



The termly newspaper for the *Open Futures Network*

openit

7



The problem solving issue

openit 7 – Summer term 2013

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What is problem based learning?

Does this sound familiar? “It Increases motivation and the integration of knowledge. It puts the child at the centre of their own learning and it encourages authentic learning and the ability to transfer knowledge across subjects?”



These are some of the advantages of Problem-Based Learning (PBL) observed in classrooms by Graham Parton from Leeds

Metropolitan University. His findings are almost identical to comments made by teachers about the impact of *Open Futures*.

We asked Graham to tell us more about PBL and how it can enhance children’s learning within *Open Futures*.

Problems

There are a never-ending number of problems and issues that can be presented to children or that children can generate themselves. A problem-based learning encounter typically begins with an authentic problem, without prior preparation by the children. Examples of problems could be:

- Why is it snowing in summer? – issues include global climate change and its impact on the environment.
- What do I need to do to become an Olympic athlete? – issues include health, diet, fitness, participation, class, gender.

“Being stuck can result in learning experiences that are transferrable and memorable.”

- Why are people starving? – issues include global poverty, wealth, war, power.

Solutions

Working in groups of 4 or 5, pupils make sense of the problem and ultimately begin to understand the complexity of the issues by working through the following four stages.

1. They collaborate with each other to explore their existing knowledge as it relates to the problem.
2. They work with the problem in a way that permits their ability to reason and apply knowledge to be challenged and evaluated appropriate to their level of learning.
3. They build on skills of enquiry and reason in order to present a grounded representation of the issues contained in the problem.
4. They propose reasoned arguments and recommendations concerning the real-life problems.

Being stuck

A central concept of problem-based learning is the powerful learning experience that can result in children becoming stuck. I use the word ‘stuck’ to mean where there is a mismatch between a child’s knowledge of an issue and a competing understanding or viewpoint. This mismatch can lead to a passage of time where the child wrestles with this problem. Rather than seeing this mismatch as a negative process it is an integral part of learning and one that should be encouraged and incorporated into the curriculum. If dealt with correctly by the teacher and sufficient support is given to the children, ‘being stuck’ can result in transformative learning experiences that are transferrable and memorable. This does, however, provide a mismatch between traditional notions of learning which sees the idea of being stuck as negative and one which teachers should seek to avoid in children’s learning.

More

I hope this condensed and brief account on how problem-based learning can be used to transform children’s learning using authentic and meaningful problems has provided a feeling of “I would like to know more about this”.

I am looking forward to exploring more about PBL at the *Open Futures* conference on Thursday 20th June in Loughborough.

Graham Parton
Principal Lecturer, School of Education and Childhood
Leeds Metropolitan University

Welcome to openit

Welcome to issue 7 of *openit* – the newspaper that supports learning and teaching through the *Open Futures* curriculum approach.



Hello again to all our *Open Futures* schools and to those of you who enjoy reading our termly newspaper with lesson ideas ready to be put into practice in the classroom.

This edition of '*openit*' is focussed on problem based learning and how the *Open Futures* four strands (*askit*, *growit*, *cookit* and *filmit*) can provide opportunities which will help children develop and practice their problem solving skills alongside the core aims of the national curriculum. Problem based learning activities provide a safe environment in which a child can look beyond the problem, ask questions and then find solutions. Have a look at our 'strand' pages, which are full of suggestions and demonstrate scenarios, which can be used in classrooms to develop children's abilities.

We've also included a summary of the Cambridge Primary Review Trust's response to the DfE on the draft National Curriculum proposals, which we hope you will find useful. Please do send Bob Pavard your comments. If you wish to share your views, you'll find his email address at the bottom of page 16.

The Andy Cameron filmit Award

We've included the details of the *Andy Cameron filmit Award* again for those of you who would like to enter the competition. We've added a new channel on the *filmit* website specifically for competition entries.

See page 3 for another exciting activity going on in 5 of our *Open Futures* schools – the Shakespeare Schools Festival, watch out for further updates in forthcoming editions of *openit*.

We hope you enjoy this edition of *openit* and we'd love to hear from you with suggestions on topics you would like to see covered in future issues. Please do contact us at hello@openfutures.com.

Lucy O'Rorke
Trust Director
June 2013

About Open Futures

'Raising attainment through bringing learning to life'

Open Futures is a schools' curriculum programme that brings learning to life for young children. It champions a fundamental shift in how the National Curriculum is delivered, by re-focusing education on intuitive approaches that ignite children's passion for learning. The programme inspires children through purposeful activities that develop practical skills and enquiring minds – awakening confidence, instilling responsibility and sparking the desire to get the most from their education and transform their prospects in life.

Open Futures focuses on four strands – thinking skills (*askit*), horticulture (*growit*), food (*cookit*) and new media (*filmit*) – which support learning across the National Curriculum, including fundamental skills in maths, English, science and information and communication technology (ICT). It gives schools a unique framework to create interesting and valuable experiences that greatly improve pupils' ability to concentrate, absorb what they are taught and play an active role in their learning.

If you are interested in finding out more about how to become an *Open Futures School* or would like to hear more about the programme please phone us on **01235 533131** or email us at hello@openfutures.com

openit

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Malcolm Garrett, IMAGES&Co – design
John Storey – editor
Gilly Gawthorne – production
Newspaper Club – printer

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The Open Futures Trust

The *Open Futures Trust* is a registered charity No 1136095



Open Futures was initiated and is generously supported by the Helen Hamlyn Trust

Communities of Enquiry
SAPERE



When you have finished with this newspaper, please pass it on to your colleagues and then recycle it.

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STOP PRESS

Partnership conference

We are looking forward to welcoming all of our Partnership Schools to a 'Celebration and Preparation' conference on 19th and 20th June in Loughborough.

The programme will include two themes developed in this edition of *openit*:

- Problem-Based Learning and
- The role of Centres of Excellence in the dissemination of *Open Futures*

Places at this conference are limited to our Partnership colleagues. However for the many *Open Futures* schools who will not be attending, the conference will be fully reported in the next edition of *openit*.

In *openit 8* we hope also to include details of future *Open Futures* National Conferences and bring you news of our exciting forthcoming CPD Programme.

Why did my school get openit?

This might be because your school is in, or close to, Birmingham, Hull, Manchester or Newham where the *Open Futures* Trust is currently sponsoring a Curriculum Development Partnership initiative.

If you're interested in hearing more about the partnership, or wish to explore ways of introducing the *Open Futures* Skills and Enquiry Learning Programme into your school, either visit www.openfutures.com or email hello@openfutures.com.

Open Futures in the news

Read-it, rehearse-it, act-it and film-it



“Speak the speech, I pray you, as I pronounced it to you, trippingly on the tongue” – Hamlet Act 3, Scene 2

Shakespeare Schools Festival

Groups of pupils in five *Open Futures* schools are now well underway preparing to participate in the Shakespeare Schools Festival.

Progress in each school is being recorded as a production diary by a *filmit* team of five pupils.

Details about the productions, names of the schools, plays performance venues and dates are now available.

Regular updates about each school’s progress towards the performance date will be available on the *filmit* website, along with related materials and teaching resources created by teachers and pupils in the five schools.

These *Open Futures* schools now have an opportunity

School	Play	Venue	Performance date
St John the Baptist C of E Primary School	The Tempest	Roedean Theatre, Brighton	24th October 2013
Tangmere Academy	A Midsummer Night’s Dream	Alexandra Theatre, Bognor Regis	7th November 2013
Crigglestone St James CE Primary Academy	Much Ado About Nothing	Theatre Royal, Wakefield	21st October 2013
Crigglestone St James CE Primary Academy	Much Ado About Nothing	The Montgomery Art Centre, Sheffield	15th November 2013
Towngate Primary School	Macbeth	Theatre Royal, Wakefield	22nd October 2013
Southdale C of E Junior School	Macbeth	Theatre Royal, Wakefield	21st October 2013

of joining over 100,000 8 – 18 year olds who, with the help of Shakespeare Schools Festival Charity, have performed abridged Shakespearian plays for their family

and friends in professional theatres around the country. SSF provides the scripts, resources, framework and workshops for teachers which equip them with the tools to engage whole classes, stretching the gifted and talented and giving SEN and disengaged pupils opportunities for effective learning, offering everyone the chance to reach their potential and represent their school in the community.

