Primary Curriculum Review and Redevelopment

Written submission template for organisations, groups and individuals responding to the *Draft Primary Curriculum Framework*

This template is intended to support you (and your colleagues/organisation) in developing a written submission in response to the *Draft Primary Curriculum Framework*. Please e-mail your completed submission to PCRRsubmissions@ncca.ie

Individual submission details

Name	PDST Primary STEM Team
Date	
E-mail	

Organisation submission details

Name	
Position	
Organisation	
Date	
E-mail	

The NCCA will publish written submissions received during the consultation. The submissions will include the author's/contributor's name/organisation. Do you consent to this submission being posted online?

Yes **√** No

Please provide some brief background information on your organisation (if applicable).

The remainder of the template includes two sections. Section 1 invites your overall comments and observations on the *Draft Primary Curriculum Framework*. Section 2 is structured to align with the six key messages related to the framework. Each message is summarised as a support for you in working on the submission.

Section 1

Please outline your overall response to the *Draft Primary Curriculum Framework.*

The introduction of a new primary school curriculum is to be welcomed, with many aspects including meta-practices, digital learning, creativity and well-being featuring strongly throughout. It is positive to see a holistic approach to assessment. Through the following sections, we hope the feedback we provide will convey the key positives and along with some concerns we have.

There may be an oversight on the important role that science and/or STEM plays in the overall contribution to key competencies of the draft framework. There is an opportunity to consider scientific thinking as a key competency in the 21st century similar to being mathematical. Possible suggestions include:

Being Mathematical *and Scientific*.

- Thinking and communicating mathematically *and scientifically*
- Solving problems and making sense of the world using mathematics *and science*
- Consider rewording 'Estimating, predicting and calculating' to *'Confidently using maths and science skills to estimate, predict and calculate'*
- Recognising relationships, trends, connections and patterns *within maths and our scientific world*
- Interpreting and processing information and data

Ireland gives one of the lowest time allocations to primary science in Europe. Performance in science was moderate, with Fourth Class children achieving a score that was significantly lower than children in 15 countries, similar to nine countries (ERC Research Series: Report 5, 2020). It could be inferred from the "moderate" performance of our fourth class children in the TIMMS 2015 assessment that the teaching and learning of science in the primary classroom needs to be addressed and has been a concern for many years (Inspectorate Report 2008). It is therefore the view of the PDST Primary STEM team that science needs a weekly allocation of at least one hour per week, if not more, to allow for curriculum content and skills to be embedded meaningfully.

In the midst of a global pandemic, there has never been a more important moment for our children to be scientifically literate and to understand the work of scientists through the Nature of Science from the earliest age possible. There is mention in the new draft framework of continuity of learning in a trajectory from preschool to primary to the Junior Cycle. Nature of Science plays a key part in Junior Cycle science with Nature of Science being referenced in the Primary Science Curriculum in 1999. Bringing Nature of Science back into focus in primary school will be important for learners becoming scientifically literate. Being cognisant of the needs of society; teachers, teacher educators and learners have a great opportunity to have science as a central competency in the new draft framework.

The STEM Education Policy in 2017 and the Inspectorate Report on STEM Education in 2020, make it clear that STEM has become an important curricular area. There may need to be clarification on the positioning of STEM education in the Irish primary classroom. STEM education has been omitted from the draft framework and further clarification may be needed on its role and how it can be supported.

Some key concerns that relate to STEM are:

- Is STEM to be part of the new primary curriculum framework?
- A clear definition of STEM is needed that is consistent across all sectors of education in Ireland for clarity and cohesion of teaching and learning and what is the role of maths and science education within this.
- Where will STEM fit in within this new curriculum?
- Will teachers use only Science time allocation for STEM activities and what effect will this have on core science content and skills?
- How will global issues such as sustainability and climate change be addressed in this new curriculum?

There may be a need for greater clarification on the difference between 'Technology Education' at stage 1 and 2 and 'Technology' at stage 3 and 4. Teachers currently interpret 'technology' as 'digital technology'. At present, digital technology is not a curricular area but rather a tool and methodology. Perhaps leaving the term 'Design and Make' as part of science will avoid any misunderstanding regarding terminology.

