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Foreword

Gifted and Talented Students: A Resource Guide for Teachers in Victorian Catholic Schools is designed to assist Catholic schools in the Archdiocese of Melbourne to respond effectively to the needs of gifted students. Developed by the Catholic Education Office Melbourne (CEOM) in consultation with school communities across Victoria, it aims to support schools in their collaborative pursuit of excellence and equity within the central vision of Catholic education.

Equity and excellence are values that underpin the vision for education in the Archdiocese of Melbourne, articulated in 2011–2015 Directions for Catholic Education in the Archdiocese of Melbourne (CEOM 2011). This vision of developing ‘engaged, purposeful and successful learners who shape the world for the common good’ is founded on an understanding of Catholic schools as ‘communities of hope, committed to providing an outstanding education where all our young people have the opportunity to develop their full and unique potential through rich and varied experiences of authentic learning’ (CEOM 2011, p. 6).

Our commitment to promoting excellence and equity in Catholic schooling is made also in the context of the Melbourne Declaration of Educational Goals for Young Australians (MCEETYA 2008), which has excellence and equity as its first goal. All students, whatever their socio-economic status, urban context, or degree of ability or disability, should have equal access to educational experiences and the opportunity to fulfil their potential.

Catholic schools seek to provide students with a learning environment that acknowledges and maximises their individual potential, and promotes their wellbeing and their experience of participation and inclusion. Acknowledging that students have varying needs, Catholic schools seek to personalise the educational experience to provide equity of opportunity.

Highly able students are acknowledged as having particular learning needs requiring adjustment to their educational program, so that they remain highly engaged and active learners. The aim of this resource is to support teachers in identifying, teaching and assessing gifted students and to support schools in developing policies and procedures and planning future directions for enhancing the education of their gifted students.

I commend this resource guide to you and trust that it will be a valuable resource in your efforts to provide for the educational needs of all your students.

Stephen Elder
Executive Director of Catholic Education
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Introduction

This resource guide is a resource for Catholic school communities who are responding to the educational needs of gifted students.

In some educational communities there is much debate about the efficacy and appropriateness of the terms ‘gifted’ and/or ‘talented’. In this resource the authors acknowledge the use of both terms but use ‘gifted’ for ease of understanding.

This resource guide will:

• provide teachers with the appropriate language to use when discussing the education of gifted students
• provide teachers (primary and secondary) with resources to teach, assess and report on the progress of gifted students
• present basic principles to inform and support schools in the development of their procedures and practices.

This resource guide can be used as professional stimulus at staff meetings. It is also hoped it will encourage teachers to undertake further research in this vital area of teaching and learning.

The report looks at the concept of giftedness and the identification of gifted students. It examines the provision of education for gifted students in Victoria at three levels: early childhood education, primary school and secondary school.

The report indicates that current provision is inadequate, even ‘highly unsatisfactory’, and outlines future directions for the education of gifted students in Victoria. Its recommendations provide ways to address the current problems, including the need for increased understanding and acceptance of giftedness and gifted education programs.

With the publication, 2011–2015 Directions for Catholic Education in the Archdiocese of Melbourne (Catholic Education Office Melbourne 2011), the CEOM, in partnership with the Catholic education community, renewed its commitment to excellence and equity and to the belief that the student is at the heart of education.

Catholic schools strive to develop, and indeed seek out, the potential of each student. This occurs in the context of each student’s holistic development: spiritual, moral, social, emotional, physical and intellectual, across every domain of learning. Indeed, ‘personhood is at the heart of the learning and teaching process, as the person of each individual being is at the heart of Christ’s teaching’ (CEOM 2009a, p. 4). The learning and teaching process is a ‘graced territory’ where students are invited to discover God’s presence in their lives, to grow in understanding of who they are and to interpret the world they live in in the context of Scripture and the Catholic Tradition (CEOM 2009a, p. 4).

Catholic schools, supported by the CEOM, are committed to building communities of learning that provide a safe, nurturing and academically stimulating environment for all students. Such communities promote inclusion and celebrate diversity. They aim to develop students’ sense of connectedness and belonging and to strengthen the wellbeing of students and the whole community.

In the 21st century Catholic schools adopt a contemporary approach to teaching and learning. Contemporary learning is differentiated and personalised, responding to the learning needs, interests and experiences of each student. Students’ learning is supported through ‘a climate of inquiry and creative exploration of ideas and the use of new and emerging technologies’. Students are ‘partners in their learning, not only with their teachers, their peers and their families, but with the wider community, both local and global’ (CEOM 2011, p. 3). They not only engage with and collaborate with communities beyond the traditional boundaries of the school, they also contribute to the good of the wider community.

Catholic schools aim to ensure that all students become successful learners who are able to embrace opportunities that are emerging in the local, national and global communities, and are ‘empowered to shape and enrich the world with direction, meaning, purpose and hope derived from their encounter with the life and teachings of Jesus’ (CEOM 2009a, p. 4).

Catholic schools seek to provide equitable access and opportunity for all, with a preferential option for the poor and marginalised. Gifted students are among those who may experience marginalisation. Catholic education respects the dignity of each student and the diversity of their gifts, whether they be academic, interpersonal, artistic or reflective of myriad other facets of human capacity. The CEOM supports Catholic schools to ensure that the distinctive nature of teaching gifted students flourishes in their local context.

Catholic education in Melbourne works closely with governments, institutions, authorities and organisations to represent and support gifted education and gifted students and to realise shared educational goals.
2. Historical Background to Giftedness

The notion of giftedness has changed over time, with contributors to the field dating as far back as Socrates. Through his portrayal in Plato’s dialogues, Socrates (469–399 BC) is renowned for his contribution to the field of ethics. Socrates also lends his name to the concepts of Socratic irony and the Socratic method, or elenchi (elenkoos). Socratic teaching is the oldest and still the most powerful teaching tactic for fostering critical thinking. In Socratic teaching the focus is on giving students questions, not answers. Teachers endeavour to develop and stimulate enquiring minds by continually probing into the subject with questions.

