

SAINT BRIGID'S NATIONAL SCHOOL



Beech Park Lawn, Castleknock, Dublin 15

Roll 00697S

SCHOOL IMPROVEMENT PLAN

NUMERACY

YEAR 1 SEPTEMBER 2015 TO JUNE 2016

YEAR 2 SEPTEMBER 2016 TO JUNE 2017

YEAR 3 SEPTEMBER 2017 TO JUNE 2018

School Improvement Plan Numeracy

TABLE OF CONTENTS

	<u>PAGE</u>
Introduction	2
Sources of Evidence	2
School Improvement Plan	3
Summary of Areas of Main Strengths	3
Summary of Area Requiring Improvements.....	3
Key Improvement Targets.....	3
Summary of School Improvement Plan Year 1.....	4
Actions	4
Summary of School Improvement Plan Year 2.....	5
Actions	5
Summary of School Improvement Plan Year 3.....	6
Actions	6
Summary of Jun & Sen Infants Pupils' Questionnaire May 2015	7
Summary of 1 st & 2 nd Class Pupils' Questionnaire May 2015	7
Summary of 3 rd – 6 th Class Pupils' Questionnaire May 2015.....	8
Summary of Teacher Questionnaire in Maths	9
Summary of Parent Questionnaire in Maths	11
Summary of Standardised tests 2013/2014 & 2014/2015.....	12
Compliance with Circulars Checklist	13

Report of School Improvement Plan, June 2015.

Introduction

A school self-evaluation of teaching and learning in Numeracy was undertaken during the school year 2014/2015. A Maths focus group with representation from all class levels was set up and meetings held. The focus group conducted a SCOT analysis (Strengths, Concerns, Opportunities, Threats) based on the key areas of the Maths curriculum and the results of the Standardised Maths Scores (Drumcondra) from June 2013 & 2014.

In line with the requirement of Circular 0039/2012 and other directives from the Department of Education & Science, our school produced a School Self-Evaluation (SSE) report for Numeracy in June 2015.

School Self Evaluation is a collaborative, reflective process of internal school review. During school self-evaluation, the principal, deputy principal and teachers, under the direction of the Board of Management and patron, and in consultation with parents and pupils, engage in reflective enquiry on the work of the school.

School self-evaluation of teaching and learning of Numeracy in St. Brigid's School was undertaken during the school years 2014/2015. The following is a summary of the findings and a plan for our school improvements in the area of Numeracy.

Sources of Evidence:

The following evaluation methods were used during the process of compiling our report:

- Staff Review (SR)
- Maths Focus Group (FG) with representation from all class levels. The focus group conducted a SCOT analysis (Strengths, Concerns, Opportunities, Threats) based on the key areas of the maths curriculum.
- Analysis of assessment data and information. Both qualitative (staff observations and views) and quantitative (Standardised Maths (Drumcondra) from June 2014 and teacher generated tests)
- Review of school documents and reports: Curriculum Statement for Numeracy, individual long-term class level Maths plans, fortnightly plans and monthly progress reports.
- Teacher Questionnaire (TQ)
- Pupil Questionnaire (PQ)
- Parent Questionnaire (PTQ)

School Improvement Plan-Numeracy

A school improvement plan (SIP) for Numeracy was prepared in tandem with our SSE report.

The SIP identified our areas of strengths and our areas requiring improvement as well as 4 improvement targets, all of which are outlined below:

Summary of Areas of Main Strengths:

- Standardised test results for Numeracy are above the National Norms.
- There is a designated room for Maths resources.
- Maths resources and varied concrete materials are used frequently (TQ).
- Staff members have high expectations for students' achievement.
- Numeracy Posters and information support teaching and learning of maths in the classroom (PQ).
- Maths is celebrated through displays of pupils' achievements and work e.g. bar charts (PQ).
- Homework allocation is suitably differentiated throughout the school (PQ).
- Fruitful collaboration occurs between parents, teachers and learning support team (TQ & PTQ).
- Children enjoy Maths and have confidence in their ability (PQ).
- Supportive parents who integrate Maths into their working day (PTQ).
- Children and parents report that they are confident in their ability to use tables to develop accuracy in computation (PQ & PTQ).
- Pupils and teachers enjoy success in Mental Maths activities (TQ & PQ).

Summary of Areas Requiring Improvements:

- Consistent language of maths and methodologies to be adopted at class level as per school plan (TQ).
- The language of problem solving and suitable strategies employed (TQ).
- Problem solving related to number, extended patterns, fractions, decimals, percentages and measures (TQ, PTQ, PQ).
- Focused regular feedback to pupils and parents on ongoing progress in maths (PTQ).
- Targeted communication with parents through website (PTQ).