Through experiencing the festival,

teachers and pupils alike can gain confidence and skills to tackle both the language and production of Shakespeare’s most exciting plays.

The Andy Cameron filmit Award 2014 is open for entries

“Atlantic Productions is proud to support the extraordinary work of *filmit* in helping to develop budding young filmmakers in Britain and around the World to become the next generation of story-tellers.”

ANTHONY GEFFEN
CEO, Atlantic Productions

It’s all about telling stories ... *The Andy Cameron filmit Award* celebrates children telling and sharing their stories, through film and animation, with other children in schools right across England and India.

Andy Cameron was a designer and educator fascinated by media and its effect on people’s lives and the arts. From a career as a photographer he found himself teaching in a south London school when the first BBC Micros arrived in the classroom. In the late 1990s he set up the Hypermedia Research Centre at the University of Westminster, going on to contribute to the international understanding and application of the ‘New Media’. He co-founded the influential Antrom collective; lead Fabrica (Benetton’s Communication Research Centre) and worked at the intersection of the arts, advertising and self expression online.

Enthralled by what the advent of new technologies and creative opportunities meant for the general

public he explored many avenues in the fields of interactive art and design and *filmit* was one such project – putting cameras into the hands of children and providing a platform for their stories to be shared and *The Andy Cameron filmit Award* celebrates his life.

The competition provides an annual focus and inspiration to celebrate children making films, children’s creativity and children’s voices.

There will be a top level judging panel including people from the film and TV industry and we’ll have great prizes for winners and runners up.

Film entries can be in whatever style or genre you want them to be but they need to be short films maximum length 3 minutes. There is no minimum length!

They can be short live action films, animations, drama, documentaries, a ‘How to’ video, a talking heads film ... your challenge is to find the style that suits your story!

**Don’t THROW-IT!
Care-for-it, Fix-it, Save-It,
or Make Something Else With It**

This year’s theme

Do you have something really special that you care for, that is at risk or broken. What will you do to care for it?

How will you find a way to fix it? Will you save it or can you do something else with it?

It might be an object like a special toy or a building, a special friendship, a favourite bird or a custom or festival that is meaningful to you. It could be real or imaginary. The only guide for your film is that your story should demonstrate how you cared for it and solved the problem.

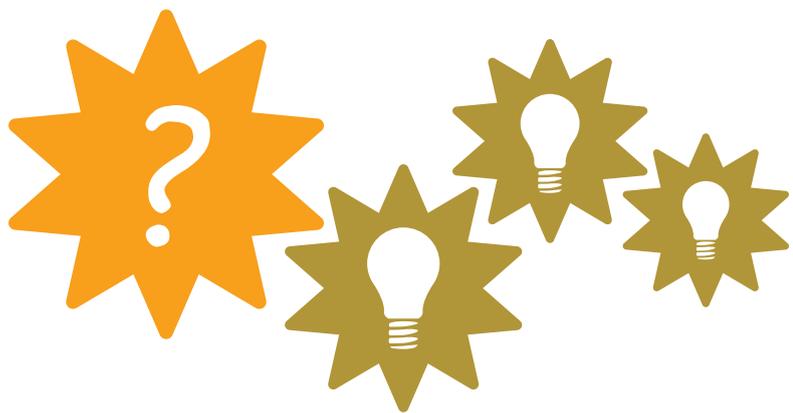
The children will find their own compelling, imaginative ideas and work them into 3 minutes of fabulous cinematic originality so the pressure is off for the teachers!

Films should be submitted online via the **filmit website** before the end of **February 2014**. There is now a new channel dedicated to entries for the competition, entitled **The Andy Cameron Award**.

Winners will be announced before **Easter 2014**. There is no limit to the number of entries each school can submit. If you are interested in entering email hello@openfutures.com to register your interest.

Full details, including age categories and deadline dates, will be sent to you soon.

**Let’s get this award off to a flying start
WE WANT TO SEE LOTS OF ENTRIES!**



askit & problem solving

Nick Chandley, *askit* trainer, demonstrates how children are good at solving problems which mean something to them.

Einstein was reported as saying that if he had an hour to solve a problem, he'd spend fifty-five minutes defining it and five minutes solving it. Just in the same way the best decorators spend most of their time preparing the surface for decoration, making the finished job of much higher quality, we need to try and instil in our children the need to really consider the problem before rushing to answer it.

Real life

The subject that immediately comes to mind when thinking of problem solving is maths, where it's not sufficient to be the best in the class at times tables as success comes in being able to answer 'real life' problems. Not all problems in life are maths problems though and here's a strategy that was first introduced to me when I did some work with the wonderful Lorraine Harrison and which I've adapted to philosophical enquiry and pretty much every other curriculum area and age group. It encourages children to work together in solving many different problems they encounter when building an 'imaginary community', all linked to real life and all helping to develop an analytical approach that will inevitably feed into their problem solving in maths.

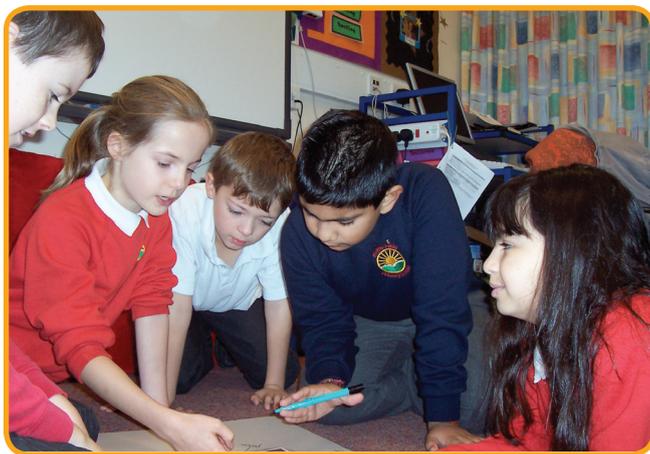
Ideas

Our community could take many forms – a Victorian workhouse, a Viking longship, a park of some kind – but

for purposes of illustration, let's keep things relevant to the time of year and create a seaside community. In terms of resourcing, this preliminary lesson couldn't be easier – just draw a line on the board like this:



This is your coastline and to start with, ask the children, in groups, to discuss the kind of things you'd find at the seaside. Once you've re-grouped and made a list, you'll need to discuss what would be reasonable and agree on a final list of things – hotels, cafes, car parks, fish & chip



shops maybe – then their first problem comes along; what would be the best position for all these things – and why? This could be your first foray into the whole-class circle, drawing upon all the strategies we know so well in *askit* – building on each others' ideas and agreeing or disagreeing respectfully. For example, would it be better to have an ice cream van or an ice cream shop? What would be the advantages/disadvantages of each? Can we make a judgment?

Critical testing

This would be a good time to explicitly discuss with the children how they're using the problem solving strategy of Einstein – defining the problem then solving the problem. How are they defining the problem? They're gaining a range of ideas and breaking the problem down into smaller units, identifying similarities and differences between them and which are more or less important. Notice the links here to how we might approach problems in maths. How are they solving the problem? They're making a democratic judgment based on the evidence and opinions gained through research & discussion and through critically testing each possible solution.



“They're making a democratic judgment based on the evidence and opinions gained through research and discussion and through critically testing each possible solution.”

Next challenge

At the end of this session, the aim would be to have a plan roughly drawn out for your class imaginary community, which either the children could record or you could simply have on the board. By this stage, the children tend to be really engaged and certainly ready for their next challenge – to take charge of various establishments in their newly-created town. It's at this point where the project can really take off, with curriculum subjects drawn in and maybe even with the children taking on different names as they adopt

their varied roles. English and maths could abound as children write letters, diaries, and leaflets and work with money, measures and masses of number work. The town could be made in 3D, mapped out, decorated with appropriate plants & trees (*growit*), have a theme tune & its own TV broadcasts (*filmit*) and maybe even known for its interesting regional foods (*cookit*). The fact that this is all generated by the children means that you will be accompanying each other on an incredibly creative journey – but let's not forget our problem solving!