In the early 20th century, Alfred Binet (1857–1911) developed intelligence tests. Binet and Theodore Simon began developing a series of tests (Binet–Simon) primarily to identify children with intellectual deficits in order to separate them from normally functioning children for placement in special classrooms. Other recognised pioneers of the day included Lewis Terman and Leta Hollingsworth. Terman’s studies at Stanford University led him to become known as the ‘father of the gifted movement’ when he published the Stanford–Binet tests in 1916. He was the first to use intelligence tests to identify gifted school children. In the 1920s, a gifted person came to be seen as one who excelled in most areas of development. Terman’s work formed the basis for the modern intelligence tests still commonly used today and colloquially known as IQ tests.

This understanding of giftedness was based on a definition of gifted students as those who learn by focusing on the elements of reasoning in a disciplined and self-assessing way. The logical relationships that result from such disciplined thought assist in developing students’ higher-order thinking skills. Later in this same century, gifted students who fitted this prototype became increasingly valued for their ‘economic benefit’, due largely to the rapid expansion of high-tech enterprises and the challenges of a global economy. In the 1960s and 1970s Dr E Paul Torrance formally introduced assessments of creativity and illustrated the importance of creativity in considering the notion of giftedness.

Giftedness is a dynamic concept which reflects changes in societal needs and priorities. Some discrepancies are inevitable; for example, some definitions do not include those students who come from backgrounds that prize forms of non-academic self-expression, such as art, leadership and music. Towards the end of the 20th century, as societal attitudes continued to change, the broader definitions of giftedness encompassing outstanding achievement across academic, cultural and physical pursuits became integral to the discourse on giftedness.
3. Definition of Giftedness

The term giftedness has many definitions. A gifted person is variously one who:

- has scored well on an intelligence test
- is above average in ability, can think creatively, and is task-committed in an area of interest or passion
- demonstrates either extraordinary potential or extraordinary performance in one or more of the intellectual, academic, creative, leadership or visual and performing arts domains
- is born with extraordinary potential in some domain of ability, such as intellectual, social, psychomotor or creative (Vialle & Rogers 2010, p. 18).

Gagné’s Model of Differentiation

The definition of giftedness commonly adopted in Australia has been influenced by a substantial body of global research, with the work of François Gagné being particularly influential (see Figure 1). Gagné’s definition is the one adopted by the CEOM and used in this handbook, as it supports those in schools wishing to understand the concept of ‘giftedness’ and the implications for schooling.

A gifted person is born with extraordinary potential in some domain of ability, such as intellectual, social, psychomotor, or creativity. A talented person is developed after the exertion of both personal and environmental catalysts and can perform in a field of human endeavor at extraordinary levels (Gagné 2002).

Figure 1: Gagné’s Model of Differentiation.
Gagné’s model leads us to understand the interrelationships between natural abilities, environmental stimuli, intrapersonal characteristics and opportunity in the development of talents. Students are born with the potential for giftedness, but environmental factors such as home nurturing and school stimulation play a major part in bringing out these gifts and developing them to their fullest potential. Students may be born with the potential for giftedness but may not have the intrapersonal characteristics, such as motivation, or the opportunities to develop their gifts into talents.

Advocates of the 1916 Stanford–Binet intelligence test (described above) posit that approximately two per cent of the population are gifted, i.e. a score above 130 (see Figure 2 below). Research has subsequently shown that giftedness is identified not only by intelligence tests. Vygotsky (1978), Renzulli and Reiss (1986), Tannenbaum (1983), Silverman (1989), Baldwin (1991), Castellano (2003), Gross (2003) and Kulik and Kulik (1991) support Gagné’s definition that giftedness is multi-faceted. Gagné holds that 10 per cent of the population are gifted. This figure was accepted by the Victorian Parliamentary Inquiry into the Education of Gifted and Talented Students (Gagné, cited in Parliament of Victoria 2012, p. 6).

### Definition of Giftedness (continued)

It is difficult to generalise about students who are gifted because their characteristics and needs are personal and unique. However, there is general agreement among academics and teachers that gifted students:

- comprehend complex ideas more fully
- learn more rapidly and in greater depth than their age peers
- may exhibit interests that differ from those of their age peers.

Gifted students may also have:

- an unusually well-developed sense of justice and fairness
- emotional intensity
- play/hobby interests that are more like those of older peers
- a tendency to prefer the companionship of peers a little older, or sometimes many years older
- an enhanced capacity to empathise with the feelings of others
- a more mature sense of humour than age peers.

It is important to note that not all gifted children will display all of these characteristics. Gifted students vary in the range of talents they exhibit and in their emotional, social and physical development, and they will often display asynchronous rates of physical, cognitive and emotional development. They are not necessarily always students who gain high marks, nor are they always the most attentive or the most docile and cooperative in terms of neatness and task completion.

The diversity of gifted learners can mean that teachers need to remain vigilant and watch for any signs of spark or ‘light bulb’ moments. Teachers in schools should see themselves as ‘talent spotters’ constantly on the lookout for signs of ability and talent (Eyre & Lowe 2002).

### Social–emotional Needs of Gifted Students

The experience of being gifted is often accompanied by particular social–emotional needs. Gifted students may struggle to be comfortable with themselves as gifted and talented (Pohl 2012a, p. 16). They can be vulnerable to internal and external pressures to excel or to conform. They may struggle to feel a sense of belonging. In addition they experience those challenges common to all young people: physical, emotional and psychological changes, particularly in adolescence, and the demands of coping with an uncertain and ever-changing world.
Characteristics of Gifted Students

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In the research on gifted students (e.g. Pohl 2012a; Renzulli & Reiss 1986; Baldwin 1991) there is general agreement that gifted students:

- tend to be more independent and less conforming
- often show leadership qualities and concern for universal problems
- prefer intellectual peers and tend to choose friends like themselves rather than age peers
- enjoy high social status among age peers, at least until their teenage years when other, preferred popularity factors may prevail (Pohl 2012a, p. 32).

