

How do we measure up?

Maths in context

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National Council for Curriculum and Assessment | JANUARY 2009 | Issue 11



welcome...

to the last paper edition of **info@ncca**
(at least, for the time being)!

Times, they are a-changing and we have adapted *info@ncca* to take account of these changes. The April issue will be published in electronic format only and will be accessible through the NCCA website, or you can have it emailed direct to your own email address. More details on this change and on how to ensure that you don't miss future issues are on page 5.

For our last outing in paper we have focused on schools and classrooms, where curriculum and assessment ideas and policies either come to life or die a slow (or even speedy!) death in the face of the increasing demands of classroom and school routines. The story of St. Joseph's, Dundalk, is an interesting one because it's a real school with real teachers and real students. As *info@ncca* becomes 'virtual', future issues will include more from the 'real'... as we present more stories

of innovative curriculum and assessment practice. If you would like your school to be included, details of how to do so are on page 11.

The 'real' also features in the report on the consultation on some rebalanced junior cycle syllabuses, and in the work underway on the curriculum framework for children in detention schools. The '*Curriculum Wheel*' on page 8 may look ambitious, but it represents the very real efforts of teachers and support staff who work with some of the children and young people who struggle to remain connected to schooling, to families and to communities.

The first issue of *info@ncca* was published in September 2005. The past three years have seen some of the best times, and now we find ourselves in some of the worst. These are indeed tough times for schools and those who work and learn in them. Our by-line is 'supporting teaching and learning'... that includes supporting teachers and learners. Ideas about how *info@ncca* can be more useful in these times are most welcome.



Anne Looney
Chief Executive

National Council for Curriculum and Assessment



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Supporting teaching and learning...

info@ncca is published three times over the school year, in September, January and April.

The April issue will be published in electronic format only. It will be available to download from www.ncca.ie/news/newsletter on 24th April. To automatically receive a copy in your inbox, please email newsletter@ncca.ie placing 'Subscribe' in the subject field, or go to the website and click the 'Subscribe to Newsletter' banner

We welcome articles from teachers as well as comments and queries about content.

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Exceptionally able students: a European perspective

Many thanks to everybody who responded to the consultation on the *Exceptionally Able Students: Draft Guidelines for Teachers* (2007). The responses received tell us that those involved in the education of exceptionally able students have found the draft guidelines interesting and useful. Your suggestions and comments also threw considerable light on ways in which they can be improved and extended. If you would like to read the draft report on the consultation go to www.ncca.ie/publications.

Exceptionally Able Students: Draft Guidelines for Teachers (2007) is also available to access or download from www.ncca.ie/publications. Some hard copies are available through newsletter@ncca.ie

In a further development the NCCA, as a member of the Consortium of Institutions for Development and Research in Education in Europe (CIDREE), is leading a project in this area. Along with our Swiss and Dutch colleagues, we hope to generate examples of good practice in differentiating the curriculum for exceptionally able students in the everyday classroom. Check out the next issue of info@ncca for an update on the CIDREE project or visit the Special Education Needs section of our website.

Ready for ACTION?

Looking for divine inspiration to liven up your lessons? Look no further! Teachers around the country have been sharing their ideas and sample activities with us and some of these are now available at www.action.ncca.ie

Check out ideas for

- using ICT as a teaching and learning tool across the curriculum from infants to sixth class.

- using assessment for learning (AfL) techniques in second class in primary school, and in first to third year post-primary.
- helping pupils in primary school who are learning English as an additional language.

These resources will be added to continually and your feedback and contributions are always welcome. Email newsletter@ncca.ie or use the feedback form on the ACTION site.

Tip sheets for parents of infants

Are you an infant teacher with parent-teacher meetings looming? You might find it useful to distribute two tip sheets developed for parents of this age group. The tip sheets give practical ideas and simple inexpensive tips about how parents can support their child's early literacy and numeracy development at home. The activities outlined complement the work of practitioners in pre-school settings and teachers in infant classes. The tip sheets are available to download from: www.ncca.ie/parents.

Primary school network

No, the results of the recent curriculum review of Science, Gaeilge and SPHE will not just sit on a shelf in a report! Primary teachers will be invited to explore issues that arose in the review and, more importantly, to help identify how we can address them.

Topics for exploration will include:

- Teaching methods - for example, differentiation, integration, high-order thinking; collaborative learning
- Assessment
- Language in the curriculum
- Time - the breadth and depth of the curriculum.

If your school is interested in being part of a network of schools looking at any of these topics, we would love to hear from you at newsletter@ncca.ie.

Foghlaim ón nuatheicneolaíocht

You may remember reading about our project which integrated mobile phones into classrooms for teaching and learning Irish with second year students. What - mobile phones?! Of course - they're perfect for language learning! This time, we're working with six cross-border schools and we've found even more uses for the phones:

- sending vocabulary SMS to students daily
- facilitating student to student chat which can be recorded for the teacher to listen to
- recording student responses to teacher's questions which the teacher can later access.

Interested? Log on to the project blog and leave a comment at <http://foghlaim.edublogs.org>.

Senior Cycle

Developments at senior cycle have progressed to a point where we now have a number of draft syllabuses and we will be looking for your views on them. While we had planned to consult on these in late Autumn we have decided that a high-profile consultation isn't appropriate at the moment, given the impact of the current public expenditure restrictions on schools and the education system.

We are now looking at different ways in which we can bring the developments on senior cycle, on the curriculum components and assessment, and on the best ways to make a difference at senior cycle to a wider audience. We will be looking for your views online and we will be meeting with organisations such as subject associations, teacher unions, parent bodies and a selection of schools and student groups over the coming months. Keep tuned in to the website, www.ncca.ie/seniorcycle for further information.

Out of print?

For 3 years now info@ncca has been printed, packaged and distributed to every school in Ireland. Small schools have been receiving one each, mid-size schools five and larger schools, ten. We knew our distribution wasn't perfect because we receive a flood of requests for extra copies when each issue is published. Teachers, it seems, would prefer to have one each. And we would prefer you to have one each. Unfortunately the cost of printing so many copies is prohibitive.