Key Improvement Targets:

- Adopt a uniform approach to the teaching and learning of the four key operations of number.
- Adopt consistency in Maths Vocabulary at each class level.
- Adopt a whole school approach in relation to the teaching of **Problem Solving** in the area of **Number**.
- Adopt a means of providing regular **feedback** to pupils and parents on maths progress through regular class tests.
- Provide parents with maths websites to utilise at home.
- Adopt a whole school approach to the teaching of **fractions, decimals and percentages**.
- Adopt a whole school approach to the teaching of **measures**.
- Communicate with parents agreed teaching methods of number operations relevant to class levels.

The work on our SIP is ongoing.

Summary of School Improvement Plan Year 1

In year 1 we wish to develop a whole school approach to the teaching of the language of **problem solving in number**. Infants will integrate this approach in Aistear.

All classes from 1st to 6th will implement regular focused feedback regarding pupils' progress in Maths through regular testing which includes formative feedback on progress.

We will compile suitable Maths websites, games and apps which will be available on the school app and website for parents to utilise at home.

Actions

- To provide CPD with PDST advisor on Problem solving for teachers.
- Teachers will incorporate the teaching of Problem solving into a Whole School “Problems On Wednesday” (POW) approach.
- Teachers will engage in class level planning meetings to agree Maths language associated with problem solving in Number as per the school plan.
- Teachers will display word banks related to appropriate Maths language of Number.
- Teachers will provide regular focused feedback regarding Maths progress through regular Maths tests from 1st to 6th class.
- Teachers will engage in class level planning meetings to agree consistency in the language of number as per school plan.
- The school website will list suitable Maths websites, games and suggestions.

Summary of School Improvement Plan Year 2

In year 2 we wish to develop a whole school approach to the teaching of the language of **problem solving** in **Extending Patterns** (Infants), **Fractions** (1st-6th), **Decimals** (3rd-6th) and **Percentages**(5th-6th).

Infants will integrate this approach in Aistear.

We will develop a whole school approach to the teaching of the following strategies of **problem solving**:

- Drawing a picture to explain a problem.
- Solving a simpler version of a problem.
- Making a chart or table of the information.
- Making a guess and testing it out.

We will use the local environment to create a variety of maths trails which will have a clear problem solving focus (**Extending Patterns** (Infants), **Fractions** (1st-6th), **Decimals** (3rd-6th) and **Percentages**(5th-6th).

All classes from 1st to 6th will continue to implement regular focused feedback regarding pupils' progress in Maths through regular testing which includes formative feedback on progress. Checklists will be devised as an "Assessment For Learning" (AFL) tool.

Actions

- Teachers will engage in class level planning meetings to agree Maths language associated with problem solving in Number (All), **Extending Patterns** (Infants), **Fractions** (1st-6th), **Decimals** (3rd-6th) and **Percentages**(5th-6th) as per the school plan.
- Teachers will display word banks related to appropriate Maths language of the above.
- Teachers will engage in class level planning meetings to agree consistency in approach to the teaching of problem solving strategies.
- Teachers will display word banks related to problem solving strategies as agreed at class level.
- Children will be supported in developing their problem solving strategies through use of checklists upon completion of class test.
- Maths trails (at least 2) with a focus on Number (All), **Extending Patterns** (Infants), **Fractions** (1st-6th), **Decimals** (3rd-6th) and **Percentages**(5th-6th) will be devised by class teachers.
- Teachers will continue to incorporate the teaching of Problem solving into a Whole School "Problems On Wednesday" (POW) approach.
- Teachers will continue to provide regular focused feedback regarding Maths progress through regular Maths tests from 1st to 6th class. Checklists will be devised and utilised as an "Assessment For Learning" (AFL) tool.
- The school website will list additional suitable Maths websites, games and suggestions.

Summary of School Improvement Plan Year 3

In year 3 we wish to develop a whole school approach to the teaching of the language of **problem solving** in **Measures** (Length, Weight & Capacity). Infants will integrate this approach in Aistear.

We will develop a whole school approach to the teaching of the following strategies of **problem solving**:

- Using appropriate equipment to solve the problem eg. balance/measuring instrument, calculator, counters.
- Looking for patterns in a problem.
- Writing a number sentence to solve a problem.

We will continue to use the local environment to create a variety of **maths trails** which will have a clear problem solving focus (Measures).