In conclusion, the introduction of a new Draft Primary Curriculum Framework is broadly welcomed. It has a clear and ambitious vision that aims to be inclusive for all learners.

Section 2

Agency and flexibility in schools

The Draft Primary Curriculum Framework proposes that the redeveloped curriculum will:

- Be for every child.
- Recognise teachers' and principals' agency and professionalism to enact the curriculum in their individual school context.
- Give more flexibility to schools in terms of planning and timetabling to identify and respond to priorities and opportunities.
- Connect with different school contexts in the education system.
- Give greater opportunities for flexibility and choice for children's learning.

The *Draft Primary Curriculum Framework* outlines important messages in relation to agency and flexibility in schools. Please give your overall feedback in relation to this key message.

Be for every child:
This message is conveyed clearly in this document. It is proposed that curriculum specification developments will draw on the principles of Universal Design for Learning (UDL). UDL is mentioned only once in the draft framework and no description of same is given. In our experience, teachers in general are not familiar with UDL. Is it envisioned that teachers will receive CPD in relation to UDL?

We feel that the "digital divide", which has become very apparent since March 2020, will need to be addressed to ensure equity of opportunity and participation for all.

Recognise teachers' and principals' agency and professionalism to enact the curriculum in their individual school context.

In our opinion, it is very positive that "the curriculum and principles recognise teachers as committed, skillful and agentic professionals in a complex role…" (p. 21). This suggests an approach that places teachers and principals at the centre of the education process. In order for this to be enacted however, there would need to be policy changes across the educational sector. In particular, consideration would need to be given to how schools are evaluated.

Ongoing opportunities for teachers to engage in Lesson Study would promote teacher agency. Lesson Study has been found to positively support the development of teacher agency in three ways (Lukacs, 2009):

1. Development of pedagogical knowledge
2. Collaborative expertise
3. Professional Community membership

School leaders will need ongoing support and time to enact curriculum change. The School Self Evaluation (SSE) process will hopefully support schools in implementing these changes.

The section on assessment strongly supports teachers being agentic professionals, however, the current system of administering and reporting standardised tests seem to be at odds with this. Is it envisaged that this practice will continue?

It will be important that all suggested supports on page 26 of the document are implemented.

Give more flexibility to schools in terms of planning and timetabling to identify and respond to priorities and opportunities

High levels of teacher knowledge with regard to both content and suitable pedagogies will be essential for teachers to maximise the benefits of having greater flexibility in relation to planning and timetabling.

This increased flexibility will be a positive move for schools. Many schools are currently concerned with being accountable for time spent on local or national projects and subsequently opt out for fear of not being compliant with their curriculum responsibilities.

Although integration is a key feature in the 1999 curriculum, it is our experience that many teachers are used to teaching subjects as separate, distinct entities. As the Primary STEM team, we know that there are many opportunities for meaningful integration across subject areas. Some schools already take an integrated approach to teaching and learning. For schools that may not be familiar with teaching in this way, they can avail of sustained support to make positive, meaningful changes to their practice. School communities will need to be afforded adequate time to familiarise themselves with any new curricula and have time as a staff to discuss and plan for a whole school approach to same.

Home-school supports (eg: explanatory videos, documents for parents/guardians etc) for schools would be required to communicate clearly that a school is allowed this level of flexibility and to avoid comparisons with other schools in the area.

Connect with different school contexts in the education system.

The increased levels of flexibility described in this document will empower schools to make decisions based on their own school context.

Give greater opportunities for flexibility and choice for children's learning.

If it is intended that future curricula will be based on the principles of UDL, then this should allow for greater opportunities for flexibility and choice for children's learning. However, to ensure that the principles of UDL are realised in teachers' classroom practices then ongoing, sustained support in relation to UDL will be required for all teachers. Additional CPD will be necessary for all members of the leadership and management teams in schools if they are to successfully lead change in their schools and the successful implementation of successive curricula. They will need a comprehensive

understanding of UDL and support in how to lead it in their own school. For those teachers working in special classes and special schools, UDL will align with many of their current practices.