And then came the economic downturn and we wondered whether we could keep publishing info@ncca at all. Well...the answer is YES! The editorial team went into a huddle and we have come up with a solution that will make the required savings while at the same time ensuring that every teacher in the country can access their own copy.

How can this be possible, you ask? It goes like this:

The next issue (No. 12) will be published in **electronic format only**. It will be available online from www.ncca.ie/news/newsletter on **Friday, 24th April**.

If you want to book your copy in advance and ensure it arrives in your email inbox on the due date, just go to www.ncca.ie, click on the banner titled '[Subscribe to Newsletter](#)', fill in your details on the form and click the 'Subscribe' button.

The electronic version allows you to move around the issue with great ease. Every article title in the contents page (or on the cover) is linked to the article itself. So, if you click on the title you will be taken to the first page

of the article. Similarly, every website and email address mentioned in the issue is clickable and will take you to the corresponding location. You can browse at your leisure or print out a copy if you prefer the portable convenience of paper.

And if it doesn't work, and you end up begging for the return of the paper version – we will find a way to bring it back. Look out for a link to our **online survey** in the April issue. By clicking on this link and answering our questions, you will be able to let us know your views on the electronic info@ncca.

Either way, we promise to bring you all the latest developments in curriculum and assessment to support teaching and learning in the classroom. We hope that you will continue to find that info@ncca is essential reading and to keep us informed of what you would like to see featured.



The next issue (April 2009) will be published in **electronic format only**. It will be available online from www.ncca.ie/news/newsletter on **Friday, 24th April**.

Rebalancing the Junior Certificate

Feedback from consultation on five rebalanced Junior Certificate subjects

Please tick the appropriate box to the following questions:

Were you one of the 1,500 teachers who visited our website during the consultations on five 'rebalanced' Junior Certificate subjects (Art, Craft, Design; English, History, Home Economics and Music) at the end of the last school year?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Were you one of the 631 respondents who filled in our online survey on the NCCA website (www.ncca.ie)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Did you attend your subject association's meeting and give your opinion on the changes proposed in the rebalancing of the Junior Certificate subject?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Were you a teacher/representative who attended a consultation meeting?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Did you know that consultation meetings were held with students, parents and principals and vice-principals?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Do you know some of the parents who were consulted with during the consultation?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Would you like to now know the outcomes of those consultations?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

If you answered yes to any of the above questions, a sincere thank you. You have helped to inform our work in shaping the future Junior Certificate syllabus in Art, Craft, Design, English, History, Home Economics or Music.

In issue 10 of **info@ncca** (available to download from our website www.ncca.ie/news/newsletter), we told you about the upcoming rebalancing consultations for the Junior Certificate subjects mentioned above. Now we're bringing you results of those consultations!

Even if you didn't get any 'yes' answers above, please read on to find out what your fellow teachers, parents, students, principals and deputy principals, and teacher union representatives all had to say about the proposed changes in each subject. The following information is a brief summary of the feedback and opinions we gathered. You can find a more detailed report for your subject on our website at www.ncca.ie/juniorcycle.

Design and layout of the syllabuses

Respondents welcomed the new common layout as a great improvement while also recognising that some areas of certain syllabuses needed further work and development. The school managers, students and parents we spoke to found it easy to compare syllabuses.

The introduction of learning outcomes



The learning outcomes are very well laid out, clear and easy to follow. They help simplify what is required to be taught and are easy to follow as they are in point form.

HOME ECONOMICS TEACHER, ONLINE SURVEY



Learning outcomes were widely welcomed as teachers felt that they would assist them in the planning, design, and evaluation of teaching and learning in a subject. It was clear that teachers felt that this was an area in which they required support for their effective introduction.



Effectiveness of rebalancing

The reduction in areas of unnecessary **overlap** was welcomed. However, respondents were of the opinion that some overlap between subjects assisted teaching and learning and should be retained.

The reduction in **overload** in subjects was welcomed as it was recognised that it would allow time for a deeper teacher and student engagement with learning in the subjects. In some cases, however, concern was expressed that too much reduction might cause a gap to emerge between Junior Certificate and Leaving Certificate. The course committees will try to strike a balance between achieving a reduction in overload and avoiding the development of any such gaps.

Assessment

The area of assessment drew lots of attention during the consultation. It was interesting to note that teachers of junior cycle understood assessment to mean examinations. The following quote gives some indication of the perspective of many respondents.



The success of this rebalanced syllabus will greatly depend on the terminal exam set by the SEC. It must adhere to the aims and objectives of the syllabus. I don't think this happened when the Junior Certificate syllabus was introduced in 1989.

HISTORY TEACHER, ONLINE SURVEY



Areas of support

Respondents felt, in general, that not only did they require some subject-related support but also needed inservice on general areas such as mixed-ability teaching, using Assessment for Learning (AfL), employing ICT imaginatively and using learning outcomes effectively in planning their teaching and learning. It was interesting to note the increasing numbers of teachers who expressed a preference for resources in electronic format.

Where to from here?

The consultation subject reports have now been reviewed by the course committees. The committees have analysed and discussed all of the material which emerged from the consultations with the different groups. The rebalanced syllabuses have been revised on the basis of the feedback and have gone for approval to the Council of the NCCA, following which they will be issued to the Department of Education. The rebalanced syllabuses will be accompanied by a strategy proposal on how their introduction might be best supported.

So, whether you want to keep up to date with developments in your own subjects or find out when the rebalanced syllabuses discussed above will be introduced to schools; look no further than our website, www.ncca.ie, or the updates section in future editions of **info@ncca** magazine to find the answers, and much more besides.