Problems will crop up all the time, especially if prompted by you. You could, for example, issue the children with notices like these:

- A foreign tour company has asked if they can bring 3,000 tourists for a weekend stay. Can we cope or should we turn them away?
- The Met Office has just issued a weather warning for freak weather – deep snow for the whole of the busiest period in summer.
- As part of an environmental campaign, the government has decreed that each property can only have electricity for 6 hours per day.

Contrived problems

You could also capitalise on the children's engagement by regularly (even subliminally!) setting them maths problems related to their community as it develops. For example, they're more likely to want to work out correct amounts of ingredients if it's their own café and a mistake might affect their profit. As they work through these problems together, *askit*-style, they'll become more adept at tackling the more, dare I say it, contrived problems they see quite often in maths.

Rewarding project

Space dictates that this can only serve to give you a flavour of what has always been for me an incredibly rewarding project that has regularly shown me how good children actually are at solving problems when they mean something to them.

We should remember too that there will inevitably be times when children will sit in silence, wrestling with a problem on a test paper, but as Vygotsky said, what a child can do in co-operation today, he can do alone tomorrow.



askit can be successfully used by adults for problems solving as shown here - headteachers at the national conference July 2012



Problem solving

Children enjoy solving problems and as Graham Parton reminds us (front page) 'There are a never-ending number of problems . . . that children can generate themselves'.

These can range from riddles to jokes to big serious, difficult-to-answer questions. All have the potential to engage, amuse and challenge young minds. All stimulate research and thinking which can lead children to have more confidence in conversation and more control over their own learning.

We asked a small group of children to pose some interesting problems for each other. They admitted that some were difficult, maybe impossible, but they were willing as a group to explore some possible answers.

Here are a few of their questions:

- How many people are there in the world? If more babies are born each year and fewer people die, when will the world be full?
- How can a pig farmer who has very little land fit more pigs on the farm?
- Egyptian Pharaohs were buried with all their possessions and their bodies were prepared for a journey to the next world. How do we know if they got there?
- Can you name three types of birds and two mammals that Moses took onto the Ark?
- The maker does not need it. The buyer does not use it. The user uses it without knowing, what is it?
- How can you transport a wine glass and a balloon six metres across a room without touching the wine glass?

We invite you to send any interesting problems posed by children to:

john.storey@openfutures.com and we will publish a selection in the next edition of *openit*

(Rosie, Jacob and Anoushka supplied the problems; answers are NOT printed on another page)



growit & problem solving

Anne Gunning, of the Royal Horticultural Society explains how learning across the curriculum can be enhanced by finding solutions to common garden problems involving diseases, pests and vandals.

When your sweet corn disappears or your cabbages are reduced to stalks how do we find out the culprit and how do we prevent it happening in the future? The problem with a garden is that anyone or anything can get into it, be that rain, Mr McGregor's rabbit, slugs or the two legged pest, otherwise known as the human vegetable destroyer or unauthorised harvester.

To problem solve in the garden there has to be a problem to start with!

A child's idea of a problem in the garden may be completely different to that of an adult. They will be delighted to discover cabbage white caterpillars on cabbages and aphids feasting on broad bean tips.

One child asked, "Why are you pulling up that lovely dandelion – it's so beautiful and the bee likes it, you're taking away its food!" So to be able to problem solve in the garden there has to be a problem to start with. It gives us the opportunity to problem solve when things go wrong.

A perfect school garden with no slug holes in any crops is something we can aspire to, but pest, disease and weed problems encountered along our gardening journey can generate many interesting investigations and scientific enquiries, as well as enriching curriculum topics such as bio-diversity, mini-beasts, habitats, food chains and plant and animal life cycles.

“What to do with the slugs will generate all sorts of ideas and emotions.”

Here are four problems which children will enjoy discussing, researching and solving:

1. How can we protect our broad bean crop from 'BLACKFLY'?
2. How can we protect our garden from TWO-LEGGED PESTS?
3. How can we protect young seedlings from SLUGS AND SNAILS?
4. How can we protect our potatoes from POTATO BLIGHT?



Studying mini-beasts



Ladybird Larva photographed by Bob Peterson and published on Wikimedia Common

Some solutions and learning opportunities

Problem 1 – How can we protect our broad bean crop from 'Blackfly'?



Black bean aphid on broad bean shoot

The children were intrigued to discover the broad bean shoot tips were covered in blackfly (Black bean aphids). Closer inspection found ladybirds and ants; What are they all doing there they wondered? The fascinating world of ants milking the aphids for their honey dew (which they eat) was revealed. In return they protect the

aphids from predators such as ladybirds who find aphids delicious.

We did not see any ladybird larvae but if we had, we could have learnt about another example of complete metamorphosis, like the butterfly life cycle. Ladybird larvae are beneficial insects in the garden as they can eat even more aphids than when they are an adult ladybird.

If you want to prevent or solve the problem make sure you pinch out the growing tip once the first pods have started to form as the aphids only feed on the tender young shoots. These shoots can be lightly steamed and eaten.

For more advice see:

www.rhs.org.uk/Children/For-families/Grow-it!/Broad-beans



Problem 2 – How can we protect our garden from Two-legged Pests?

In public spaces there is always a worry about vandalism and theft. Although this can be a problem, experience has found that the problem is not as common place as we feared. Careful planning of where to site the garden is the key factor. Aside from all the horticultural requirements such as a sunny sheltered aspect, we can ask how can we make the garden less appealing to this ubiquitous pest? The children will have some great ideas here are a few tips to add to their solutions:



Cabbages protected against predators by netting

- Make access as difficult as possible with enclosed fencing.
- Harvest as soon as crops are ready.
- Is it best to be exposed or enclosed? Plots which are exposed to public view are less tempting as a place to hang out and get up to mischief. However one school in Birmingham was well hidden but after the council thinned the trees next to a busy road, the trouble stopped.
- Keep the plot tidy. An untidy plot says we don't care.
- Make lots of hand written signs to show that the children are actively using the garden.



Colourful signage warning that the garden is used regularly



Make a scarecrow demonstrating regular usage and to deter birds

- Develop strong community links and invite local people to purchase home grown organic crops.
- To deter contractors from mowing over newly planted wild life hedgerows display lots of large colourful signs or a make barrier of large rocks painted white.

Problem 3 – How can we protect young seedlings from Slugs and Snails?

Last year the slugs and snails had the perfect weather conditions for survival and multiplication. Slimy trails and ragged leaves were the tell tail signs when we looked for 'Who Dunit'. Unlike other pests these nocturnal molluscs are not so fussy about their food and will eat anything which is young and fresh – young seedlings are a favourite. At one school this was an opportunity for some scientific investigation. We planted some lettuce which had been grown in pots and then surrounded each plant with a ring of broken egg shells, gravel and wool pellets.

The children decided how to make the investigation fair and considered other factors which may influence the results. They even remembered to include a control lettuce with no barrier surrounding it. They made posters to tell other visitors to the garden what was happening. They found that although the control was eaten first, the others soon followed.



How to tackle the problem organically? Study slug habitats, make one they will retire to at the end of a busy night and then relocate them during the day – or feed them to the birds. What to do with the slugs will generate all sorts of ideas and emotions.



An old picture frame with copper tape around it. Simon the snail was place in the centre. Did the copper tape deter him – no he slithered along it, unhindered.

For more information see:

<http://www.rhs.org.uk/Gardening/Grow-Your-Own/Veg-A-to-Z/Lettuce>



Problem 4 – How can we protect our potatoes from Potato Blight?