The vast majority of teachers incorporate differentiation into their teaching and although UDL and differentiation can share some common features, however UDL will require a change in mindset for many teachers.

It may be useful to ensure all teachers are introduced to UDL in advance of any new curricula being published. A working definition of UDL in an Irish primary classroom would be essential and practical examples would need to be included in the toolkit.

Curriculum connections between preschool, primary and post-primary schools

The Draft Primary Curriculum Framework proposes that the redeveloped curriculum will:

- Provide a clear vision for children's learning across the eight years of primary school.
- Link with learning experiences provided through the themes of the *Aistear*: *the Early Childhood Curriculum Framework* and connect with the subjects, key skills and statements of learning in the *Framework for Junior Cycle*.
- Support educational transitions by connecting with what and how children learn at home, in preschool and post-primary school.

The *Draft Primary Curriculum Framework* outlines important messages in relation to curriculum connections between preschool, primary and post-primary schools. Please give your overall feedback in relation to this key message.

Provide a clear vision for children's learning across the eight years of primary school.

It is positive to recognise the input preschool has on primary education as well as the family and community. Including all of these aspects will holistically develop, "attitudes, concepts, dispositions, knowledge, skills and values." (p. 19)

Link with learning experiences provided through the themes of the Aistear: the Early Childhood Curriculum Framework and connect with the subjects, key skills and statements of learning in the Framework for Junior Cycle.

It is encouraging to see how Aistear is being linked to the eight principles of the Draft Primary Curriculum Framework and to the principles of the Framework for the Junior Cycle, demonstrating continuity in vision and teaching and learning.

Aistear is ten years old and is rich in pedagogical principles on play. Schools' interactions with and understanding about Aistear still varies greatly between school contexts. In some cases it may not have been introduced at all. Current health guidelines may also be impacting on the implementation of Aistear.

This new framework offers an opportune moment to bring Aistear back into focus for all schools, highlighting the important role it plays as a methodology in laying the foundations for future learning. Further support for schools and CPD may need to be provided in relation to Aistear and its role within the curriculum framework.

Support educational transitions by connecting with what and how children learn at home, in preschool and post-primary school.

There is a great opportunity presented by this framework to foster further links between all educational settings. Supporting transitions is one such instance. *Mo Scéal* and the *Education Passport* were introduced to help to bridge the gap between education sectors. Anecdotal evidence would suggest there is variation between schools on how this information is shared and

used. Could there be supports given to schools on how to use this information in a more meaningful way? Could there be supports given to schools so there is a more consistent approach in how this information is shared?

The importance of the transfer of information between class teachers being explicitly mentioned in the framework is welcomed.

The use of common language across settings is very helpful in establishing connections for the child's learning trajectory e.g. Mathematical proficiencies in Draft PMC and Junior Cycle Mathematics.

There is a great scope for making connections and building relationships across the educational sectors, from preschool to primary and primary to post-primary. Opportunities could be further afforded through Professional Learning Communities (PLC) for example, enabling teachers to gain a clear understanding about what happens and what it is hoped will happen in relation to a child's learning experiences and learning outcomes in preschool, primary and post - primary. This in turn would help build connections across childrens' learning trajectories throughout their education.

Emerging priorities for children's learning

The Draft Primary Curriculum Framework proposes that the redeveloped curriculum will:

- Embed seven key competencies across children's learning outcomes from junior infants to sixth class.
- Focus on developing children's skills, knowledge, dispositions, values and attitudes. The Learning Outcomes and the Key Competencies are broad in nature to describe this wider understanding of learning.
- Have increased emphasis on some existing areas such as PE and SPHE (Wellbeing) and digital learning, and have new aspects such as Modern Foreign Languages, Technology, Education about Religions and Beliefs (ERB) and Ethics, and a broader Arts Education.