Subject-specific feedback

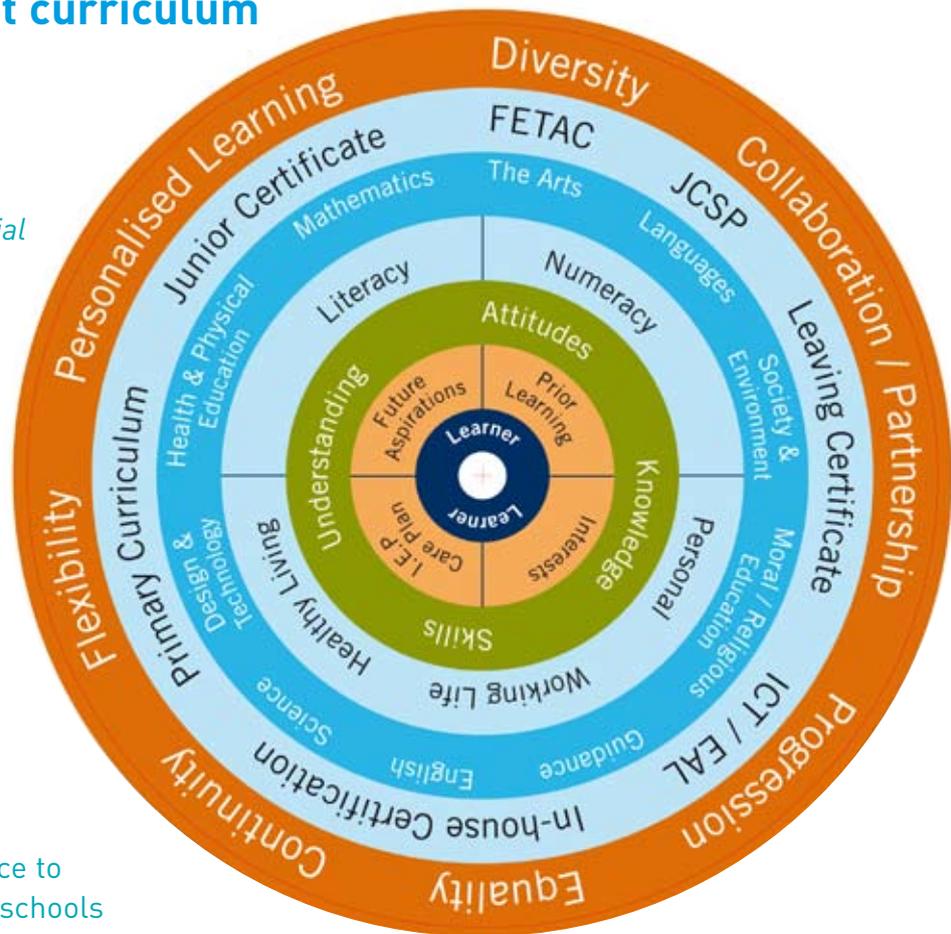
The following were among the many points made during the consultation.

Art, Craft, Design	<ul style="list-style-type: none"> • Respondents would like to see a clearer statement of assessment for the syllabus. • They also would like further adjustments made to the assessment methods used.
English	<ul style="list-style-type: none"> • Respondents would like to see a greater alignment of the assessment methods used with the aims, objectives and learning outcomes. • They also requested a discussion around the provision of recommended suitable material for use in classes and the implications this would have on the open-nature of the syllabus.
History	<ul style="list-style-type: none"> • Respondents would like to see Section III of the course further reduced. • They would like more emphasis on the coursework project which would bring it more in line with the leaving certificate examination and which would increase the validity of assessing the skills of an historian.
Music	<ul style="list-style-type: none"> • Respondents would like to see further work carried out on the prescribed lists (songs and works). • They would also like to see the criteria for selection of music for performance introduced.
Home Economics	<ul style="list-style-type: none"> • Respondents felt that the rebalancing may have gone too far, thus widening the gap between Junior Certificate and Leaving Certificate. • Respondents also felt that some overlap with other subjects was necessary and should be retained.

Inside out

A new way to think about curriculum

At the request of the Department of Education and Science, a *Curriculum Framework for Children Detention Schools, High Support Units and Special Care Units* has been developed by the NCCA. Children Detention Schools provide residential care, education and rehabilitation for children who are either remanded or committed by the High Court. High Support Care is for children with severe emotional and behavioural problems and Special Care Units accommodate children who are the subject of special care orders granted by the High Court. The *Curriculum Framework* identifies the aims, guiding principles and defining features of education programmes developed with reference to the framework for learners in these schools and units.



Aims

The aims of the framework are informed by the aims of the primary and post-primary curricula, combined with the views of teachers and learners in the settings on its role and purpose.

Curriculum Wheel

The *Curriculum Wheel* diagram relates the areas of learning included in educational programmes in schools and units to the other elements of the curriculum framework.

The curriculum revolves around the learner. It is represented as concentric circles on a wheel to act as a visual reminder/reflective tool for teachers and learners of the importance of maintaining a holistic view of the curriculum. Independently revolving, each of the inner circles aligns elements of the curriculum with their supporting/complementary features. The wheel highlights the responsibility of curriculum as a whole for such vital skills as literacy, numeracy and life skills, and the need to integrate knowledge, skills, understanding and attitudes across all learning areas. The guiding principles that inform the curriculum framework are also emphasised in the outer circle.

An interactive version of the *Curriculum Wheel*, together with a short explanation of its elements, is available through the ACTION website, www.action.ncca.ie. The curriculum framework document can also be downloaded through this site or by following the links from the NCCA's website www.ncca.ie. Guidelines to support the implementation of the framework in the schools and units are being finalised and will be available to download from ACTION shortly.

Teaching and learning: under construction



Part of the NCCA's work on curriculum and assessment involves sharing research and examples of best practice with other countries. And so, the European Conference on Educational Research in Sweden last September presented an opportunity to discuss the impressive work undertaken by post-primary teachers in this country.

We presented a paper at the conference (see the programme at www.ipd.gu.se/english/ecer2008/) on three curriculum development initiatives currently underway with teachers in a number of schools. Each of these initiatives involves teachers in classrooms developing different aspects of curriculum and sharing their experiences with other teachers and with the NCCA. The paper showcased teachers as curriculum developers on site in their classrooms. The three areas of work are:

- developing transition units
- using key skills in senior cycle classrooms
- exploring the development of more flexible learning profiles for senior cycle students.