Gifted students often think differently and feel differently as a result of these factors. They may react in an intensified manner to experiences because their cognitive complexity matches a wider range of emotional responses. Consequently, they need to learn that applying their cognitive abilities to experiences will assist them in making sense of their world and their sense of place within it.

In the past fifty years educators and psychologists have become increasingly aware of the influence of supportive relationships on the attainment of human potential (Sears & Barbee 1977). It has been noted that gifted students tend to seek out older students, or peers equally as gifted, for companionship (O’Shea 2005). Programs which provide opportunities for these relationships, and programs offering more formal mentoring relationships, can be helpful to gifted students.

Pohl (2012a, p. 32) also highlights eight areas of vulnerability for highly gifted students:

1. **Uneven development.** Gifted students may develop at different rates in the cognitive, emotional and physical domains. This asynchronism results in uneven development and can create tension for the student, for instance when a student’s intellectual abilities outweigh their manipulative/motor skills.

2. **Adult expectations.** High expectations by teachers and parents are often seen as essential for high levels of achievement to occur. Some gifted students may mask their difficulties because they think teachers expect a high level of achievement at all times.

3. **Self-definition.** Gifted students often have unusually high expectations of themselves that place pressure upon them to excel.

4. **Inappropriate environments.** Some classrooms may lack the stimulation and exposure to higher-order thinking skills necessary to nurture the abilities of gifted individuals. It can be distressing for some...
5. **Perfectionism.** Some students can display a compulsive attitude to tasks and attention to detail and set unrealistic expectations for themselves and other students.

6. **Alienation.** Gifted students may feel different and want acceptance from their peer group more than anything else.

7. **Role conflict.** Gifted students quite often do not know if they should be smart, popular, sporty or cool when interacting with others.

8. **Intensity or over-excitability.** Gifted students often have inborn, heightened abilities to receive and respond to stimuli (Dabrowski & Piechowski 1977, p. 12). They are likely to experience everything intensely. This intensity, or over-excitability, is ‘often not valued socially, being viewed instead as nervousness, hyperactivity, neurotic temperament, excessive emotionally and emotional intensity, that most people find uncomfortable at close range’ (Piechowski & Colangelo 1984, p. 81).

Gifted students may often not meet their full potential without some intervention to support their social-emotional needs. School counsellors and/or psychologists need to be made available to support these students. The teacher’s role should be one of compassion and respect for the uniqueness of all gifted students as they struggle with the development of their identity. Teachers need to ‘get to know’ their students and engage them in conversation. They also need to understand the complexities of teaching gifted students. Targeted professional learning is beneficial in this regard.
Diversity in Gifted Students

It is now widely accepted that gifted students have a broad range of characteristics that are reflected across the broader population. Hence giftedness should be regarded as being equally represented across all races, cultures and economic groupings. This is particularly relevant in our Victorian context, which is rich in cultural diversity. In Victorian schools there are gifted students among the new arrivals, refugees and Aboriginal and Torres Strait Islander students, and teachers must be aware of language background and cultural sensitivities when considering the identification of gifted students.

Highly able students are enrolled in every primary and secondary school, in almost every class and from every cultural and socioeconomic group. But all too often gifted students can slip under the radar. Sometimes they hide their gifts because they do not want to stand out in the class or are desperate to ‘fit in’. Occasionally their gifts are not recognised because the students think ‘outside the box’. Teachers must develop an awareness of the existence of these students and an understanding of their needs – both intellectual and social–emotional.

Teachers should be particularly alert to two groups of gifted students, gifted learning-disabled students and gifted under-achieving students.

**Gifted Learning-disabled Students**

Some students are both gifted and learning-disabled. Many writers define gifted learning-disabled students through the discrepancy between their ability and their academic performance. McCoach, Kehle, Bray and Siegle (2001) define such learners as ‘students of superior intellectual ability who exhibit a significant discrepancy in their level of performance in a particular academic area such as reading, mathematics, spelling or written expression’. Several terms can be found in the literature to describe students who are gifted but also have a learning disability. These may include ‘dual-exceptional’ and ‘twice-exceptional’.

In some case these students may have a physical disability such as a hearing impairment or a named disability such as autism, but the terms are most commonly used in reference to a learning disability such as dyslexia. Children with dual exceptionalities can be difficult to identify, as their strengths, including their superior intellect, mask the weaknesses from their disability, so that both their giftedness and their disability remain undetected. Their academic performance is substantially below what would be expected based on their general intellectual ability.

**Gifted Under-achieving Students**

Some gifted students do not achieve at an appropriate level for their giftedness. Often the gifted under-achieving student will resist challenges, participate reluctantly and strive to belong socially to the peer group. The gifted under-achieving student may deny their talent and even be perceived as a compliant but average student. Gifted girls can often under-achieve, as they do not want to appear to be smart in front of the boys.
It is important to determine the reasons for under-achievement in order to tackle it. The process for identifying gifted students needs to be multi-dimensional, drawing on a selection of objective and subjective sources for information gathering. This balance is particularly important in identifying the under-achieving student.

**Appropriate Testing Instruments**

Gifted students can be found in all groups within a culturally diverse society. However, giftedness in students from cultural groups outside the mainstream, such as Aboriginal and Torres Strait Islander students, refugees and new arrivals from a range of countries/cultures is not always recognised. In some instances this may be due to prejudice, bias or misconceptions on the part of the teacher, sometimes deriving from less positive behaviours or attitudes of the students. However, often the tests used to identify giftedness are inadequate for these students. Tests which include a large non-verbal component may be more appropriate. The CEOM is trialling a variety of non-verbal assessment tools for the identification of gifted students.

Some examples of tests including non-verbal components are:

- the Raven Progressive Matrices (Raven 1998). This non-verbal test is typically used in educational settings. It is the most common and popular test administered to people aged five to 80 years.

- the Middle Years Ability Test (MYAT) (ACER 2009). MYAT is a general ability test suitable for students aged 10–15 years. It provides a multi-faceted estimate of general intellectual ability.