The *Draft Primary Curriculum Framework* outlines important messages in relation to emerging priorities for children's learning. Please give your overall feedback in relation to this key message.

Embed seven key competencies across children's learning outcomes from junior infants to sixth class.

The alignment of the 'Key Competencies' with Aistear's four themes and the eight key skills in the Framework for Junior Cycle is a positive step and should help transitions between early years, primary and post- primary settings and the use of a common language could possibly allow for more collaboration across sectors. The embedding of competencies across all curriculum areas and from junior infants to sixth class is also welcome.

Could the 'Being mathematical' competence be extended to include '*and scientific'?* If so, is there also merit in making the following changes 'Thinking and Communicating mathematically' to include 'and scientifically' and adding 'and science' to the statement 'Solving problems and making sense of the world using mathematics'?

Consider adding the skill of observing to the list 'Estimating, predicting and calculating'. As recognised by the 1999 curriculum, observation is a fundamental skill (Primary School Science Curriculum, p.19). Childrens' ability to estimate, predict, recognise patterns etc. are all based on the information that they obtain through observation.

Could 'Interpreting and processing information and data' also be extended? The research (incl. Leavy, A. 2020; Haylock, D., and Manning, R., 2014) recognises the need for children to be actively engaged in the data handling process; including engaging in inquiry and formulating their own questions and collecting and presenting data, resulting in a more meaningful process for children. Consideration should also be given to how data is connected to the wider curriculum.

Focus on developing children's skills, knowledge, dispositions, values and attitudes. The Learning Outcomes and the Key Competencies are broad in nature to describe this wider understanding of learning.

The inclusion of developing skills, dispositions, values and attitudes as well as essential knowledge is positive. Being cognisant that these were also included on the 1999 curriculum. and yet evidence (incl. inspectorate reports, TIMSS, PDST advisor observations) suggests that teachers tend to overemphasise developing childrens' knowledge and negate the others. How is it envisioned that teachers will be supported to ensure that skills, dispositions, values and attitudes be given the same consideration as knowledge development?

Have increased emphasis on some existing areas such as PE and SPHE (Wellbeing) and digital learning, and have new aspects such as Modern Foreign Languages, Technology, Education about Religions and Beliefs (ERB) and Ethics, and a broader Arts Education.

Clarification may be needed on what 'Technology' looks like in primary school classrooms. For example is this the T in STEM and what is the role of digital technology in this? Currently, many teachers interpret technology and digital technology as the same thing. Vasque (2015) cited in Liston (2018) article entitled "*Unravelling STEM: Beyond the acronym of Science, Technology, Engineering, and Mathematics"* explains the meaning of the "T" in STEM and the implications this has for STEM learning.

Is it envisioned that teachers will be upskilled in technology, as defined in the curriculum? Regarding the broader STEM agenda, how does it fit into the revised curriculum? Is there an agreed definition of STEM from an Irish perspective?

Changing how the curriculum is structured and presented

The Draft Primary Curriculum Framework proposes that the redeveloped curriculum will:

- Be broad and balanced in purpose and content.
- Be structured in five broad curriculum areas;
    - Language
    - Mathematics, Science and Technology Education
    - Wellbeing
    - Social and Environmental Education
    - Arts Education.

(In addition to the five areas above, the Patron's Programme is developed by a school's patron with the aim of contributing to the child's holistic development particularly from the religious and/or ethical perspective and in the process, underpins and supports the characteristic spirit of the school. These areas connect to the themes of *Aistear* and to the subject-based work in Junior Cycle.)

- Provide for an integrated learning experience, with curriculum areas in Stages 1 and 2 (junior Infants – second Class) and more subject-based learning in Stages 3 and 4 (third class – sixth class).
- Use broad learning outcomes to describe the expected learning and development for children.
- Incorporate the new *Primary Language Curriculum* / *Curaclam Teanga na Bunscoile.*

The *Draft Primary Curriculum Framework* outlines important messages in relation to changing how the curriculum is structured and presented. Please give your overall feedback in relation to this key message.