You can access more information on transition units and key skills on www.ncca.ie/seniorcycle. A report on flexible learning profiles will be published on the website in the coming months.

The conference paper will feature in a book on *Schools as Curriculum Agencies*, which will include chapters from European and Asian countries, to be published this year. Our work with schools and teachers is attracting considerable attention internationally and two teachers working on the key skills initiative attended the Quest

Conference in Toronto in November, by invitation of the York district school board. They shared their experiences and insights into how to build engaging classrooms and enhance student learning.

So, besides the presentation of the NCCA paper, what did the other 1,700 people and over 900 papers have to say about teaching and learning? Some of the ideas discussed are well summed up in a keynote paper entitled *Learning empowers, and teachers are important mediators in this enabling process* presented by Professor Hanele Niemi from the University of Helsinki. She spoke of how the whole concept of learning has gone through a large process of redefinition in recent years. Learning is now seen more and more as an active individual process, where learners construct their own knowledge base. Learning is also seen more and more as a process based on sharing and participation with different partners in a community.

The concept of knowledge has also changed from one of static transmitted contents, to knowledge that is ever renewable and often constructed with other learners. Learning environments have changed radically. Along with schools and educational institutions, they now cover a large range of

different kinds of learning spaces, including virtual environments. Traditional concepts of where and how people learn are being broken by young peoples' working lives, their non-stop interaction with the media, and their use of their leisure time.

Professor Niemi told the conference that learning can be seen as empowerment. This means that people acquire the tools to shape and control their lives, and that through learning they create new knowledge and competencies. Does this concept of learning mean we no longer need teachers and teaching, we hear you cry? No! The core to learning still involves the interaction of teachers with learners but increasingly the teacher's role is one of facilitator. According to Professor Niemi, teachers have an even more important role in learning as they empower learners with the tools for lifelong learning. This also means that the teachers' professional role is expanding and that teachers require deep understanding of the subjects they are teaching as well as the tools required to help their students to learn.

So, as you can see, new ideas about teaching and learning are evolving all the time. Take a look around your own building site today!

Reporting with confidence

Re-modelling school reports

Completing a child's school report can be a daunting task! Teachers are anxious to report honestly, but at the same time want to be positive and take account of the mismatch there can sometimes be between a child's effort and achievement. They also face the issue of committing assessment information to paper in a way that gives a comprehensive and holistic view of the child and yet can be easily and accurately interpreted by the parent at home.

Designing a report card that addresses these and many other concerns, as well as reflecting the changing needs of the curriculum, children, parents, teachers and schools, is undoubtedly a formidable challenge. But despite these obstacles, the principal and staff of St. Joseph's National School in Dundalk embraced the prospect of re-modelling their school reports in a step towards improving teaching and learning in their school. We went to Dundalk to see how they got on.

Q. Why did it all begin?

The impetus for change came from within the school itself. Since the advent of the revised curriculum we became increasingly disenchanted with our much outdated annual school report card. This limited the appraisal of the child to an assessment solely of the child's learning.

Another reason for the change is that we have altered, very deliberately, our perception of the role of teacher and parents in the education process. We are building a community of learners here, where teachers, parents and outside agencies promote a vision of our pupils as active strategic learners – aware not only of what they learn but also how and why they learn. We wanted report cards which reflected our belief in the potential of our pupils and parents to complement, support and enrich teachers' work in developing autonomous learners.

Q. What areas did your reports cover?

There were a number of areas we unanimously agreed upon:

- A comprehensive and holistic view of the child as a learner.
- Information that is easily accessible.
- Simple concrete ideas for parents to help their child.
- Short and long term targets for future differentiated teaching and learning.
- A standardised approach with regard to teacher judgement and assessments.
- Pupil self-evaluation.
- An access point for support teachers to provide an evaluation.
- Assessments both of and for learning that could be shared with other relevant professionals.

Q. What was the purpose of child involvement in the report cards?

We believe that an invaluable part of learning is about children understanding **how** they learn. As such, child involvement and self-assessment is vital. Each child in our school has an A4 report booklet that spans their primary school years. There is a space on the cover of the booklet to include a photograph of the child in junior infants and again in third class. This both personalises the report cards and fosters a sense of the child's ownership of the contents.



Q. What do parents think about the new reports?

The feedback received after the report cards were initially used at the parent-teacher meetings was extremely positive. Subsequently, we made a number of changes to the report cards based on the recounted experiences of children, parents and teachers. The NCCA's draft report card templates also helped to inform the revisions.

Anecdotal evidence suggests that parents are happier with these new reports. Our scheduled 'Children Show the Way Day', when 90% of parents visit the school, will offer us an opportunity to hear what parents think. What has struck us, though, is that this is the first time that parents have quoted specific targets and observations set by the teachers. They feel it has given them a focus for working with their child at home. They also say that it will enable them to have meaningful discussions with the class teacher throughout the year.

Q. Did you develop the same card for all pupils, and for different times of the year?

From a practical point of view we wanted to produce a report card that could be easily produced and housed in one complete booklet. The colour coded duplicable report cards are banded together according to class level; infants are blue, juniors are green, middle years are yellow and senior classes are pink. There are two report cards for each class, one to be used at the parent-teacher meeting and an identical one to be used at the end of the year.

Q. How do teachers feel about the new reports?

We have a dynamic work ethic in the school that unifies the staff. We see each child's successes and difficulties as ones which belong to an entire team of teachers. This sense of mutual responsibility has led to a systematic, structured and informed approach to teaching. Teachers, as part of a professional team, build upon the successes and support the struggles. As such we have shared values and a consistent teaching approach throughout the school. Having a uniform reporting system makes sense.

Have you got something that worked in curriculum and assessment that you would like to share? We would be delighted to hear from you at newsletter@ncca.ie.

Read all about the school that doesn't use text books in the next issue of [info@ncca](#).

Q. Were there difficulties in managing the change?

The identification of the need for change developed within the school. All teachers were involved in the process of revising the report cards. It was not a change that was imposed on them. Assistant principals in our school have the responsibility as Heads of Department at non-mainstream, infant, junior, middle and senior class level. Frequent meetings within and between departments ensured that all members of staff were included in the decision making.