- the Wechsler Non-Verbal Scale of Ability (WNV) (Wechsler & Naglieri 2006). The WNV is designed for culturally and linguistically diverse groups. It is helpful for those who are not proficient in the English language, or have other language considerations.

- the NNAT2 (Naglieri Nonverbal Ability Test, 2nd edition) (Naglieri 2010). This test was developed for Indigenous students but it can be used for non-English speakers. The NNAT2’s norm-based score identifies students who are likely to have the potential for advanced scholastic achievement.

- the HAST (Higher Ability Selection Test) and the HAST–P (Higher Ability Selection Test – Primary) (ACER 2011). These tests can be used to identify academically gifted students from middle primary to senior secondary school. The tests were designed for the purpose of identifying students for participation in gifted and talented programs. The HAST and HAST–P can be used to test whole cohorts or as a second-stage test to verify existing information about a student or refine the assessment of highly able students at the upper end of the scale.

- the Wechsler Intelligence Scale for Children IV, Australian Standardised Edition (WISC–IV Australian) (Wechsler 2005). This is a psychometric assessment tool and must be administered by an educational psychologist. It is recommended for students aged six to 17 years.

Teachers may need to consider the use of interpreters and translators for students from culturally and linguistically diverse backgrounds when collecting a student’s developmental history or biographical information, or when completing checklists and questionnaires with parents.
7. Identification of Gifted Students

There is no single technique through which teachers can fully identify and be certain about the gifts of any student. However, by a combination of careful and sensitive observations in an atmosphere which encourages individual expression and objective assessment, teachers can build up a detailed picture of their students and make confident judgments.

The identification process should be inclusive to ensure gifted students are not disadvantaged on the basis of gender, race, culture, socioeconomic background or physical or sensory disability.

There is general agreement, too, that identification should be a flexible, continuous process to allow for the recognition of gifts and talents that may not be immediately apparent. Teacher, parent, peer and self-nomination, when used with care, can contribute to the identification process. Information that will help the teacher identify a student’s gifts and talents is available from a broad range of sources.

Identifying the gifted students in any school site is not an end in itself. Rather, it is undertaken for the purpose of finding the most appropriate provision to assist students to be the best they can be.

Sources of Evidence for Identification of Giftedness

Checklists and Rating Scales
Teachers may begin with close analysis of their own classroom observations, guided by a checklist or teacher/parent rating scales. These are commercially available and are designed to help identify children for placement in gifted and talented educational programs. Questionnaire(s) to be completed by the student’s teacher are also commercially available or printed in reference books which detail the identification of gifted students. Parents also hold a wealth of information, which is particularly useful in the early identification of gifted students together with the completion of developmental questionnaires.

Academic and School Records
Schools may also conduct a review of a portfolio of the student’s work in one or more areas of endeavour. A review of the student’s cumulative school file may include school records, results from NAPLAN (National Assessment Program – Literacy and Numeracy), achievement tests (e.g. reading, mathematics), certificates recognising creative and/or physical excellence, and anecdotal records such as interviews (parent/child/community member/previous teacher/school psychologist).

Formal Assessments
Formal assessments may include IQ tests (verbal and non-verbal) and standardised tests, including diagnostic reading or mathematics tests or normed measures of motor and visual/perceptual abilities. Standardised tests of ability and achievement can be of great value in forming a basis for identification. Specific achievement
tests such as reading and comprehension tests monitor performance in these areas. Formal assessments are objective and when used together with other data (such as those listed above) can aid identification significantly. A Wechsler Intelligence Scale for Children IV (WISC IV – see Chapter 6) may also be administered. This test can only be administered by a registered psychologist.

**Full Evaluation**

Identification of giftedness is most effective with a full evaluation. A full evaluation looks at the student from many different perspectives, and integrates the information gleaned from testing and other assessment tools into an accurate identification. From the resulting information, teachers should be able to make very specific educational and behavioural recommendations to both the teachers and the parents of the student.

A follow-up interpretive consultation with the family is also a valuable and essential component of a full evaluation. During this follow-up session, the teacher or psychologist (if a WISC IV was administered) has an opportunity to explain the results of the testing, including what the scores mean and do not mean. During this consultation, the teacher, psychologist or school adviser is also able to provide feedback about relevant observations of the student during the testing process, and discuss possible recommendations for home and school-based activities.
Learning and Teaching of Gifted Students

General Principles
These general principles apply to the education of all students in Catholic schools. Where these principles underpin learning and teaching, each individual student’s needs, interests and experiences will be taken into account in the planning of curriculum and assessment and the provision of learning opportunities. The information obtained from rigorous assessment enables teachers to differentiate their teaching and personalise each student’s learning.

Equity
All students have the right to a learning environment that will assist them in reaching their potential. Catholic schools are learning-centred schools, where planning for learning and teaching ‘consciously and intentionally takes account of, and provides for, diversity and difference among students’ (CEOM 2009a, p. 9).

In the Catholic school the curriculum is founded on a belief in the dignity of the human person, a commitment to social justice, and a transformative view of learning and teaching. Learning and teaching strategies are designed to ‘recognise and value the rich and diverse experiences, perspectives and interests’ and to develop the abilities, and the gifts and talents, of all students, not least gifted students (CEOM 2009a).

Contemporary Learning
The core knowledge, skills and understandings for living and thriving in the 21st century are identified in contemporary learning and integrated across the curriculum to create deep and powerful learning opportunities. Learning occurs in a climate of inquiry, which promotes the creative exploration of ideas, reflection, higher-order thinking and collaboration. It is evidence-based and is therefore responsive to each student’s learning needs (CEOM 2009b).

Contemporary learning requires the use of new and emerging technologies and the development of contemporary literacies. Learning opportunities engage students in the contemporary world and foster communities of learning, both local and global.