All classes from 1st to 6th will continue to implement regular focused feedback regarding pupils' progress in Maths through regular testing which includes formative feedback on progress.

Actions

- Teachers will engage in class level planning meetings to agree Maths language associated with problem solving in Measures as per the school plan.
- Teachers will display word banks related to appropriate Maths language of the above.
- Teachers will engage in class level planning meetings to agree consistency in approach to the teaching of the additional problem solving strategies.
- Teachers will display word banks related to all problem solving strategies as agreed at class level.
- Maths trails with a focus on Measures will be devised and utilised by class teachers.
- Teachers will continue to incorporate the teaching of Problem solving into a Whole School "Problems On Wednesday" (POW) approach.
- Teachers will continue to provide regular focused feedback regarding Maths progress through regular Maths tests from 1st to 6th class. Checklists will continue to be utilised as an "Assessment For Learning" (AFL) tool.
- The school website will list additional suitable Maths websites, games and suggestions.

**Summary of Junior Infants & Senior Infants
Pupils' Questionnaire May 2015.**

	Junior Infants	Senior Infants	Results-Average overall
Favourite topics	Games 45% Writing Numbers 18% Activities 18% Bookwork 18%	Games 40% maths in head 21% maths in books 20% Activities 19%	Games 43% Activities 19% Bookwork 15%
Least favourite topics	Bookwork 42% Activities 21% Games 20% Writing Numbers 17%	Activities 33% maths in head 31% maths in books 18% Games 17%	Bookwork 30% Activities 27% Games 19%
Like maths	77%	77%	77%
think they are good at maths	81%	91%	86%
think maths is easy	76%	79%	78%
like counting	78%	66%	72%
do mathas sums in head		81%	
use my fingers to add		90%	
use cubes/number line to help me add		87%	

Summary of 1st & 2nd Pupils' Questionnaire May 2015.

	1st	2nd	Results-Average overall
Favourite topics	Games 69% Brainteasers 9% Sums in copy 7% Concrete measures 7%	Games 43% Sums in copy 13% Concrete measures 11%	Games 56% Sums in copy 10% Concrete Measures 9% Brainteasers 9%
Least favourite topics	Sums in copy 31% Concrete counting 27% Mathemagic 15%	Sums in copy 27% Fractions 15% Concrete adding 14%	Sums in copy 29% Concrete adding 20.5% Fractions 15% Mathemagic 15%
Maths Trails	22%	52%	
Concrete Materials	90%	91%	
Like problem-solving	62%	51%	

Summary of 3rd -6th Pupils' Questionnaire May 2015.

	3rd	4th	5th	6th	Results-average score
Favourite topics	Data 27% Tables 16% Money 11%	Tables 20% Data 16% Shape 15%	Data 18% Percentages 17% Shape 11%	Tables 20% Data 14% Money 13%	Data 19% Tables 19% Shape 13% Money 12%
Least favourite topics	Word Prb. 20% Measures 16% Data 14%	Fractions 27% Word Prb. 22% Time 13%	Word Prb. 21% Time 16% Fractions 13%	Word Prb. 27% Measures 14% Fractions 12%	Word Prb. 24% Fractions 17% Measures 15% Time 15%
Maths Trails	59/110=54%	63/104=61%	44/115=38%	5/107=5%	
Concrete Materials	61/110=55%	46/104=44%	63/115=55%	32/107=30%	
Like problem-solving	63%	60%	69%	41%	
Problem-solving strategies	Simpler version	Simpler version	Simpler version	Making a guess.	

Summary of Teacher Questionnaire in Maths

	Strongly Agree	Agree	Disagree
I like teaching maths	58%	42%	0%
Pupils have a positive attitude towards maths	47%	44%	6%
Agreement on homework at class level	39%	31%	14%
Agreed differentiated approach to homework for less able pupils	8%	17%	58%
Maths plan informs my planning	17%	44%	39%
Resources & materials are readily available	19%	61%	17%
ICT maths resources are readily available	11%	56%	28%
Resources for teaching maths in the local environment are available	6%	33%	58%
I implement a whole school approach to teaching number facts	6%	22%	53%
Addition strategies as per school plan are followed	8%	31%	39%
Opportunities are provided for pupils to learn from peers	22%	56%	22%
I use a variety of tools to monitor pupils' attainments	22%	69%	8%
I find it difficult to cater for the needs of all pupils	31%	53%	14%
There is adequate support for pupils experiencing difficulty	14%	36%	42%