Q. Did the work of the NCCA contribute to the development of the report cards?

Preliminary work had already begun on the key elements that the new school report should contain prior to accessing the NCCA's draft report card templates. When it was discovered that the NCCA was also involved in developing report cards it gave our whole project new energy. The perception was that the process we were involved in now had outside validation of it being worthwhile.

We also referred to 'Assessment in the Primary School Curriculum' when finalising the report cards. The guidelines helped to clarify a number of issues for us. Taking the standardised tests results for example, class teachers were encouraged to be guided primarily by their incidental assessments and recorded classroom observations.



Q. If you were to do the work again what, if anything, would you do differently?

Whereas we don't anticipate that we will have to go through this process again for quite some time, our reports will continue to be updated and improved. For example, through focused staff consultation each department came up with a menu of targets in the areas of literacy, numeracy and social development for teachers to choose from. They also agreed on specific achievable targets for parents to focus on at home. These will be modified bi-annually or annually.

Q. What would you say to other schools who wanted to develop similar cards?

Ownership of the final product is vital if you want the project to be a success. To achieve this, it is imperative that all those involved in completing the report are involved from the beginning, that everyone has the opportunity to voice their views, have their opinions heard and, in a concrete way, see their input reflected in the redrafted reports.

A community of learners

On a final note, it is a particularly nice touch to see the inclusion of the phrase 'Your child is a valued member of this school' on each report card. From the warm, vibrant and enthusiastic atmosphere that welcomes you on arrival at the school, it is obvious that their desire to build a community of learners is being realised.

With special thanks to **Gerry Murphy, Marcella O'Conluain and Rosalyn Brady.**

St. Joseph's N.S., Muirhevnamore, Dundalk *Your child is a valued member of this school*

Class Level _____ Date: _____

The following statements are based on **Performance and Achievements** in

Mr/Ms _____ class

★ Needs considerable help

★ Needs a little help

★ Is capable of independent work in this area

★ Shows deep understanding

	★	★	★	★
Mathematics				
Understanding facts and concepts				
Using procedures and methods				
Reasoning and problem solving				
Talking about maths				
English				
Listening				
Speaking				
Emergent Reading/Reading				
Early Writing/Writing				
Gaelige				
Eisteacht (Listening)				
Labhairt (Speaking)				
Léitheoireacht (Reading)				
Scribhneoireacht (Writing)				
History				
Geography				
Science				
Visual Arts				
Music				
Drama				
Physical Education				
Social Personal and Health Education				
Religious Education				

Standardised test scores	English Sten:		
	Maths Sten:		
	Sten 8-10: Well above average	Sten 5-6: Average	
	Sten 7: Above average	Sten 1-4: Below average	

Support Teaching: Your child is working with Mr/Ms

Progress in English:

Progress in Maths:

Your Child As A Learner	Rarely	Sometimes	Often	Mostly
Shows interest in learning				
Completes work satisfactorily				
Presents work carefully				
Perseveres with challenging tasks				
Shows creative thinking and problem solving				
Follows directions				
Is cooperative/reliable				
Works well on his/her own				
Works well with other children				

Your Child's Social and Personal Development	Rarely	Sometimes	Often	Mostly
Mixes well with other children				
Deals with feelings appropriately				
Behaves well in class				
Behaves well in the yard				

Targets for remainder of this year/next year:

- 1.
- 2.
- 3.

Home/School Cooperation	Needs Attention	Good	Excellent
Attendance			
Punctuality			
Uniform			
Homework			

Pupil Self-Evaluation	Yes	No
I am happy at school		
I think I have behaved well		
I have worked hard		
I am pleased with my achievements		

Ways You Can Help Your Child Do Better:

- 1.
- 2.

Assistant Principal: _____ Parent: _____

Signature of Pupil: _____

Leaving Certificate Applied

A look into the current provision of LCA in schools

The Leaving Certificate Applied (LCA) was introduced to schools in 1995 and has enjoyed considerable success. The structure of the programme and the teaching and learning methods used contribute to some students achieving a Leaving Certificate who might otherwise have left school without a qualification. In the words of one LCA graduate:

'If I hadn't done the LCA I wouldn't have stayed to do the normal Leaving. I wouldn't be where I am now, to be honest. I said that before I went in to do the Applied Leaving and I said that in my interview to get into the Applied Leaving, that if I didn't get into it I wasn't staying, because I can't handle pressure'.

Teachers report that the students grow in confidence and self-esteem over the course of the two years of the programme and students report that LCA contributed positively to their experience of school. An LCA graduate puts the change in her level of confidence down to the teaching methods used in the LCA when she says:

'...because in first second and third year, it was constantly opening the books and the teacher talking, writing down things and studying, and that wasn't having conversations and getting involved in different things, different tasks, and in LCA you do work experience and the trade fair, key assignments and getting into groups, talking, doing different activities, like the trade fair, eh, it was talking out in class as well'.

LCA as a senior cycle programme

LCA students make up about seven percent of the Leaving Certificate cohort in any year and this figure has remained relatively stable over the period since 2003. As it is national educational policy to increase the numbers completing senior cycle education it is timely to look at the provision of, and issues surrounding, this programme.

Who is a typical LCA student?

The LCA programme would appear to cater for students who have experienced difficulties with their schoolwork, who are at risk of early school leaving, and who have disengaged academically and have had negative experiences of school. LCA take-up is strongly related to ability grouping during the junior cycle; thirty-four percent of students receiving learning support in third year go on to take LCA, as compared with three percent of other students. While all these factors enhance the likelihood of entering LCA, the majority of students in these categories still take other Leaving Certificate programmes. The pathway taken by students reflects the programmes provided in the school they attend. The LCA programme is more commonly provided in larger schools catering to more disadvantaged populations. Their pathway also reflects school policy regarding LCA entry, as well as individual student choice.

Where to for LCA students?

Graduates of the LCA have relatively low levels (twenty-eight percent) of progression to further study (higher education and further education). This rate is only slightly higher than those leaving school during senior cycle. However the good news is that LCA graduates have much lower unemployment rates than those leaving school prior to the completion of senior cycle.