Personalised Learning
Contemporary learning is personalised. Students are co-creators of their learning, partners with teachers, peers, parents and the wider community. Students’ interests and experiences are valued and the curriculum reflects this. Learning opportunities are diverse and flexible to respond to the diversity and difference among the students. Each student is supported to extend their knowledge, skills and understandings to higher levels.
Supporting Structures and Approaches

The teaching and learning of gifted students is supported by a number of structures or approaches underpinning school operations. It is important to have a range of these measures in place to ensure that there are appropriate policies and practices for the identification, learning and teaching, and assessment of gifted students. The measures include:

- whole-school planning and management of gifted education
- appropriate and evidence-based identification (quantitative, not just qualitative)
- well-planned and articulated programs and provision
- curriculum differentiation
- flexible pathways in progression and study options, including the Victorian Certificate of Applied Learning (VCAL) and Vocational Education and Training in Schools (VETiS)
- the use of PLPs (Personalised Learning Plans) and PSGs (Parent Support Groups) where appropriate (see Section 11 on reporting)
- active engagement of parents and carers in students’ learning processes
- regular collaborative review, i.e. needs assessment and evaluation of goals and outcomes
- appropriate and effective professional learning
- avenues for accessing resources available in the wider community, e.g. mentoring.

AusVELS

The Victorian curriculum framework, AusVELS, should be consulted when designing appropriate curriculum to support the learning of gifted students. The Victorian Curriculum and Assessment Authority (VCAA) has developed AusVELS to provide one curriculum framework for curriculum, assessment and reporting as Australian Curriculum subjects are progressively phased in during 2013–15. Schools are required to deliver the Australian Curriculum Phase 1 subjects (English, mathematics, science and history), Prep–Year 10, from 2013. For further information visit the AusVELS website: <http://ausvels.vcaa.vic.edu.au>.
What Is Differentiation?
An effective curriculum for gifted students is essentially a core curriculum that has been differentiated to meet their needs, allowing for personalised learning. Curriculum differentiation refers to adapting the usual curriculum in order to meet an individual student’s specific learning needs. It has been defined as ‘the process by which curriculum objectives, teaching methods, assessment methods, resources and learning activities are planned to cater for the needs of individual pupils’ (Kronborg & Plunkett 2012).

Differentiation is an organised, yet flexible, way of proactively adjusting teaching and learning to meet students where they are and help all students achieve maximum growth as learners. The design and implementation of differentiated teaching and learning strategies are based on student need according to the student’s skills, knowledge and understanding, as shown in pre-assessment and in combination with teachers’ professional judgment. These strategies include tasks which accommodate different students’ abilities, learning preferences and readiness, and are linked to specific curriculum requirements.

Why Differentiate Instruction?
When students’ needs, interests and experiences are valued, curriculum will be differentiated and learning personalised. The diversity of gifted students means that levels of giftedness, needs and interests vary enormously. Research has highlighted curriculum differentiation as a key strategy for providing for gifted students. For example, Monash gifted education experts, Dr Leonie Kronborg and Dr Margaret Plunkett (2012), have found:

While a number of requirements appear to be vital to any successful programmatic response to meeting the needs of high ability students, curriculum differentiation inevitably emerges as perhaps the most important of all (p. 19).

Differentiating instruction assists teachers to respond to the diversity of abilities, levels of giftedness, learning needs and interests of the gifted students in their care. The aim is to ensure each student is challenged and supported to grow in knowledge, skills and understanding across the curriculum domains. In this way, each student not only reaches their potential but is able ‘to achieve higher than their aspirations, to exceed their potential’ (Hattie 2012).

Australian Professional Standards for Teachers
Differentiation is supported by the Australian Professional Standards for Teachers (AITSL 2012). It is a component of knowing students and how they learn (Standard 1) and planning for and implementing effective teaching and learning (Standard 3):

- Standard 1.5: ‘Differentiate teaching to meet the specific learning needs of students across the full range of abilities’. At various career stages teachers achieve this standard by:
  - demonstrating knowledge and understanding of strategies for differentiating
  - developing teaching activities that incorporate differentiated strategies.
  - evaluating the effectiveness of differentiated learning and teaching programs.

- Standard 3.1: ‘Establish challenging learning goals’ – so that students of ‘varying abilities and characteristics’ have challenging and achievable learning goals. This involves developing a culture of ‘high expectations for all students’ in ‘all aspects of their education’.

How Does Differentiation Work for Gifted Students?
The unique characteristics of the students must serve as the basis for decisions on how the curriculum should be modified (Feldhusen & Kennedy 1989; Maker 1982).
Lorna Earl reflects that ‘differentiation is making sure that the right students get the right learning tasks at the right time. Once you have a sense of what each student holds as given or known and what she needs in order to learn, differentiation is no longer an option, it is an obvious response!’ (Earl 2003, pp. 86–87).

Differentiating the learning to ensure high impact on student outcomes is sound pedagogy, not only for gifted students but for all students. There is little or no evidence of a one size fits all approach to reform implementation.

Pre-testing is Essential
No two students start learning at the same place. We need first to pre-test to understand what our students know or don’t know, what they can and cannot do. Then we can differentiate the curriculum according to what they will learn (content), how they will learn (process) and how they will demonstrate their learning (product). Pre-testing is a vital pre-requisite for differentiation.

Strategies for Differentiation
Table 1 (page 19) is a list of strategies to employ when differentiating the curriculum for gifted learners. There are strategies for differentiating the content, the process of learning and the ways in which students demonstrate what they have learned. In a fully differentiated curriculum, all three areas need to be differentiated. It is important, too, that teachers constantly monitor students’ learning to determine strategies for further improvement and growth.

Contemporary Tools
Today’s students were born into a digital world. They have spent their entire lives surrounded by computers, video games, mobile phones (depending on their age, smart phones), digital music players, the Internet, video, ‘and all the other toys and tools of the digital age’ (Prensky 2001). Social networks are their normal way of communicating. Using these contemporary tools to collaborate, research, learn, communicate, produce and publish is second-nature to today’s students.
Students’ familiarity and engagement with contemporary tools, and the potential of new and emerging technologies to enhance learning, make them an essential element of contemporary learning and a significant aid to differentiating the curriculum.