Diseases are more of a hidden problem in the garden as many are caused by micro-organisms which are too small to be seen by the naked eye. If you plant first early varieties which are listed as blight resistant (Sarpò Range) you may avoid blight, a fungal disease causing rapid death of foliage. Just like athlete's foot, fungal diseases thrive in damp conditions, so one way to prevent the problem is correct watering technique. Potatoes should be watered at the base, directly onto the soil and not over the foliage as the dormant spores will quickly penetrate the leaves. Also make sure there is adequate drainage if growing in pots so the soil does not remain wet for long periods.

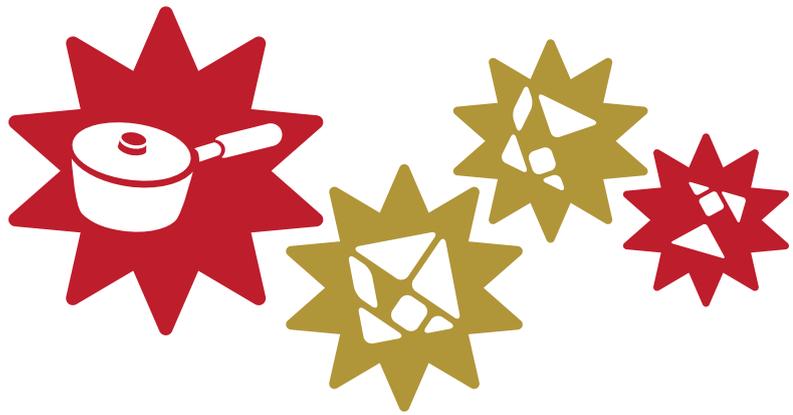


Blight on potatoes, as seen above, is rapid blackening and death of stems and leaves which will spread to the potatoes if some control measures are not taken. Caused by a fungus – and the cause of the Irish potato famine.

For more information see:

<http://www.rhs.org.uk/Gardening/Grow-Your-Own/Veg-A-to-Z/Potatoes>





cookit & problem solving

Ann Kerry, *cookit* Manager, demonstrates how preparing a packed lunch can pose challenging problems with lots of learning opportunities.

Learning about food should be as practically involving an experience as possible because food presents people with everyday decisions to make and problems to solve. Children need to develop the knowledge, skills, and practical capability to meet needs and requirements through appropriate responses to the challenges with which food presents them. As such, food has a role to play in linking aspects of education that relate to health, life skills and in preparing young people to be informed citizens.

Real life problems

Problem based learning is an ideal methodology to enhance students' application of knowledge, problem solving skills, higher-order thinking, and self-directed learning skills. In doing so pupils learn to apply the knowledge to solve real life problems and in seeking solutions to the problems, the pupil learns the skills as well as the knowledge that revolves around the problem and the environment in which the problem takes place.

When utilising *cookit* with problem based learning there are numerous scenarios that pupils can relate to. Here are two examples.

1. Planning and making a packed lunch suitable for vegetarians that is to be stored at ambient temperature until eaten.

Some examples of suitable dishes for the packed lunch could be a Lunchbox wrap, where the filling is selected for vegetarian consumption, therefore no meat (including chicken) or fish. The wrap is a good source of starch, a carbohydrate.



Lunchbox wrap

The pupils could research what could be included as a filling but ideally it would include a selection of vegetables, providing a range of vitamins and dietary fibre, plus a protein such as hummus, cheese or hard boiled egg.

It is important that the Lunchbox wrap is tested for flavour, colour, textures and that the filling doesn't fall out of the wrap!



Hummus

Alternatively the packed lunch could include a pasta salad such as Sunset pasta salad (see **openit 3** for the recipe). The making of the Pasta salad could be trialled and changes made to the recipe that suit the taste of the consumer.

The dessert for the packed lunch could be a Jamaican fruit salad, a flavoursome dish with good colour, a



Fruits to make Jamaican fruit salad

variety of textures, and an abundance of vitamin C. The fruit salad can also be adapted to accommodate the use of seasonal produce, especially if it can be sourced from the school garden.

The packed lunch needs to be served with a drink, which could be a bottle of water, but to provide additional contributions towards the 5 A Day, try including a smoothie such as Rhubarb and strawberry smoothie.

Stages in the problem based learning process

- The pupils are presented with a problem.
- The pupils work together in small groups or teams to clarify the problem and mind map some ideas based on prior knowledge.
- The groups identify what they need to learn to work through the problem clarifying what they need to know. They then make an action plan for working on the problem.
- The pupils engage in independent study with the teacher as a facilitator.
- The pupils meet together again as a group to share information.
- They present their solution to the problem.
- They evaluate and review what they have learned from working on the problem.

Smoothie making and the selection of fruit used is a good way for pupils to test which flavours and colours work well together, this could be a problem based learning activity in itself.

At this stage the component parts of the packed lunch have been selected, but how can it be kept cool?



Rhubarb and strawberry smoothie

There are numerous plastic sealable boxes available where the different dishes can be packed separately so that they do not contaminate each other with their flavour, and the drink could be stored in a tightly sealed screw top bottle. Some commercially made lunch boxes have built in freezer packs, or a freezer pack could be inserted into the lunchbox.

To save space, try freezing the water or the smoothie in the bottle, this will keep the packed lunch cool, whilst slowly defrosting just in time to drink it at lunchtime.

See the exemplar mind map for the problem or “design brief”

2. To plan and make a one course simple hot lunch to be served to parents or visitors that utilises school grown produce and can be made in advance.

A solution could be soup and bread.

The soup can be made the day before and chilled, or made in bulk and frozen in batches, but the soups must be re-heated thoroughly before serving.

The bread is best made into rolls so that they are already portioned, then either served fresh on the day of making or frozen in batches, defrosted in time for serving and served slightly warmed.

In **openit 2** find the recipes for Harvest vegetable soup, Curried parsnip soup, Butternut squash soup and Tomato soup express plus the recipe for Bread rolls.

In **openit 5** find the recipes for Tuscan soup and Courgette, onion and cheese bread. The soups and the Courgette onion and cheese bread make good use of the school harvested produce.

These are just a couple of examples of potential problems to solve, but in reality food will always present people with everyday decisions to make and problems to solve.

Please see page 10 for the four recipes mentioned in this article: **Hummus, Jamaican fruit salad, Lunchbox wrap and Rhubarb and strawberry smoothie**

Food education can make a real difference

- Food is a global issue, of everyday importance to people and a necessity in life. We are all consumers, users, and makers of food. If children are not educated about food from an early age they will still make food choices, develop preferences and find ways of meeting their food needs, but from a very low baseline of knowledge and understanding. Being out of control in this way makes them powerless and passive, rather than active citizens.
- A little basic food education can make a real difference to the quality of people’s lives. It empowers them to make choices and provides them with a greater range of options. Not to be educated about food has consequences for the quality of life.
- In the primary school curriculum, food can provide a focus for literacy, numeracy, science, and health education. *cookit* presents excellent opportunities for work across the curriculum, above and beyond learning about food itself, as well as for teaching and learning through ‘hands on’ activities.

Mind mapping a packed lunch





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Recipe



Hummus

This Mediterranean creamy dip is ideally served with warm pitta bread or batons of raw vegetables, such as celery, carrot or cucumber for dipping.

This recipe serves 4.

Ingredients

- 2 x 410g Cans of chick peas
- 3 - 4 Garlic cloves – peeled and crushed
- 5 - 6 Tablespoons olive oil
- 2 - 3 Tablespoons lemon juice
- 3 Tablespoons tahini (light sesame cream)
- Ground black pepper

Equipment

- Can opener
- Sieve
- Measuring jug
- Food processor
- Mixing bowl
- Wooden spoon
- Garlic crusher
- Spatula
- Serving dishes eg ramekins

How to make it

- 1 Drain the can of chick peas through a sieve over a mixing bowl.
- 2 Pour the liquid into a measuring jug.
- 3 Place the chick peas into a blender and whizz them until smooth.
- 4 Transfer to a mixing bowl and combine with most of the olive oil, lemon juice, tahini and crushed garlic. Taste and add more olive oil and lemon juice as required.
- 5 If needed add a little of the saved chickpea liquid to give a light, soft consistency like softly whipped cream.
- 6 Add pepper to taste.
- 7 Spoon into ramekin dishes and serve chilled.