Further studies

As it's over ten years since the LCA was introduced in schools, the NCCA is developing a paper looking at the provision of the programme and aspects within it which may need to be reviewed or changed. The ESRI are also currently completing research commissioned by the NCCA on students' experience of, and progression from, the LCA programme. The NCCA is, in addition, working with a group of schools exploring how different subjects, courses and modules from the various senior cycle programmes can be combined into more flexible learning profiles (FLPs) or personalised programmes of study in senior cycle. Each of these areas of work will contribute to reflection during 2009 on how far the LCA has come and how it should be shaped for the future.

You can find out more about the LCA and this work at www.ncca.ie/seniorcycle

How do we n



Michael Phelps won a remarkable 8 gold medals in swimming at the 2008 Summer Olympics in Beijing, beating the previous record of 7 achieved by Mark Spitz in 1972. His swimming success is attributed to a number of unusual body features, one of which is his longer than usual arm span – it is almost 8 cm longer than his height.

What does 'longer than usual' mean? What is considered a 'normal' arm span for a given height? Are there normal (or expected) proportions in the human body?

These questions could prove a starting point for discussions by and with students. What do they think is the ratio between their own height and their arm span? Does their age make a difference? Is the proportion different for males and females? What other 'normal' proportions might exist in the human body?

Using a tape measure and/or a height chart, students can check their own heights and arm spans (in cm) and fill in the results in the table shown (or enter them in a spreadsheet, if a computer is available). The ratio for each student should then be calculated. Did they correctly predict the ratio? What is the average ratio for the group?



measure up?

Student	Height (h)	Arm Span (s)	Ratio s:h
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
etc.			

The results could be shown on a scatter-plot diagram, to see if there is a pattern. How does this compare with the supposed ratio of 1? More advanced work on the data collected could produce a 'line of best fit', or a more complex analysis of the results could be used to check whether, for this sample, the claim of Vitruvius (an ancient Roman architect) is upheld – that a man's arm span is the same as his height.

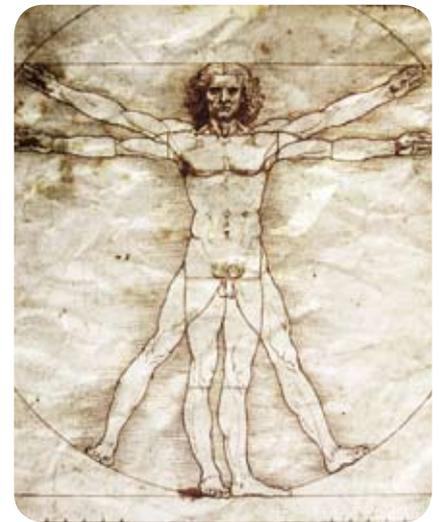
Vitruvian Man – where art meets mathematics!

While most people will readily associate Leonardo da Vinci with paintings like the Mona Lisa and the Last Supper, his interests and curiosity spread much wider than art and encompassed diverse areas such as engineering, anatomy, botany, mathematics and music. He was also an inventor and

his imagination and attention to detail enabled him to design some amazing artefacts, most of which it would not have been feasible to make in his lifetime, but which have fascinated scientists and engineers ever since.

One of da Vinci's iconic drawings is that of *Vitruvian Man* – named after Vitruvius, who related ideal human proportions to geometry in his treatise *De Architectura*. Da Vinci's drawing is accompanied by hand-written notes (in mirror writing!), clearly relating various 'units' of the human body (male) to the proportions described by Vitruvius.

In da Vinci's famous drawing, which is depicted on the Italian 1 euro coin, the outstretched male figure is simultaneously inscribed in a circle and a square. Different poses are possible using combinations of the arm and leg positions. With the arms stretched horizontally and the legs together, the figure is inscribed in the superimposed square while, with both arms and legs spread-eagled, the figure is inscribed in a circle.



As an extension activity, students could investigate other body measurements and proportions: length of the hand, length of the forearm, length of the upper arm, head height, head width, etc. They might also consider comparing their findings with an older set of students, or with data from an adult sample.

Interestingly, another feature of Michael Phelps which is said to have contributed to his swimming success is his 'disproportionately long' torso and his 'relatively short' legs. As before, discussion could centre on what these observations imply. Da Vinci might not approve, but it's hard to beat winning 8 gold medals at one Olympic Games!!



How did Da Vinci draw the Vitruvian man? Teachers may like their students to practise their construction skills while at the same time following in the footsteps of this great man.

Begin by distributing large copies of the diagram and have the students confirm that the centre of the circle is at the navel. Then, drawing a line directly from the centre through the nose, let them mark the top of the circle. Using a protractor, ask them to set out a sequence of angles from this point, each measuring 51.5° and mark the points on the circle. Students may notice the faint marks that are already there. Connect these points to make a 7-pointed star.

Did da Vinci use the 7-pointed star to create this figure? Notice the placement of the upper arms, the chest area, the outstretched arms and feet. Investigate whether 5- or 6-pointed stars could be used to similar effect. Ask students to draw an inverted 7-pointed star using a different colour; how does this outline the straight legs and chest area? On a new copy of the drawing, lightly draw x-y axes crossing at the navel. Bisect each quadrant to get the diagonals and bisect again to get 22.5° . Use these points to draw an 8-pointed star on the diagram. Let the students discover how this star coincides with the straightened arms and shoulders, the throat, the "third eye",

and where the legs join the torso. See how the head, elbows, knees and feet are highlighted. Did da Vinci use these divisions of the circle to get his proportions? Is there truly a da Vinci code?

Note that the golden ratio (Phi) is another ratio that is found in the human body.