The use of new and emerging technologies promotes effective and authentic learning for all students, and offers particular advantages for gifted students. Using contemporary tools:

- extends learning beyond the classroom and the school and beyond the conventional school day; learning anytime, anywhere
- allows students to communicate and collaborate with students, experts and communities anywhere and to develop new learning partnerships
- provides new ways of working individually and in collaboration with others
- provides personalised access to knowledge and expertise
- provides opportunities to engage with different cultures and different perspectives and to build new knowledge and understanding
- supports self-directed learning
- promotes learning at the student’s own pace and stage of readiness
- provides opportunities to engage with real-world problems affecting real people
- can assist in providing effective feedback.

**What is Acceleration?**

Acceleration can take many forms. Karen Roger’s research (Rogers 2006b) has identified many ways in which schools can implement acceleration strategies for gifted learners. Of these, Victorian schools use the following approaches:

- **Early entry:** A child enters kindergarten or Prep earlier than the minimum entry age. For schools in the Archdiocese of Melbourne, only the Executive Director of Catholic Education or his delegate can give permission for this to occur (see Appendix 4 of CEOM Policy 2.4 (CEOM 2009c)).

- **Skipping a year level:** A student bypasses a full year of school and enters the next year level with students a year older. Skipping a year level rarely occurs in the last two years of secondary school.

- **Subject acceleration:** A specific subject is provided at advanced levels to a student, either by sending the student to a higher year level for study or by bringing materials from a higher year level into the student’s current class. This is one of the most common forms of acceleration in the Catholic system. Subject acceleration is appropriate when students are gifted in particular academic areas. Some schools provide a Year 13 subject, where the Year 12 student studies a first-year university subject. This varies with different universities.

- **Early admission to university:** A student leaves secondary school one or two years early to pursue a university degree full-time, often without a traditional credential, such as the Victorian Certificate of Education (VCE). This is rare in Victoria.

**Differentiation Using Acceleration**

Acceleration is another way to differentiate provision for gifted students. In general it is any approach that results in students moving through the curriculum at a faster pace. Research supports the use of acceleration as an effective strategy for the education of gifted students (cf. Hattie 2009, p. 100). Sometimes, especially in primary schools, acceleration is called ‘enrichment’ or ‘extension’ if it concerns just a single subject.
<table>
<thead>
<tr>
<th>WHAT STUDENTS LEARN (CONTENT)</th>
<th>HOW STUDENTS LEARN (PROCESS)</th>
<th>HOW STUDENTS DEMONSTRATE THEIR LEARNING (PRODUCT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The content of the curriculum comprises the ideas, concepts, information and skills presented to students.</td>
<td>This is how the content is presented and the ways students manipulate the content to construct meaning.</td>
<td>This refers to the variety of ways students produce tangible evidence of their learning. It should reflect their potential and enable them to demonstrate how much they have learned.</td>
</tr>
</tbody>
</table>

**Set clear and appropriate learning goals.**
Organise content around key concepts/big ideas/abstract themes, integrating content across multiple disciplines.
Provide content that challenges students to move beyond what they already know and understand to higher levels of competence.
Allow for multiple entry-points for students (to cater for prior knowledge, understanding and skill).
Offer curriculum at greater depth to gifted students, not more at the same level.
Facilitate student self-directed learning in areas of interest related to the key concept.
Provide a range of materials, including more abstract texts and texts at a more advanced reading level and greater levels of complexity.
Broaden the options students have for acquiring content.
Relate content to real-world issues.

Support students to set their own learning goals.
Provide opportunities for students to choose how they learn.
Support students to take increased responsibility for the monitoring and management of their own learning.
Accelerate the pace of learning and reduce repetition and practice time for gifted students. This will open up time for extension (cf. Core Module 5, in GERRIC 2005).
Scaffold learning for gifted students, as well as less gifted students.
Encourage higher-order thinking and problem-solving by using higher-order questioning, e.g.
- open-ended questions
- provocative questions (Williams 1993)
- questions from the Analysing, Evaluating and Creating sections of the revised Bloom’s Taxonomy (Anderson et al. 2001)
- De Bono’s Six Thinking Hats
- Pohl’s infusion matrix (Pohl 2012b, p. 85).
Encourage creative, divergent thinking by providing opportunities to ask What if? and imagine scenarios as if they had a particular role in them. Futures thinking can be useful here.
Develop learning opportunities that build learning relationships in the local, national or global community, and enable students to engage with real issues in the community.
Vary the complexity of graphic organisers, like mind mapping, to suit the students’ level of understanding.
Construct rubrics with students to develop metacognition in their learning.
Provide a variety of learning activities to allow for Multiple Intelligences (Gardner 1999) and different learning styles.
Encourage the use of contemporary digital tools to broaden opportunities for research and collaboration, particularly beyond the school boundaries.
Vary the ways in which students are grouped for learning. Include opportunities for groups of similar ability and move students in and out of groups according to need (cf. Core Module 5, in GERRIC 2005).
Allow time for thinking and reflection.
Provide a number of varied options for demonstrating learning.
Provide opportunities for students to choose how they will demonstrate their learning.
Provide opportunities for gifted students to demonstrate mastery of their learning.
Facilitate opportunities for assignments/assessment tasks to involve a real-life problem or concern and a real-life audience.
Provide students with opportunities to work on individual projects on areas of deep interest. Develop learning contracts with these students.
Create a variety of assignments at a number of levels (tiered assignments).
Facilitate the use of contemporary tools in the design, creation and publishing of the product of learning.
Differentiated Instruction (continued)

Individual circumstances will dictate whether in-class acceleration or a different setting is required. Acceleration can allow more time for specialities and interests and, in the case of secondary students, opportunities for developing insights into possible career choices.

The long-term advantages of acceleration far outweigh any disadvantages for gifted learners (Hattie 2012). However, attention must be paid to the social and emotional wellbeing of the student in an acceleration program. Care must be taken that ‘asynchrony’ does not lead to social and emotional issues (Silverman 2002).