Hot tip

- If you do not have a food processor the chick peas can be mashed thoroughly until smooth.
- Use a pestle and mortar to crush the garlic, if you do not have a garlic crusher.



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Recipe



Jamaican fruit salad

A delicious mixture of tropical fruit with an exotic tang.

This recipe serves 6 - 8.

Ingredients

- 1 Tablespoon light soft brown sugar
- Juice of 1 Orange
- Juice of 1 Lime
- Juice of 1 Lemon
- 1 Tablespoon crystallized ginger - chopped
- 1/2 Papaya - peeled and chopped or 1/2 cantaloupe melon - peeled and diced
- 1 Mango - 'hedge-hogged'
- 1/2 Fresh pineapple - peeled and diced
- 2 Bananas - peeled and sliced
- 3 Tablespoons flaked coconut (not desiccated)

Equipment

- Tablespoon
- Mixing bowl
- Chopping board
- Sharp knife
- Lemon squeezer
- Small bowl
- Teaspoon

How to make it

- 1 Put the sugar, orange juice and lime juice into the mixing bowl. Add the ginger and stir well until the sugar dissolves in the juice.
- 2 Add all of the prepared fruit except the banana. Place the banana in the small bowl. Add the lemon juice and stir well.
- 3 Gently stir the banana into the fruit and add the coconut. Serve immediately.

Hot tip

- The lemon juice prevents the banana from turning brown.



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Recipe



Lunchbox wrap

Wraps are ideal for a lunchbox.

This recipe makes 2.

Ingredients

- 1 Tablespoon hummus or cream cheese
- 2 Wheat tortilla wraps
- Mixed salad leaves
- 6 Cherry tomatoes – halved
- 1 Chicken breast – cooked, cooled and thinly sliced or 2 tablespoons canned tuna in spring water – drained

Equipment

- Tablespoon
- Table knife
- Can opener
- Chopping board
- Sharp knife

How to make it

- 1 Spread the hummus or cream cheese over the two wraps.
- 2 Scatter the salad leaves over the middle of the wrap and top with tomatoes.
- 3 Divide the chicken or tuna between the wraps.
- 4 Fold over two opposite sides to seal the edges and then roll up firmly to enclose the filling. Cut in half to serve.

Variations

- Try adding chopped spring onions or red pepper, grated cheese or other favourite ingredients.
- Any unused wraps from the packet can be frozen to use another day.



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Recipe



Rhubarb and strawberry smoothie

This recipe makes 2 large or 4 small smoothies.

Ingredients

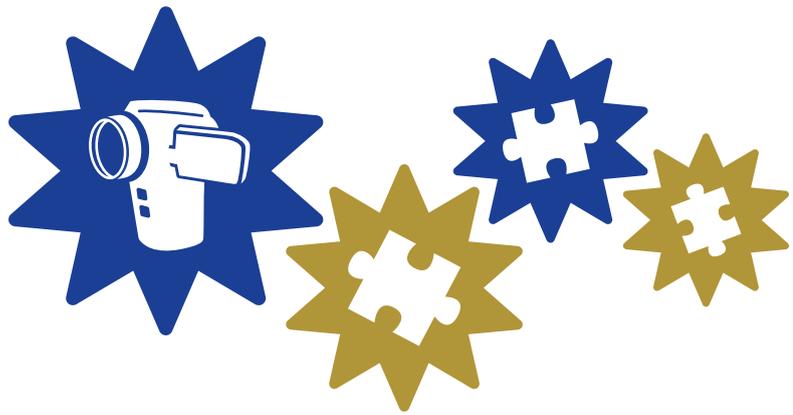
- 150g Strawberries – washed and hulled or 150g canned strawberries in natural juice
- 100g Canned rhubarb in light syrup – drained or fresh rhubarb stewed with a little sugar
- 2 Leaves of fresh basil
- 175ml Fresh orange juice

Equipment

- Can opener
- Measuring jug
- Blender
- Glasses

How to make it

- 1 Place the rhubarb, strawberries, basil leaves and orange juice in a blender and whizz for 1 - 2 minutes.
- 2 Serve immediately in tall glasses.



filmit & problem solving

Denise Evans, *filmit* Trainer, explores how a gruesome blood-splattering incident can provide a stimulating, collaborative, problem solving learning experience.

Denise explores how collaborative problem solving when making an animated film not only improved the quality of the film but also enhanced learning across the curriculum.

Teams

We all want our pupils to be independent learners, to explore and find ways to problem-solve rather than rely on direct instructions given by adults. Complex problems are best solved by teams of three, four or five people, compared to people who tackle the same problems by themselves or with one other person. Essentially, group members combine their abilities



and resources. Collaboration is vital and recognised as a powerful way of driving innovation. Scientists go down avenues that they might not have gone, work is harmonious with each individual doing so much more than they can do by working alone. Teams work with a unified purpose, building on everyone's expertise.



Talk

So how can this scientific approach work with problem solving within our primary schools? The *Open Futures* strands are empowering our pupils to do something amazing and then share how they did it, both within their classroom, school and the

Open Futures community. By developing exploratory talk we are developing children's awareness of the importance of talk as a tool. Creative problem solving through *askit*, *growit*, *cookit* and *filmit*.

Animation

I was recently fortunate enough to work with Year 4 pupils in the creation of film animations.



Animated films and the skills needed to produce them can provide a stimulus to learning across the curriculum and requires group and team work. In this instance it was part of their Literacy topic of 'Imaginary worlds.' By setting a task that was both open-ended, as well as engaging, it gave pupils something that they were excited about and wanted to talk about. It helped develop the way they worked together to solve on-going problems. Creating an animated film allowed the pupils to use their artistic and creative talents.

Questions

Pupils were organised into teams of five to six and quickly immersed themselves into the creation of their animation sets for

“Pupils even gave up half of their lunch break because they were so keen to complete their model sets before filming took place.”

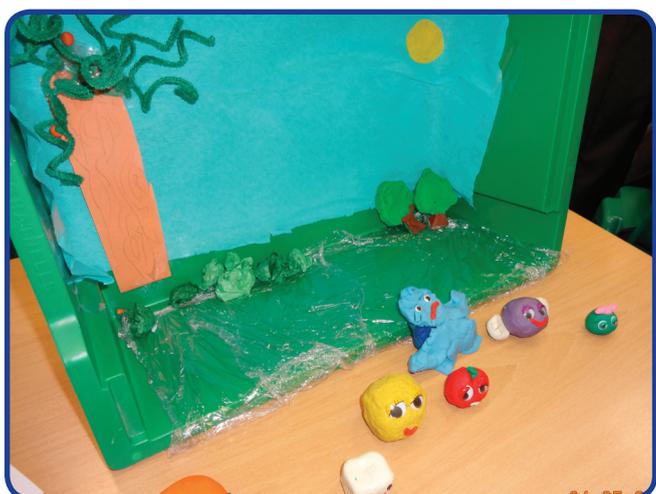
their chosen imaginary world. Some pupils worked on the creation of the background scene whilst others started to create their characters.



From the outset, pupils were heard to say “How can we . . .” and ideas were tried out, improved upon until the problem was solved. The materials the pupils used included plasticine, pipe cleaners, crepe, tissue and coloured paper.



The pupils were constantly asking questions such as “How can we make this delicate model stand up alone?” “How can we make this character make small movements and keep the same position without falling down?” “How can we make the blood splatter slowly during our animation?” “How can we make objects fall slowly from the sky whilst capturing them at different stages?”



During the construction of the characters and sets they used anything that could be bent or formed into another shape and discussed ways of making small movements giving the impression of the models moving.



Filming

The atmosphere in the classroom was one of engaged delight. Pupils even gave up half of their lunch break because they were so keen to complete their model sets before filming took place. They assisted each other working in joint activity.

It was clear that the activity fully supported multiple intelligences. Pupils could be heard to say “Which looks better?” “What happens next?”