Finding number patterns in nature can be both fascinating and motivating for students. An interesting extension of the above work, which might be more relevant for post-primary students, could be to ask them, in pairs, to think of two numbers. They should take the smaller number and add it to the larger one. Add the result to the larger of the two original numbers, and repeat this process several times. For example, if the original numbers were 7 and 10, adding them gives 17. Adding 17 and 10 gives 27, then 17 added to 27 gives 44, and so forth. They should do at least 12 additions to generate a sequence. Ask the students to find the ratio between the 13th and 12th terms (i.e. 13th term: 12th term). It may come as a surprise that, regardless of the numbers in the sequence, the ratio will always be the same – Phi, the golden ratio!

A Renaissance mathematician named Leonardo Pisano (better known by his nickname, Fibonacci) discovered that many animals reproduce – and some plants and trees locate their branches – according to a special sequence which was named after him. This sequence begins with 0 and 1 and then continues, following the pattern of addition already described.

The Fibonacci sequence is

0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144.....

It was Fibonacci who, following his travels to the East, introduced Arabic numerals to the West and saved us from a fate of having to enter Roman numerals into our calculators!

The Fibonacci sequence can be used to construct a Fibonacci spiral, by drawing successive quarter-circles with radii increasing according to the sequence above (but omitting the first two numbers). A web search will yield many examples of this spiral and ways of constructing it.

In the film *Pretty Woman* it was claimed that the length of a human foot is equal to the distance between the elbow and the wrist. Is this true?

Opening Minds



‘Now what I want is Facts.... Facts alone are wanted in life’.

(DICKENS, HARD TIMES).

Fortunately, not many of us would agree with this statement. We know that students (like us all) need more than the knowledge of facts. ‘Knowing about’ will only get you so far. ‘Knowing how’, and ‘knowing how to’, are also needed.

Modern life is changing at an ever increasing pace. Will what is being taught in schools now equip young people adequately for adult life? It is this type of question that regularly comes up when we discuss classroom practice and the curriculum. In the review of senior cycle, key skills have been developed in an attempt to empower students with the skills that they need for the future. These key skills are: information processing, critical and creative thinking, communicating, working with others and, being personally effective.

(You’ll find more information about key skills on our website and in issue 6 of **info@ncca**, at www.ncca.ie/news/newsletter.)

Similarly, work is underway in some ‘Opening Minds’ schools in England and last year we attended a conference in London to learn more about this approach.

Opening Minds is a competence-based curriculum framework which evolved

from research completed by the Royal Society for the Encouragement of Arts, Manufactures and Commerce (RSA). The RSA suggested that in place of the National Curriculum, which they view as information-driven, competences should be taught to provide young people with the skills and abilities needed to survive and succeed in their future world.

Rather than focusing on subjects, *Opening Minds* competences form the basis from which the curriculum is taught. Lessons are largely project-based and are three hours long. Each lesson focuses on developing one or more of the following competences:

- competence for learning
- managing information
- relating to people
- managing situations
- citizenship.

All schools and subject departments write up their own *Opening Minds* units to include and emphasise the teaching of the competences.

There are approximately 135 schools in England which have adopted the *Opening Minds* curriculum for use with Year 7. One school, the RSA Academy in Tipton, has been sponsored by the RSA to use the *Opening Minds*

approach throughout students’ post-primary education. It is currently in its first year of operation and close attention is being paid to see how teachers and students are getting on with the change.

Thus far, the schools involved have reported improvements in student behaviour, attendance, motivation and improved transfer from primary schools for students. However, some critics of the system believe that too much emphasis is placed on developing competences at the expense of learning core subject knowledge. Teachers, too, find the writing of competence based units very time consuming and report an increased workload.

When you have a chance, take a look at the work of *Opening Minds*, and see if it gives you any ideas for use in your own classroom. You might find the blog/comment board interesting where teachers reveal how they are experiencing this curriculum framework. The websites are www.thersa.org/projects/education and www.openingminds.org.uk.

Presentations from the conference can be found at: www.thersa.org/projects/education/opening-minds

Messages from research

Looking inside our schools

Research can tell us much that is interesting about the experiences of teachers and pupils or about the ways in which schools relate to parents. It can confirm for us what we have long suspected is the case but can't quite prove, or it can tell us that things are not necessarily the way we see them and challenge us by throwing new light on the familiar. Two recent pieces of NCCA-funded research provided just such confirmations and/or challenges (depending on your perspective) along with a great deal of interesting reading. The first piece, on science in primary schools, was conducted by St. Patrick's College, Drumcondra, and the second, on reporting to parents in primary schools, was conducted by University College Cork. Read on to find out whether your own views have been either confirmed or confounded.

Science in primary schools... What the kids think!



Do the pupils in your class love going on field trips? Do all the magnets in the school go missing when you begin planning for a lesson on forces? You are not alone!

The research project on science in primary schools was recently carried out by Dr. Janet Varley, Dr. Clíona Murphy and Órlaith Veale at St. Patrick's College, Drumcondra. Findings in the report, *Science in Primary Schools, Phase 1*, are based on data gathered from a case study involving 11 primary schools, and on a survey sent to 70 schools. Between October 2007 and February 2008, pupils from third to sixth class were observed during science lessons, many were interviewed and 1,030 pupils completed questionnaires. The findings and recommendations of the report give a fascinating insight into what our pupils think of the *Science Curriculum* and of the teaching and learning methods used.

'... it's very fun working in groups, because we can all help each other if we're stuck'.

(2ND CLASS PUPIL)



'We don't want to be sitting there being bored listening to a teacher going on about what science is. We just want to be doing it'.

(4TH CLASS PUPIL)

'I'd like to do more of going outside to learn science'.

(3RD CLASS PUPIL)

Findings

The good news contained in the report is that pupils are:

- generally enthusiastic about primary school science.
- very positive about hands-on science and particularly enjoy working in small groups.
- extremely enthusiastic about working on science outside the classroom.
- positive about visitors who have engaged them in scientific work at school and about going on science-related trips.
- positively disposed to the use of ICT in science.

Alongside the 'good news' some challenges were identified.

- Some pupils do not get regular opportunities to engage in hands-on science, and child-led investigations and design-and-make activities appear to be used infrequently.
- Pupils seem to have relatively few opportunities to develop scientific skills as teacher demonstration and explanation are dominant features of science lessons.
- Pupils rarely encounter field trips or engage with visitors/experts on scientific matters.
- Pupils' chances of using ICT in science lessons appear to be extremely limited.
- In general, pupils in primary schools do not get opportunities to relate their experiences in science in school to the wider world or to their own place in it.