Extension Education

Teachers in Victorian Catholic schools are able to access the services of a number of teachers placed in specialist science and cultural environments. These Placed Teachers, funded by the Catholic Education Commission of Victoria Ltd (CECV), support the initiatives of Catholic education, and those of the Victorian and Australian governments such as the Victorian Essential Learning Standards (VELS), VCE Study Designs, the Australian Curriculum and sustainability education. They have particular responsibility for supporting ‘extension education’.

CECV Placed Teachers can provide:

- teacher-led visits to exhibitions and activities at specialist venues
- interactive educational opportunities fostering authentic learning
- contemporary learning opportunities
- assistance to teachers in planning learning programs for their students
- inquiry-based learning opportunities for students
- access to experts willing to share knowledge with students and teachers
- professional learning, both onsite and offsite
- assistance in setting up networks to exchange ideas, resources and teaching and learning strategies
- assistance to schools to access funds to visit specialist venues
- resources that enrich student learning within the classroom
- online resources
- insight into career opportunities for students
- opportunities to develop ongoing partnerships with schools.

For a list of organisations where CECV Placed Teachers provide extension education, see Table 2.

For further information, visit the CEOM website: <www.ceomelb.catholic.edu.au/learning-teaching/extension-education/> or contact the CEOM at (03) 9267 0228.

Table 2: Organisations with CECV Placed Teachers

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>CERES (Centre for Education and Research in Environmental Strategies)</td>
<td><a href="http://www.ceres.org.au">www.ceres.org.au</a></td>
</tr>
<tr>
<td>CSIRO Science Education</td>
<td><a href="http://www.csiro.au/Portals/Education.aspx">www.csiro.au/Portals/Education.aspx</a></td>
</tr>
<tr>
<td>Healesville Sanctuary</td>
<td><a href="http://www.zoo.org.au/HealesvilleSanctuary">www.zoo.org.au/HealesvilleSanctuary</a></td>
</tr>
<tr>
<td>Mary MacKillop Heritage Centre</td>
<td><a href="http://www.sosj.org.au">www.sosj.org.au</a></td>
</tr>
<tr>
<td>National Gallery of Victoria</td>
<td><a href="http://www.ngv.vic.gov.au">www.ngv.vic.gov.au</a></td>
</tr>
<tr>
<td>Scienceworks and the Planetarium</td>
<td><a href="http://www.scienceworks.museum.vic.gov.au">www.scienceworks.museum.vic.gov.au</a></td>
</tr>
</tbody>
</table>
Teachers using differentiated assessment need to gather data from multiple sources before, during and after the learning process to identify and respond to learners’ needs and strengths and to determine progress.

**Pre- and Post-assessment Practices**
Planning pre- and post-assessment tasks is vital for the success of differentiated instruction.

**Pre-assessment**
Pre-assessment tasks:
- show what a student knows, understands and is able to do before the teaching of a unit begins
- enable teachers to adjust the curriculum to respond to the students’ degree of mastery of the material, ensuring the curriculum is challenging and engaging and will move the students to a higher level of competence
- enable teachers to group students for specific instruction according to need
- may lead to different learning experiences for students in the same classroom
- should be done well in advance of the curriculum delivery to facilitate appropriate modification.

**Post-assessment**
Post-assessment tasks:
- should be developed to maintain unity of purpose between teaching and assessment
- may be summative and/or formative in nature and will be designed to ensure that each learner is able to engage in the learning process
- for gifted students will include higher-order thinking skills and more complex or abstract content and understandings (such assessments may be more appropriate for students in the higher levels of schooling who are not undergoing acceleration programs)
- when compared with a student’s pre-assessment, will inform teachers about the learning gain of individual students.

**Characteristics of Assessment for a Differentiated Curriculum**
Differentiated assessment aims to:
1. enable all students to demonstrate the extent of their learning (on-demand testing may be suitable in this instance)
2. enable all students to access assessments appropriate to their current level of development
3. enable all students to experience success in learning, where success is the individual’s progress in learning
4. assist teachers to identify and respond to under-achievement
5. counter under-achievement through the provision of engaging learning opportunities and appropriate assessments
6. inform teaching and learning practices
7. support lifelong learning.

Figure 3 (page 22) provides a graphic representation of the key features of differentiated assessment.
Assessment and Gifted Students (continued)

Figure 3: The Fundamentals of Differentiated Assessment

- Quality assessment in Catholic schools is assessment for learning.
- Provides meaningful feedback.
- Enables all students to experience success.
- Shows individual performance.
- Is part of the teaching and learning cycle.
- Is part of a differentiated curriculum.
- Informs teaching practice.
- Provides meaningful feedback.
- Is developed in conjunction with the curriculum.
- Allows students to show the true extent of their learning.
- Is conscious of individual differences.
- Should mean students engaging in different tasks.

Adapted from the Catholic Education Office Sydney 2009, Planning and Implementing Differentiated Assessment in an Australian School System, CEOS, Sydney, p. S. Reproduced and adapted with permission.
Giving Meaningful Feedback to Students
An important aspect of assessment is the feedback students receive from their teachers. Some practical suggestions for giving students meaningful feedback include:

- Provide feedback about individual learning gains.
- When returning student work, encourage students to read and respond to the feedback before you assign a grade or mark.
- Invite students to assess their own work using a negotiated rubric or agreed criteria before you assess.
- Give students the opportunity to re-submit an assessment after being given feedback to show their understanding of and response to the feedback.
- Base support and ‘extension’ assessments on assessment tasks that have worked well and that have engaged the student or held their attention.

Figure 4 presents a brief planning process for differentiating curriculum. It is a reminder to include pre-assessment and meaningful feedback in the process.

Figure 4: Process for Developing Differentiated Learning, Assessment and Feedback
As the AusVELS curriculum has been constructed on a sequential basis and calibrated over a number of levels, it can help teachers plan for the more complex learning tasks and assessment needed by gifted students to ensure maximal learning progression.

The CEOM’s Reporting Student Achievement Guidelines for Schools 2013 (available on the CEVN website <http://cevn.cecv.catholic.edu.au> under Curriculum and Student Support / AusVELS Assessment and Reporting) provides guidance with regard to the reporting of student achievement for gifted students against the AusVELS.