	Number	Algebra	Data	Measures	Shape & Space	Early Maths Activities
Favourite strand	61%	0%	19%	14%	6%	0%
Most challenging strand to teach	25%	22%	8%	28%	8%	6%
I use concrete materials for...	89%	36%	61%	100%	97%	31%
I use ICT for....	75%	31%	56%	44%	61%	11%
I use school environment for.....	39%	14%	61%	75%	83%	14%
Adequately assessed	97%	50%	53%	61%	56%	22%

	All of the time	Most of the time	Some of the time	Seldom	Never
My Maths lessons do not depend on the text books	3%	47%	36%	14%	0%
I encourage pupils to use suitable maths language across the curriculum	28%	42%	25%	0%	0%
I use ICT for....	75%	31%	56%	44%	61%
I use school environment for.....	39%	14%	61%	75%	83%

Teachers reported that problem solving questions regularly included the following:

1. Word problems (78%)
2. Games (73%)
3. Puzzles (50%)
4. Practical investigations (42%)
5. **Maths Trails (28%)**
6. Open-ended tasks (23%)
7. ICT (19%)
8. Missing/surplus information (14%)
9. **Strategies e.g. RUDE (14%)**
10. Projects (3%)

Summary of Parent Questionnaire in Maths

	Yes	No	Don't know
My child likes maths	84%	12%	4%
I know my child's strengths in maths	69%	15%	17%
I know my child's difficulties in maths	49%	31%	21%
My child currently attends learning support	9%	91%	0%
I link maths to everyday activities at home	78%	20%	2%
There is adequate communication with the school regarding my child's progress	58%	32%	10%

Parents reported that they supported their children's learning in maths at home through participation in the following:

- Telling the time, tv time-table
- Timing baking, play activities, tidy up, journey times, tv programmes
- Naming days, day before, day after, birthday date and month
- Tables competitions, tables posters, tables games
- Using measure for baking and cooking: grammes, kgs, half kg, litres, ml.
- Shopping lists, change,
- Apps on i-pad
- Puzzles, number patterns, Sudoku