When the sets were completed and they were ready to begin capturing on film, pupils had to work out how to ensure that their created sets didn't move, whilst a number of pupil's hands were busy making their characters make small movements within the sets. They had to make sure that the camera, which was mounted on a tripod, remained in exactly the same position during filming, even if someone accidentally knocked it.



Solutions

Problem solving doesn't end with the activity. Once the films were loaded on to the *filmit* web site, others within the wider *Open Futures* community could offer solutions to problems, offering a wider collaborative approach to learning. Pupils were able to watch their own and each other's films. They discussed how they could have made their animations longer, perhaps by adding more clips of the same shot to slow things down especially if they wanted to include a pause or make a character blink or wink.

Ideas

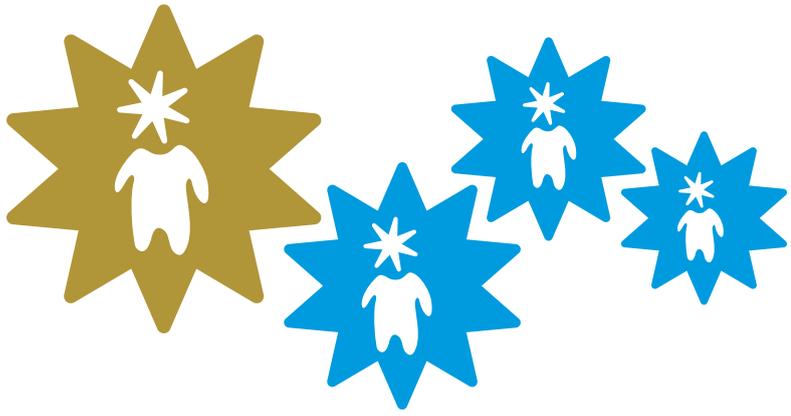
Pupils working in teams are positively engaged, they share information, develop one another's contributions and are part of a creative problem-solving activity.

The exploratory use of ideas whilst working as a team enables pupils to encourage other approaches. Consequently there is no loss of face if ideas are challenged or changed.

Problem Based Learning through *filmit* really can enhance and extend pupils' learning across all areas of the curriculum.

Visit the *Open Futures'* website to log in to the *filmit* area to see the films made by Thoresby Primary School during this session, on 25 April 2013.





Open Futures People

Open Futures People is a regular feature in *openIt*

Number four - The Chair of Governors' tale



Glenis White, Chair of Governor for Birkwood School is seen here on the right with **Julie Allen**, the school's headteacher

Glenis White, Chair of Governor for Birkwood School, Cudworth, Barnsley talks to Sue Macleod, Open Futures' Curriculum Adviser, about her role as Chair of Governors and her hopes for Open Futures within Birkwood.

Good morning Glenis, thanks for agreeing to talk to *openit*. Could you tell us a little about Birkwood and the introduction of *Open Futures* into the school?

Birkwood can best be described by our school motto '**Inspire, Cherish and Achieve Together**'. We are a very successful, caring school responsive to the needs of the local community. Teachers and governors work together to provide the very best opportunities for children to become independent, aspirational learners.

We joined the *Open Futures* network a year ago. All staff have been trained to *askit* level 1. Governors and teachers attended an *Open Futures* briefing meeting in March and *cookit* training starts this term in the school's purpose-built teaching kitchen. Headteacher Julie Allen has, with the support of her staff and Governors, identified *Open Futures* as a key driver in the development of children's learning during the next few years.

How long have you been the Chair of Governors at Birkwood? What do you see as your main role?

I have been Chair for over 10 years and on the Governing Body for 15 years. Previously I was a headteacher in another primary school in Barnsley.

My role as Chair of Governors is, with the headteacher, to be responsible for the strategic development of the school. The governors support, challenge and hold senior staff to account for developing and maintaining high quality teaching and learning.

We have an excellent relationship with Julie and her senior staff. We believe in speaking our minds, being frank, open and honest.

What made you become a Governor and then a Chair of Governors?

When I retired I wanted to use the skills and knowledge acquired over the years to support education within this community. I was born and bred in Cudworth and as a child would have gone to school at Birkwood if it had it been built then.

Being a governor is very demanding and time consuming but also very satisfying work. We have no problem in recruiting Governors; Cudworth is very supportive of the school. We have a good reputation thanks to Julie. She is a shining example of an inspirational headteacher, entirely dedicated to achieving the best education for our children.

The school has now been involved with the programme for about 18 months – what impact do you see on teachers, children, learning and teaching?

askit is now embedded from F1 through to Y6. Julie and her team have assessed, monitored and evaluated the impact so far. The results are very pleasing. Children of all ages are showing increased confidence and are articulating critical, higher order thinking skills which are having a positive effect on speaking, listening, reading and writing.

How do you see the school developing in the future?

We have recently spent £20,000 on a first class teaching kitchen. *cookit* training is underway and very soon we are planning to extend the facilities

to include parents. This will further embed one of our healthy school priorities to encourage healthy diets in children and their families. Training in *growit* and *filmit* will follow next year.



Birkwood's new teaching kitchen

Finally, What do you hope the school will gain from being an *Open Futures* school?

We want *Open Futures* to build on our already successful creative curriculum and thereby move Birkwood to become an outstanding school.

We are also keen to develop stronger links with other schools through the *Open Futures* Learning Community. We were disappointed that Barnsley was not chosen as an *Open Futures* partnership area. Birkwood was the only school in Barnsley to show an interest in *Open Futures* two years ago but we are certain that there are others who would be interested now.

Thank you Glenis, I am sure that more schools in Barnsley will be interested in joining the *Open Futures* network, particularly after reading this very helpful article.





Frequently Asked Questions

National Curriculum & Training Director, John Storey, responds to questions about Centres of Excellence and the *Open Futures* Quality Mark

Schools new to *Open Futures* frequently ask to learn more about the Skills and Enquiry Programme and also to see *askit*, *growit*, *cookit* and *filmit* in action.

The best people to respond to these questions are Headteachers and Teachers in any *Open Futures*' Schools.

There are also a growing number of *Open Futures* Centres of Excellence where visitors are welcome to observe activities in all four strands and to talk with teachers and senior managers. This inevitably leads to other questions . . .

Q – What is an *Open Futures*' Centre of excellence?

A. Centres of Excellence are:

- 'Showcases' for the very best *Open Futures* learning and teaching.
- Schools which have adopted the *Open Futures* Skills and Enquiry learning programme as key drivers in their curriculum planning.
- Schools which have demonstrated how *Open Futures* Strands and Pedagogy have made a major contribution to pupils' learning, motivation and well-being.

Q – How many Centres of Excellence are there?

A. The aim is that by 2015 there will be a group of Centres of Excellence within a half-day's travel

from any primary school in England. These will be concentrated mainly, but not exclusively, in urban areas with high social deprivation indicators.

Currently there are eleven, 2 in West Sussex, 2 in East Hampshire and 7 in Wakefield:

West Sussex

- Tangmere Academy
- St John Baptist C of E Primary

Hampshire

- Petersgate Infant School
- Hart Plain Infant School

Wakefield

- Crigglestone St James CE Primary Academy Trust
- Southdale CE Juniors
- Towngate Primary School
- Hental Primary School
- Knottingley St Botolph's CE Academy
- Carlton J&I South Elmsall
- South Hiendley J, I and EY School

The target is to have 30 Centres of Excellence by July 2015.

A further ten will have achieved the status by 31st July 2013 and by the end of the academic year 2015 there will be an additional nine Centres of Excellence.

Q – What is the Quality Mark and how does it work?

A. The Quality Mark is a guide for schools to assess their progress in implementing The *Open Futures* Skills and Enquiry Learning Programme. The Quality Mark has six school development areas each of which is assessed at three levels.

Development areas:

1. Strategic planning, vision and leadership
2. Organisation and management structures

3. Learning and teaching
4. Monitoring and assessment
5. Learning environment and resources
6. Staff development

Q – How does a school become a Centre of Excellence?