Recommendations

The report makes a number of interesting recommendations about additional professional development, including science in pre-service education, and about that 'R' word – RESOURCES.

And the next steps...?

A second part of the research focuses on the pupils' perception of how their learning of science at primary level has prepared them for work in the subject at post-primary level. Stay tuned!

Reporting to parents, how primary schools do it

Reporting to parents in primary school: communication, meaning and learning

The research carried out by a team from UCC—Professor Kathy Hall, Dr. Paul Conway, Dr. Anne Rath, Dr. Rosaleen Murphy and Jacinta McKeon—compiled a ‘big-picture’ view of reporting. The team did this by analysing returns from a national sample of Irish primary schools and looking more closely inside six schools where they interviewed principals, teachers, parents and children. So, what did they find, and do the findings confirm what we already thought or offer us new insights to think about?

You knew, for example, that teachers find parent-teacher meetings to be more significant than written reports when helping parents to understand and support their children’s progress. But, did you know that almost one in six primary schools do not send written reports home to parents?

What do teachers believe to be most important in reporting on children’s progress?

Teachers and principals are very concerned to represent children’s learning positively and honestly in written reports and in meetings with parents, as evidenced by this statement from a principal: *‘nothing should come as a surprise’*. Teachers and principals expressed their concern about the potential negative impact on children of critical reports. So, especially in written reports, they are conscious of walking a kind of tightrope between being accurate and being supportive of the child.

Typically, how long do primary schools keep copies of records and reports about pupils’ progress?

As you can imagine, the answer to this is...it varies from school to school. But the research report does tell us that over 40% of Irish schools keep reports on file until the child is 21 years old, with a further third of schools keeping the reports until the child has left post-primary school.

Does the research report challenge assumptions at all?

Yes, it does, in a number of areas. One of the most interesting of these is where the research team discovered that the perceptions of teachers and parents didn’t always tally. All of the schools said that, as far as those very important informal contacts between school and parents went, they operated an ‘open door’ policy. Parents were free to ‘drop in any time’ and have a chat with their child’s teacher. While some parents confirmed this to be the case, others felt that their access was more restricted and they were reluctant to ask teachers to explain or go into greater detail about what was in their child’s report. In fact, this emerges as a general theme from the report, that the process of reporting on pupil progress should ideally take the form more of a conversation – a sharing of meaning – between teacher and parent and less of a one-way giving of information.

Does the research say anything really positive about reporting practice?

Very much so. The report is full of interesting echoes of the voices of ‘real’ teachers, parents and children. The researchers found not a single child who was indifferent about their school report – getting a report is a really important event for them. Schools, too, seemed prepared to reach out in creative ways to meet with parents and keep them informed about their children’s progress. For example:

‘One... school’s exceptional approaches to involve and communicate with parents about children’s learning include bi-weekly newsletters, coffee mornings, food fairs and other inter-cultural events’.

And the next steps...?

The report recommends that, in the light of the increased emphasis on assessment and reporting:

‘...schools have the opportunity to engage in within-school, across-school, and especially within-level/class professional dialogue about evaluations of children’s learning. We also recommend that schools have the opportunity to develop exemplars that would support the production of narrative accounts of children’s learning that are trustworthy’.

Research reports are an important part of the conversations we have about our work in education. They may not tell the full story or offer definitive answers, but they are all the more interesting for that.



You can download both of the reports (*‘Science in Primary Schools, Phase 1’* and *‘Reporting to Parents in Primary School: Communication, Meaning and Learning’*) or read them online at www.ncca.ie/publications

Early childhood education

Reconsidering the basics

To find out more about the conference, go to www.eecera.org.

The 18th international European Early Childhood Research Association (EECERA) conference, *Reconsidering the Basics in Early Childhood Education* was held in Norway in September. 'Transitions' was one of the key themes at this year's conference and infant teachers in particular will be interested in some ideas and suggestions from various sessions.

Infant teachers are very aware of the many transitions during children's lives, and even during the course of one day, as they change from home to school and back again and as they change between activities. A key transition is the initial move to primary school and we have gathered some ideas from EECERA to help make this particular transition easier for all involved:

- Before the summer talk to older classes about their first day in school and the things that the teacher/parents should do to make the transition easier for children entering school. Follow their advice!
- Arrange visits beforehand not only with parents and children but also invite 'feeder' pre-schools (children and practitioners) to visit too.
- Visit the 'feeder' pre-schools yourself. Meet the children and practitioners and see the kind of environment the children are coming from. Take note of how the areas are organised and the types of signage and pictorial representation used, and replicate some of these in your classroom to make the transition smoother. Chat to the children about what they will be doing in big school.
- When parents visit, encourage them to take photos of the different areas (the classroom, playground, toilets) and to talk about them at home. Explain to parents how the child's day will be organised.
- Provide a welcoming environment for every child and family, have bright welcome signs in children's home languages (ask for help from older classes).
- Ask for photos of children and for pieces of their 'work' from pre-school/home and display these in the classroom for their first day.
- Do lots of pair and small group work so that children can get to know each other.
- Organise a buddy system involving older children including siblings.
- Talk to the children about how they are settling in and about the new experience. Listen to and respond to their perspectives on the transition to school. Ask for ideas on how to make it easier/better. Read stories about first experiences.
- Remember smells! Every school has its own smell especially the toilets!! Why not ensure there is some nice soap or an air freshener? Maybe hang up some of the children's art work in there or paint the door or the skirting boards a bright colour.
- Organise playground activities and games and involve older children. Being in a large open space with a lot of other bodies, most of whom are bigger than you can be a very daunting experience!

Experiencing a smooth transition to primary school can make it even more enjoyable and exciting for children.

For further information on any of the projects mentioned in this issue, please visit our website at www.ncca.ie.

To comment on info@ncca or suggest topics for inclusion, email: newsletter@ncca.ie

