many sizes as accurately as possible.

Materials and Tools

- Square section wood
- Pens / pencils
- Masking tape
- String
- Drawing pins
- Large card sheet
- Dowel
- Sandpaper
- Hacksaws
- Scissors
- Bench hooks

Success Criteria

- Each house will submit their best design for testing.
- 1 mark (up to a total of 5) for number of circle sizes it is possible to draw.
- Up to 5 marks for the quality of the circle drawn.
- Up to 5 marks for ease of use.

Year 6: Task, Materials and Success Criteria

Using a tabloid newspaper, build a bridge of a span of 1 metre to hold the largest load possible.

Materials and Tools

- 1 newspaper per house
- 1 new role of masking tape per house
- Metre ruler for checking length

Success Criteria

- Each bridge will be piled evenly with weights, we will record the weight it can hold.
- The house whose bridge held the heaviest weight wins 4 points, the next heaviest wins 3 points etc.

Promoting life skills within the house system

The competition led to excellent co-operation between pupils within houses, it also fostered great communication across year groups within the same house. King's Hawford has 2 classes in each year group. It would have been impossible to ensure that pupils did not let their friends in other classes but in the same year group, know what challenge was coming up. I therefore made a virtue of this potential problem by encouraging the children to explain to their mates in other classes what they had learnt from the task set. Because the success of each challenge depended on manual dexterity as well as understanding, this did not spoil the second class's fun. Students in all houses had the same opportunity to communicate, so the small advantage gained by being able to think through a problem in advance favoured those houses with good communicators as well as skilful designers!

Share your Ideas

It has been such a successful competition, that I am going to run it again next year with different activities. Does anyone else out there run a similar competition and can you think of further suitable short activities? You can contact me directly with suggestions at kturk@ksw.org.uk.

Kathy Turk.

Year five Soup Project

This project is the food technology element of Year Five's DT syllabus at Ipswich Prep School. The children learn about the importance of eating 'five a day' as part of a healthy diet as an element of our Healthy School policy and consolidate the knowledge they have gained in Science lessons about the role of vitamins and fibre in maintaining health. They try out a variety of commercial packet soups and evaluate them on their appearance, flavour and nutritional value. Following this they learn how to prepare a variety of vegetables using safe procedures (and utensils such as graters, peelers and sharp knives) before drawing up their own ideas of the ingredients that would combine to make a healthy and tasty vegetable soup.

This year I had the idea of liaising with our Catering Manager, who willingly agreed to become involved and to judge the finished recipes on their merits. The children were therefore asked to work in groups to make a nutritious, tasty soup to be served at lunch time in the school dining hall. Their ingredients lists and 'Plan of Action' documents were passed on to the school kitchen in order for them to make their selection.

The children thoroughly enjoyed these activities. Groups worked sensibly together and during each Year Five practical lesson six different pans of soup were produced by classes of twenty-two. This would not have been possible without our dedicated Teaching Assistants! We thought that tasting our soups would be the highlight of the project until we learned that the catering staff were actually going to recreate their five favourite recipes over the course of a week!

Tallulah (Y5) said of Monday's 'Broccoli and Potato Surprise' "This is the most delicious soup I have ever tasted!" and Philip said of Tuesday's 'Chunky Carrot and Noodle' "This is fantastic!" Each day brought new surprises as different groups learned that their soups had been selected.

I can't thank the catering staff enough for their co-operation. This was a fun project and many children who were previously unwilling to eat soup have now made it a regular part of their diets.

Amanda Warren

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Name:

Class:

Date:

Evaluating instant soups

Brand and variety	Appearance	Aroma	Texture/consistency	Flavour	Other comments

My favourite was number

Because

Name:

Class:

Health and Safety in the Kitchen

Write up to three health and safety rules for using the following equipment:

A box grater

A saucepan on an electric hob

A sharp knife and a chopping board

Choose one of these options and design a poster to demonstrate how to use the equipment safely!