Be structured in five broad curriculum areas

Is it envisioned that STEM will form part of the new draft primary curriculum framework? If so, how will the "E" in STEM be integrated/addressed? If there is a focus on STEM, is there a possibility that the importance of maths and science as individual subjects in their own right will be diminished? It is important to remember that both subjects have concepts and skills that need to be developed in subject specific ways.

Provide for an integrated learning experience, with curriculum areas in Stages 1 and 2 (junior Infants – second Class) and more subject-based learning in Stages 3 and 4 (3rd - 6th class)

Integration offers wonderful opportunities to support authentic learning in real-life contexts. In addition to flexibility in time allocations, integration offers teachers the freedom to delve deeper into particular topics and themes and in a more meaningful way, taking their lead from a child's needs and interests. Teachers will need support and time to transition from a subject based curriculum to a more integrated framework. It may also be challenging to ensure that concepts and skills associated with the individual subjects and disciplines are not diminished. Have multi-grade classrooms been considered? For example, what will teachers do in classrooms that have classes from stages 1, 2 and 3 or classes from 2, 3 or 4 or those teaching all classes?

Use broad learning outcomes to describe the expected learning and development for children.

The introduction of broad learning outcomes is a positive step and recognises the diversity of the children in Irish classrooms. It enables teachers to provide suitable learning experiences for those with differing abilities, needs and stages of development found in every classroom. It may be worth considering that if learning outcomes are too broad, they may not provide enough support and guidance for teachers. Due to the number of subjects/curricular areas at primary, many teachers are not subject specialists in some of the areas they teach. How will they be provided with or supported in, acquiring the relevant subject knowledge? How is it envisaged that teachers will be supported to engage with support materials and toolkits?

Supporting a variety of pedagogical approaches and strategies with assessment central to teaching and learning

The Draft Primary Curriculum Framework proposes that the redeveloped curriculum will:

- Promote high quality teaching, learning and assessment.
- Conceptualise assessment as an essential and critical part of teaching and learning.
- Highlight the importance of teachers' professional judgement in supporting progression in children's learning.
- Encourage teachers to make meaningful connections with children's interests and experiences.
- Recognise the significance of quality relationships and their impact on children's learning.
- Recognise the role and influence of parents and families in children's education.

The *Draft Primary Curriculum Framework* outlines important messages in relation to supporting a variety of pedagogical approaches and strategies with assessment central to teaching and learning. Please give your overall feedback in relation to this key message.

Promote high quality teaching, learning and assessment.

The interweaving of assessment to become a more intrinsic part of teaching and learning, rather than a solely stand alone summative event, is very much welcomed. The statement "teachers' decisions about what to teach, when to teach it, how to sequence and pace learning, as well as decisions about the specific experiences to use are shaped by the strengths, needs, interests and individuality of the children with whom they work" helps to support this vision (p. 20).

This will present a major challenge for many teachers, who still view assessment (even formative assessment) as something which only happens after the teaching activity, rather than as an ongoing process. The key messages on assessment are clear and should permeate through examples or resources that will be used to support teachers (p. 23).

Schools can be data rich but information poor. Teachers gather lots of information about children in their classrooms, but may not be sure how to utilise this information effectively to inform teaching and learning. Ongoing support from PDST and NCCA will be important going forward. The NCCA Assessment Guidelines (2007) was and still is an excellent resource that perhaps many schools did not get the opportunity to fully engage with. There are many aspects of these guidelines that could possibly be still retained, while being interwoven with more modern practice that is user-friendly for teachers and school leaders

Including dispositions, values and attitudes as important aspects to learning in this draft framework is welcomed. Recording of these salient pieces of information should be encouraged, as valuable pieces of data to form a narrative of a child's progress for sharing with relevant stakeholders.

Conceptualise assessment as an essential and critical part of teaching and learning.

The over dependence and weighting given to standardised testing seems to be a continuous dilemma for school leaders, teachers and support services. It is positive to see that standardised testing is noted in the Draft Framework as being, "not necessarily more important than other types of assessment in which teachers and children are involved during classroom activity." (p. 24).