A. A school will be deemed a Centre of Excellence when it has achieved Level 3 on the *Open Futures* Quality Mark.

Level One

'Self Assessed' by the Headteacher and Senior Managers, the process monitored and supported by an *Open Futures* Curriculum Adviser.

Level Two

'Peer assessed'. Progress in achieving this level is assessed by another Headteacher monitored and supported by an *Open Futures* Curriculum Adviser.

Level Three

An 'Independent Assessment'. The final decision about a school achieving Centre of Excellence status is made after an independent assessor has visited and evaluated progress across level Three.

Delegates attending the Partnership Conference on the 19th and 20th June, will hear about the development of a Centre of Excellence during the presentation by Mary Pavard, Headteacher of Tangmere Academy in West Sussex.

If you would like to visit an *Open Futures* Centre of Excellence or if you think your school should become a Centre of Excellence contact Anna Hodgson, Operations Manager via email at anna.hodgson@openfutures.com

NOW
Total 11

West Sussex	2
East Hampshire	2
Wakefield	7

SOON
Total 21

West Sussex	2
East Hampshire	2
Wakefield	7
Birmingham	1
Hull	3
Manchester	3
Newham	3

2015
Total 30

West Sussex	2
East Hampshire	2
Wakefield	7
Birmingham	4
Hull	5
Manchester	5
Newham	5

The draft National Curriculum

The Cambridge Primary Review’s response to the public consultation

Those of us who participated in last years *Open Futures* Conference enjoyed the stimulating workshop-presentation by Alison Peacock and Gareth Pimley from the Cambridge Primary Review Trust. We were not entirely surprised by the Trust’s response to the DfE’s consultation summarised here by Bob Pavard, *Open Futures* Curriculum Adviser

Conclusions

“Overall, we find the proposals in many respects educationally unsound and evidentially questionable. They are based on a flawed critique of existing arrangements and an overly selective response to international data.

Their lack of serious educational rationale is confirmed by the decision to add an essentially cosmetic statement of aims after the priorities and content have been determined.

They perpetuate some of the most damaging aspects of current and past arrangements, notably a curriculum which is divided not only in time but also as to quality and seriousness of purpose, especially where the arts and humanities are concerned.

The proposals rightly prioritise knowledge but wrongly reduce it to unchallengeable proposition.

They disregard both research evidence and expert opinion on matters such as spoken language and the teaching of reading, history and citizenship.

They belittle or ignore aspects of cultural life and human development – such as drama, dance and the exploration of faith and belief – which ought to feature in any national curriculum.

While claiming modernity they fail adequately to reflect the profound social and educational implications of the digital revolution.

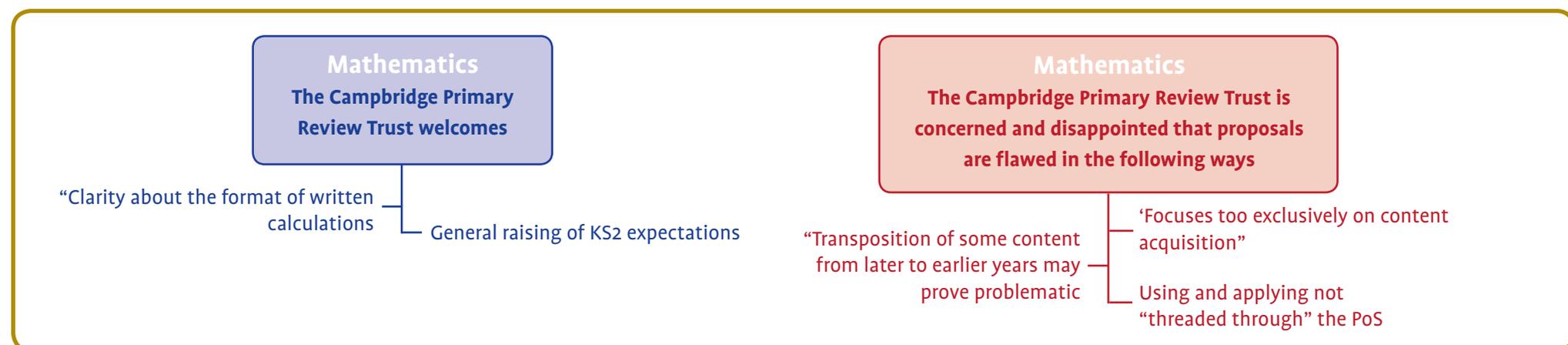
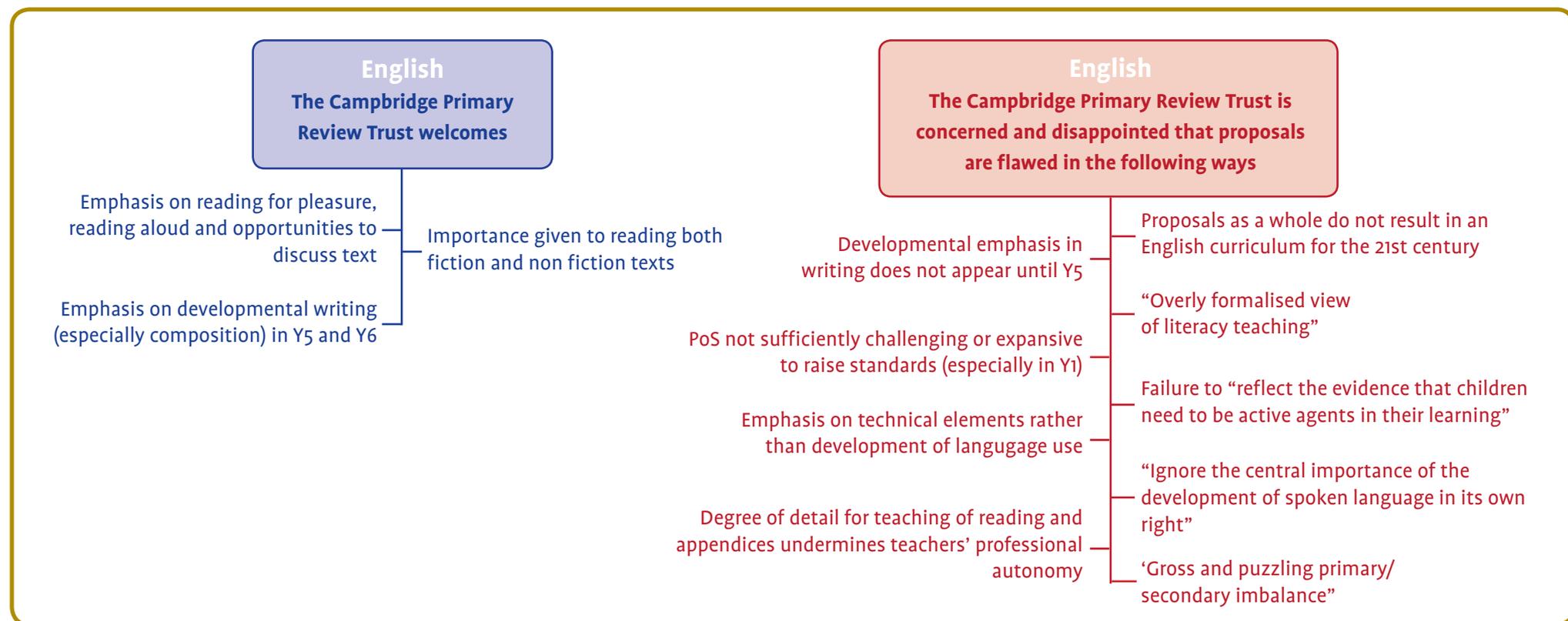
Since the announcement of the current National Curriculum Review in 2010, CPR/CPRT has taken a

careful and considered approach to the succession of statements, reports and proposals that have emerged, presenting focused and properly argued critique, avoiding strident adversarialism and seeking every opportunity to engage directly and constructively with ministers and officials.