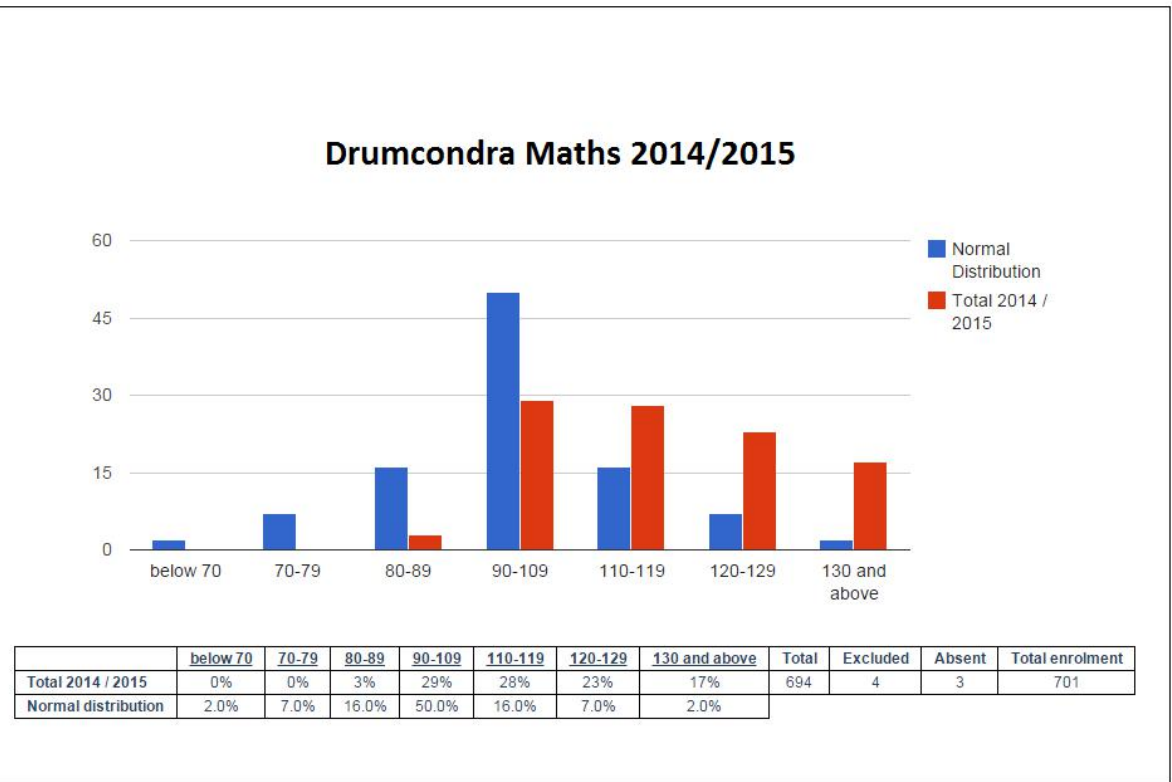
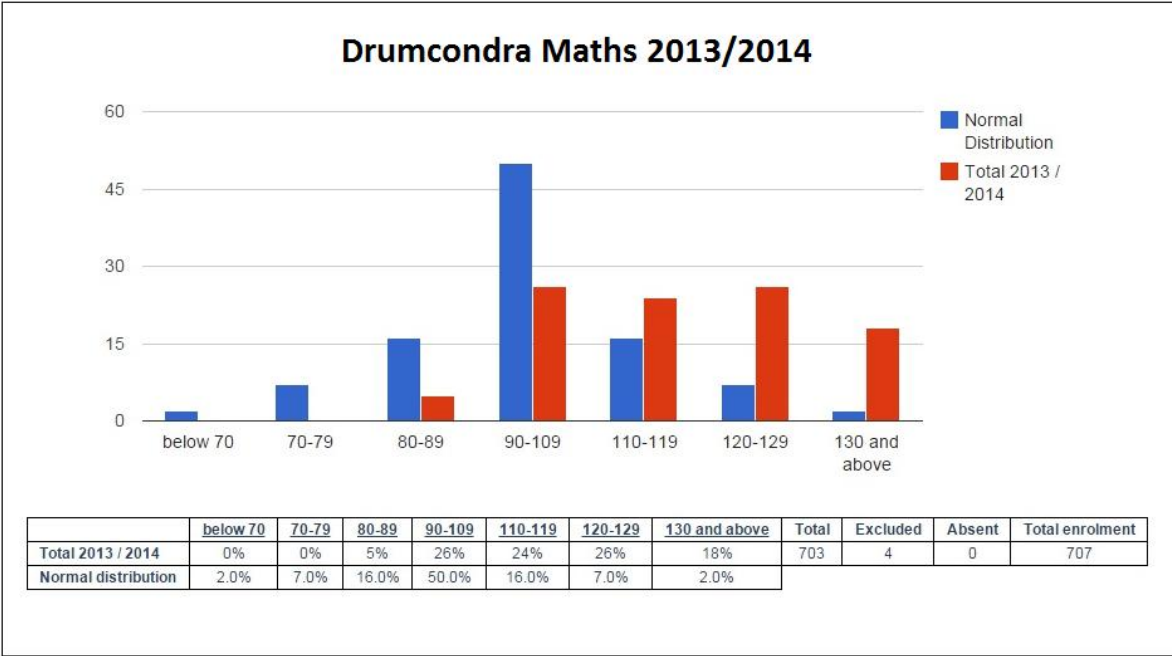
The most common areas that parents reported that children experienced difficulty were:

1. **Problem solving (33)**
2. Fractions (19)
3. Decimals (15)

Parents made the following suggestions regarding support for their children's learning in maths:

1. **Web-games and apps on school website/app (25)**
2. **Regular tests with feedback (21)**
3. Increased face-to-face contact with teacher (14)
4. Workshops explaining methodologies and teaching ideas (9)

Results of standardised tests 2013 / 2014 & 2014 / 2015



COMPLIANCE WITH CIRCULARS CHECKLIST

Rules and regulations for schools are set out in a number of Education Acts, and in Circulars issued to schools from time to time by the Department of Education and Skills. The list below deals with important areas of school life and tells you what rules and regulations apply to them. You will find the Acts and Circulars mentioned on the Department's website, www.education.ie.