CPD and school support around the idea of assessment will be needed to enable schools to unpack new language and concepts, in order to develop their understanding of the integral role assessment plays and the value of different assessments.

The NCCA Assessment Guidelines (2007) will continue to be a rich supportive resource for teachers in schools. New terminology of "intuitive assessment", "planned interactions" "assessment events" may need more explicit explanation to support teachers. As noted on page 25, more guidance on this will be forthcoming within the developed specifications and is welcomed.

Highlight the importance of teachers' professional judgement in supporting progression in children's learning.

In order to make sound professional judgements on future learning for children, teachers need a strong foundation of pedagogical and content knowledge. This could be seen as being at odds with a curriculum that is now introducing new subjects. This also provides many challenges in decision making around special education.

Encourage teachers to make meaningful connections with children's interests and experiences.

Recognising the child as the primary stakeholder and beneficiary from assessment information is an important statement (p. 25). Children need to know about and understand their own learning and progress. These meta-practices should be explicitly outlined for teachers in any support materials created. Self and peer assessment methodologies may seem simple, but must be carefully and skilfully utilised by teachers to maintain positive dispositions and attitudes towards learning among children..

Recognise the significance of quality relationships and their impact on children's learning.

"Promoting responsive pedagogies and practices", (p. 20) may need further unpacking for teachers in order to support them in making the links between pedagogies and relationships. It should be noted that early intervention methodologies and interventions are advocated as the important first step in having an impact on children's learning. Perhaps there is a conflicting view between responsive pedagogies and early intervention practices?

Building on the successes and strengths of the 1999 curriculum while recognising and responding to the challenges and changing needs and priorities.

The 1999 curriculum contributed to many successes including:

- Enhanced enjoyment of learning for children.
- Increased use of active methodologies for teaching and learning.
- Improved attainment levels in reading, mathematics and science as evidenced in national and international assessments.

The Draft Primary Curriculum Framework proposes that the redeveloped curriculum will:

- Address curriculum overload at primary level.
- Take stock of strategies, initiatives and programmes and clarify priorities for children's learning.
- Link with *Aistear* and *the Framework for Junior Cycle.*

The *Draft Primary Curriculum Framework* outlines important messages in relation to building on the successes and strengths of the 1999 curriculum while recognising and responding to challenges and changing needs and priorities. Please give your overall feedback in relation to this key message.

This framework builds on many of the successes of the 1999 curriculum. It also takes some key ideas which were not enacted in the way it was intended in the 1999 curriculum and places these key ideas to the forefront, for example, teaching skills through content, rather than focusing on content alone.

The 1999 curriculum was well researched and based on sound theoretical frameworks. Unfortunately, teacher opportunity to engage with these frameworks was very limited, resulting in the curriculum not being fully enacted as it was intended to be. How can this be avoided this time around? The NCCA have made a huge effort in trying to engage with as many stakeholders as possible, in many different ways during this consultation phase eg: online information meetings, social media etc. It will be important to continue to engage with stakeholders once the framework is published and as each subject specification is being drafted.

Address curriculum overload at primary level.

The flexibility offered by this draft framework allows teachers to tailor the learning experiences to the needs and interests of children, in an integrated holistic way across multiple subject domains. This reflects the real world, in a more meaningful way than that the current division/separation of subjects does not.

This curriculum framework aims to address curriculum overload at primary level. However, it is unclear how this will be achieved, particularly with the introduction of new subjects. The introduction of curricular areas at stages 1 and 2 should facilitate a reduction in curriculum

overload. The five curriculum specifications present an opportunity to eliminate unnecessary repetition across areas and subjects, and to move from very detailed content objectives to broad learning outcomes. Teachers will need clear guidance and support on how to do this.
Ongoing sustained support for all teachers will be necessary to ensure teacher confidence and competence in selecting appropriate and meaningful learning experiences and to avoid an over reliance on the use of textbooks and workbooks.

Data Protection

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Thank you for your submission.