All students are expected to experience learning and teaching sequences in, and be assessed against, all AusVELS domains relevant for their year of schooling. As the AusVELS curriculum has been constructed on a sequential basis and calibrated over a number of levels, it can help teachers plan for the more complex learning tasks and assessment needed by gifted students to ensure maximal learning progression.

The A–E reporting scale indicating achievement against the expected standard at the time of reporting also provides a mechanism for the learning of gifted students to be assessed above or well above the expected standard. It is important that there is a mechanism in place for high ratings for individual students to be shared with teaching colleagues, as this can help ensure that gifted students experience learning and teaching sequences appropriate to their needs, most especially when new teachers take them for the first time.

In the case of twice-exceptional students, pastoral discretion can be exercised by school principals in consultation with parents, where pastoral concerns for individual students are held in relation to reporting against the standards. In such cases, parents of students who have been exempted are to be provided with the access to the established processes and procedures of the Program Support Group (PSG) and the consequent Personalised Learning Plan (PLP), so the needs of the student are identified, monitored and met.

Students with additional needs can receive modified subject reports for a specific learning area. They may also receive reports for programs offered within (parallel) or outside (alternative) a mainstream program. See the CEOM’s Reporting Student Achievement Guidelines for Schools 2013 (available from CEVN) for further information about these reports.

Program Support Group (PSG) meetings and Personalised Learning Plans (PLPs) can be put in place for any gifted student in a Catholic school in the Archdiocese of Melbourne, regardless of the reporting implications. They can help ensure that a ‘holistic’ view of the gifted student’s learning progression over time is established, monitored and documented, and are therefore highly recommended.

The CEOM is currently developing a new Personalised Learning Plan (PLP) for Exceptionally Able (EA) students. This is part of the ongoing commitment of the CEOM to improving the teaching and learning of gifted students.
Key Resources

Heacox, D 2002, Differentiating Instruction in the Regular Classroom: How to Reach and Teach All Learners, Grades 3–12, Free Spirit Publishing, Minneapolis, MN.


Vialle, W & Rogers, KB 2010, Educating the Gifted Learner, David Barlow Publishing, Australia.

Useful Links
Australian Association for the Education of the Gifted and Talented Ltd <www.aaegt.net.au/>

Australian Curriculum: Student Diversity <www.australiancurriculum.edu.au/studentdiversity>

Gifted and Talented Education Professional Development Package for Teachers

Gifted Education

The Learning Place


Teacher Resources Galore
(particularly for Graphic Organisers and other tools) <www.teacherresourcesgalore.com/>

Teacher Support Resources


Victorian Association for Gifted and Talented Children
Glossary

**Ability grouping** – Grouping students of similar ability together for learning and teaching.

**Above-level testing** – Testing students at a level that is higher than their age or year level. This provides an opportunity for students to demonstrate higher levels of ability.

**Acceleration** – Presenting curriculum earlier or at a faster pace than usual, e.g. grade skipping, early entrance, subject acceleration.

**Asynchronous development** – Developing cognitively, physically and emotionally at different rates.

**Authentic assessment** – Assessing using real-world challenges that require students to apply the relevant skills and knowledge they have learned in the classroom.

**Ceiling effect** – Resulting from tests whose highest scores are too low for gifted students to demonstrate their true abilities.

**Criterion-referenced testing** – Determining students’ assessment by comparing their achievements to clearly articulated criteria and standards, rather than the work of fellow students.

**Curriculum compacting** – Accelerating learning and teaching and minimising repetition, after pre-testing to determine students’ level of mastery.

**Divergent thinking** – Thinking which involves exploring many possibilities and connections, which can lead to new and creative ideas. See lateral thinking.

**Dual exceptionality** – See twice-exceptional.

**Early entrance** – Starting school at a younger age than usual.

**Enrichment and extension** – Adding breadth and depth to the curriculum so that students are challenged and can explore areas of interest.

**Formative assessment** – Assessing to provide ongoing feedback on learning to students and teachers, including areas needing further development.

**Gifted-learning-disabled** – Being intellectually gifted as well as having one or more learning disability (see twice-exceptional).

**Gifted under-achiever** – A student whose actual achievement does not match her high potential as measured by some reliable index of actual ability.

**Higher-order thinking (HOT)** – Thinking that includes abstract reasoning, critical thinking, creative thinking and problem-solving.
Intelligence Quotient (IQ) – A measure of aptitude or intellectual capabilities, determined by psychometric testing.

Lateral thinking – Thinking in an indirect way, solving problems by approaching them from a different angle. (The term was invented by Edward DeBono in 1967.) See divergent thinking.

Metacognition – Thinking about thinking. Metacognitive skills help students to understand their own thinking processes and to use this understanding to think more effectively.

Norm-referenced testing – Determining students’ assessment by comparing their achievements to those of other students in a ‘normal’, statistically symmetrical distribution, represented in a bell curve.

Over-excitabilities – Intensities or sensitivities to stimuli in one or more of the psychomotor, sensual, intellectual, imaginative and emotional domains (a term originated by Kazimierz Dabrowski).

Personalised Learning Plan (PLP) – A documented and agreed plan for addressing the learning needs of a particular student (sometimes called an Individual Education Plan (IEP)).

Pre-assessment (also known as pre-test) – Assessing students’ current level of mastery of the intended curriculum before teaching the unit.

Psychometric assessment – Measuring mental capabilities quantitatively, as in IQ tests.

Self-esteem – What we feel about who we are, and how we value ourselves.

Self-concept – What we know and believe about our capabilities and self-worth.

Self-efficacy – What we believe about our ability to succeed at particular things.

Summative assessment – Assessing to provide a summary of a student’s learning, usually completed at the end of a course or unit. The summary is often used in awarding grades.

Tiered tasks – Tasks typically presented in three levels – support, core and extension – with possible differences in depth, abstraction and complexity.

Twice-exceptional – Describing a student who is gifted but also has a disability.

Under-achievement – See gifted under-achiever.
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