Which area of school life is involved, and what are the regulations?	Is the school following the regulations fully
<p>The school calendar and the school timetable</p> <p>Circular 11/95 sets down the length of the school year - minimum of 183 days</p> <p>Circular 11/95 sets down the length of the school day</p> <p>4 hours 40 minutes (infants);</p> <p>5 hours 40 minutes (1st-6th classes)</p>	<p>Yes</p> <p>Yes</p>
<p>Parent/ teacher meetings and staff meetings</p> <p>Circular 14/04 sets out the arrangements for these meetings</p>	<p>Yes</p>
<p>Implementation of agreement regarding additional time in school for teachers</p> <p>Circular 0008/2011 requires teachers to do an additional 36 hours of out-of-class work each year, so as not to reduce teaching time</p>	<p>Yes</p>
<p>Standardisation of school year</p> <p>Circular 034/2011 gives the dates for school holidays</p>	<p>Yes</p>
<p>Valid enrolment of pupils</p> <p>Sections of the Education Act 1998 and the Education (Welfare) Act 2000, and the Rules for National Schools set out the conditions for pupils to be validly enrolled in a school</p>	<p>Yes</p>
<p>Pupils repeating a year</p> <p>The circumstances in which pupils may repeat a year are set out in Rules for National Schools, and circulars 11/01 and 32/03</p>	<p>Yes</p>
<p>Development of school plan</p> <p>Section 21, Education Act 1998 requires all schools to have a school plan</p>	<p>Yes</p>
<p>Engagement with SSE process</p> <p>Circular 39/2012 outlines the school self-evaluation process and what it requires of schools</p>	<p>Yes</p>
<p>Time for literacy and numeracy - assessing and reporting literacy and numeracy achievement</p> <p>Circular 56/2011 sets out initial actions required in the implementation of the National Literacy and Numeracy</p>	<p>Yes</p>

Strategy	
Exemption from Irish Circular 12/96 sets out the circumstances in which children are exempt from studying Irish	Yes
Implementation of child protection procedures Circular 0065/2011 and the Child Protection Guidelines oblige schools to ensure that: liaison persons have been appointed; the procedures have been communicated to the whole school community; and the procedures are being followed	Yes
Implementation of complaints procedure as appropriate Section 28 Education Act 1998 provides for procedures to address complaints about a school.	Yes
Appeals in the case of refusal to enrol students, suspension and expulsion (permanent exclusion) Section 29 Education Act 1998 provides for appeals procedures in these cases, which are dealt with first of all by the school. Where cases are not resolved at school level, an external appeals committee hears the appeal and makes a decision.	Yes

What area of school life does the policy deal with and what is the aim of the policy?	Has policy been approved by the board of management?
<p>Enrolment policy</p> <p>Section (15)(2)(d) Education Act 1998 obliges schools to have and publish an enrolment policy that respects the principles of equality and parental choice</p>	Yes
<p>Code of behaviour</p> <p>Section 23, Education (Welfare) Act 2000, and the 2008 National Educational Welfare Board Guidelines set out regulations and good practice for schools to follow in drawing up and implementing a code of behaviour</p>	Yes
<p>Anti-bullying policy</p> <p><i>Anti-bullying Procedures for Primary and Post-primary Schools</i>, 2013 sets out regulations and good practice for schools to follow in drawing up and implementing an anti-bullying policy</p>	Yes
<p>Attendance and participation strategy</p> <p>Section 22 Education Welfare Act 2000 requires schools to develop a strategy to support high levels of pupil attendance and participation in school life</p>	Yes
<p>Health and safety statement</p> <p>All schools should have a health and safety statement that is regularly reviewed (see Section 20 Health and Safety Act 2005)</p>	Yes
<p>Data protection</p> <p>School procedures relating to gathering, storing and sharing data on pupils should comply with data protection legislation - Data Protection Act 1988</p> <p>Data Protection (Amendment Act) 2003</p>	Yes
<p>Internet acceptable use policy</p> <p>Schools should have and implement a policy to instruct pupils on safe and responsible use of the internet. See www.webwise.ie for guidelines</p>	Yes
<p>Special education needs policy</p> <p>Various pieces of equality and education legislation, especially the Education for Persons with Special Education Needs Act (EPSEN) 2004, require schools to be inclusive of pupils with special educational needs and to provide for them appropriately using the resources available</p>	Yes
<p>Relationships and sexuality education (RSE) policy</p> <p>Schools are required to have an RSE policy and to implement it in line with Relationships and Sexuality Education: Policy Guidelines (1997)</p>	Yes
<p>Substance use policy</p> <p>The National Drugs Strategy and Department Guidelines require schools to develop and implement a policy on substance use, in partnership with parents and other agencies</p>	Yes
<p>Child protection policy</p>	Yes

Circular 0065/2011 sets out requirements (see above for details of policy and implementation)	
Parents as partners Circular 24/91 requests schools to set up a parents' association, and promotes partnership between home and school	Yes
Deployment of special needs assistants Circular 71/11 allows for SNAs to be deployed flexibly to respond to the needs of the school	Yes
Other	