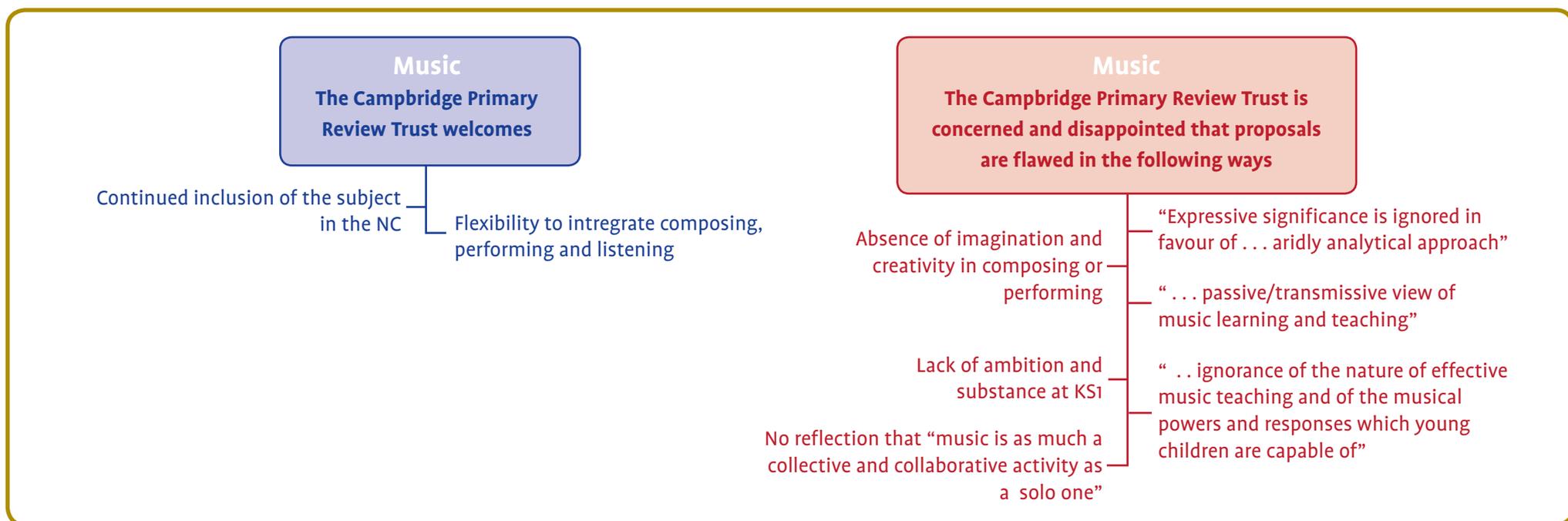
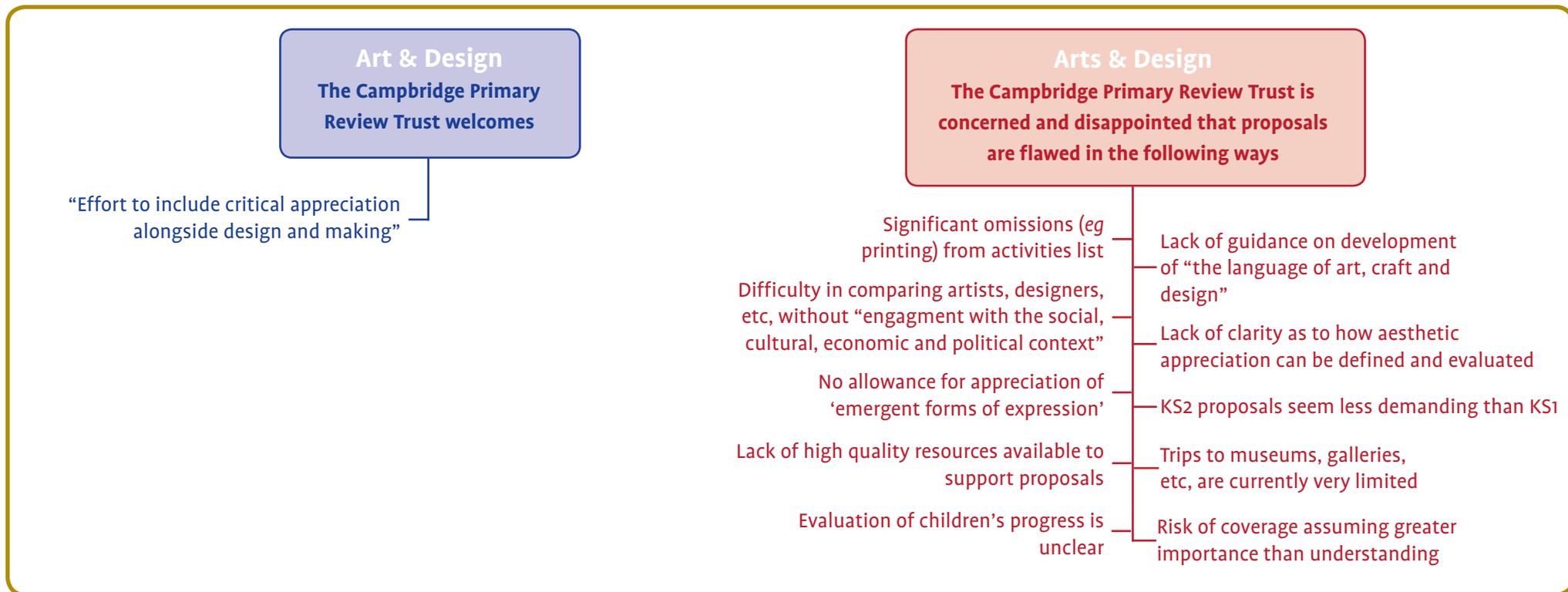
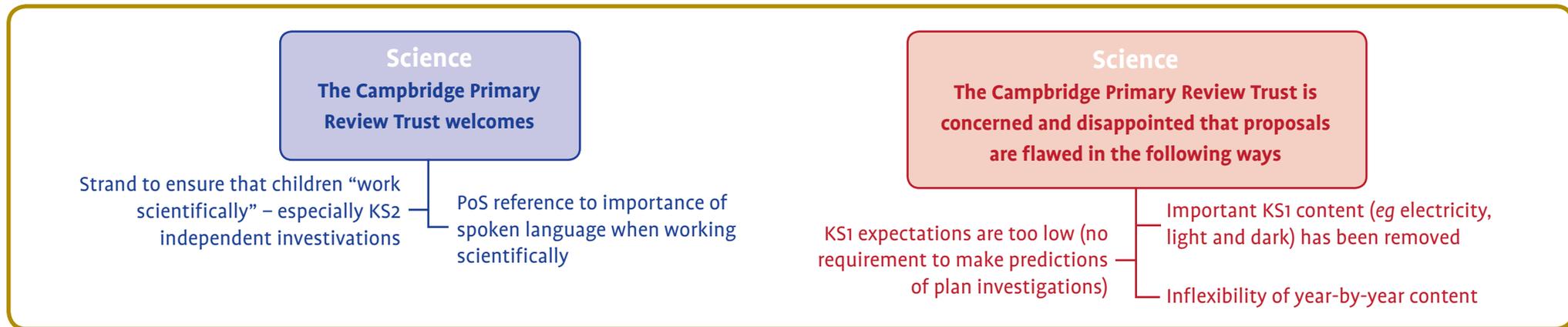
Yet we cannot disguise our sense of the immense gulf that exists between what, in terms of the quality of consultation, evidence and vision, the Government has effected and what the Cambridge Primary Review aspired to and achieved.

Nor can we stand aloof from the concerns expressed by other organisations, with the general thrust of many of which – if not always their tone – we find ourselves in broad agreement.“

Response to FIVE programmes of study



The Cambridge Primary Review’s response to the public consultation (continued)



The full response, including comments on all the Programmes of Study can be downloaded from the CPRT website at www.primaryreview.org.uk

How far do you agree with the CPRT? Did you make a formal contribution to the discussion?

If you wish to share your response or would like to comment on any aspect of the draft primary curriculum contact Bob Pavard, Southern Curriculum Adviser by emailing him via Anna Hodgson, Operation Manager – anna.hodgson@openfutures.com.

A selection of your opinions will be published in the next edition of *openit*.