Differentiation Toolbox

The WHAT, WHY, HOW and WHERE of using qualitative differentiation for gifted students in your New Zealand classroom

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CONTENTS

ABSTRACT

This resource is an overview of qualitative differentiation. It defines **what** qualitative differentiation is and how it differs from quantitative differentiation. A table outlines the differences between a differentiated classroom and a traditional classroom. It summarises how content, process and product can be differentiated to create learning experiences with examples given in the appendices of different ideas to use. Enrichment, acceleration, curriculum compacting, and flexible grouping are also discussed with ideas on how to include these elements into your school or classroom.

The resource explains **why** it is beneficial to students and what challenges you will face in the implementation. The link between motivation of gifted students and qualitative differentiation is examined with a formula given to help aid the motivation of gifted students. This resource gives practical advice and examples of **how** to implement qualitative differentiation in your class. It covers Assessment for Learning (pre-assessment), Assessment in Learning (formative assessment) and Assessment of Learning (summative assessment). There are templates of graphic organisers to allow you to introduce strategies easily into your classroom. Finally, there is a '**where** to go from here' section which gives websites, organisations and best reading to help your implementation of qualitative differentiation.

INTRO

Sally is 14 years old. She owns an iPhone, an iPod, has My Sky and when she goes to McDonalds, she orders a Big Mac with an extra meat patty, extra gherkins and without the special sauce. She frequently logs on to connect with friends on *Facebook* and *Pinterest* and she can access her pages at anytime on her phone. She also shows off her new YouTube clip to anyone who will sit still long enough to enjoy it.

As a 21st Century learner, Sally has whatever she needs at the touch of button. She never waits. She never does one thing at a time. She makes hundreds of choices about what is right for her. And she is never bored... except for the 1875 minutes she spends sitting in her school's classrooms each week.

At Sally's school, her teachers insist that she can only concentrate if she does one thing at a time. They insist that Sally is not capable of making decisions that are right for her learning. They insist that her needs are the same as the person in front of her, behind her and across from her. She must learn the same as everyone else in the class because that is "fair".

But is it?

Strickland (2008, p.172) said “treating everyone the same may not mean treating everyone fairly”.

How “fair” is it for a student to re-learn what they already know because not everyone knows it? How “fair” is it to have a student go through an entire year’s schooling and not progress in their own learning? How “fair” is it to have a student not reach their full potential just because they have already met the potential of their age group?

Our role as teachers is to provide the resources and the guidance to help each student LEARN. Yes, all THIRTY of them. We need to step away from believing that our students only need to learn what is expected of them at their curriculum level and begin a process of individual learning that will allow all of our students to meet their true potential. Providing for gifted and talented learners is not solely about setting up a “separate” aspect of the school. Rather it is about enhancing what the school already does to meet their special needs (Eyre, 2002). Gifted learners do not respond well in classrooms “with a drill and skill, teacher-centered, text-based, test-driven profile” (Tomlinson & Callahan, 1992, as cited in Tomlinson, Coleman, Allan, Udall & Laandrum, 2004). Qualitative differentiation can create a classroom where all learners respond well.

WHAT *is qualitative differentiation?*

Background

Differentiation is currently one of those ‘catch phrases’ that some teachers throw around in job interviews or in the staff room when they know that someone from Senior Management is listening. But what is it really?

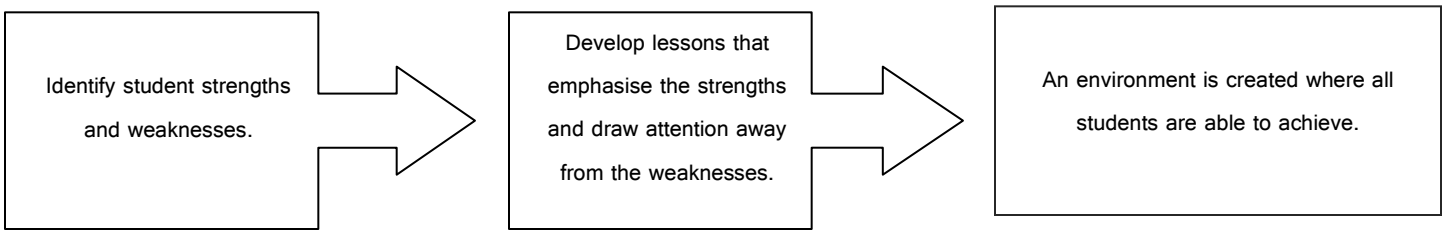
In basic terms, it means teaching in a variety of ways to meet the wide range of needs of different learners (Nunley, 2006). It is an instructional practice that teachers are embracing because it links “brain based research to practical learning environments” (George & Alexander, 2003; Wolfe, 2001 as cited in Sparapani, Walker, & VanTiflin, 2009, p.170). It allows all students to learn to their needs and is another ‘tool’ for teachers to put in their ever growing toolbox of helping students to learn.

There are three important principles for differentiated instruction:

1. Each student has a different learning profile.
2. Learning is more effective in classrooms where the students are active participants and are involved in all aspects of their learning rather than just receiving ‘chalk and talk’.
3. Students are able to make meaning out of the content rather than regurgitating the curriculum.

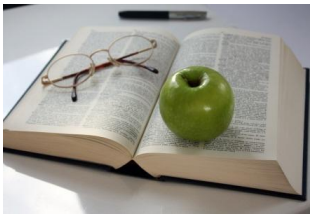
(Sparapani, et al., 2009, p.170)

Differentiation is not a 'recipe' to have all students succeed in school. Rather, it is a wide range of 'ingredients' that can be mixed together to appeal to individual student preferences and strengths. These 'ingredients' all share some characteristics in common (Sparapani, et al., 2009, p.171):



Tomlinson (1999) states that a differentiated classroom is where the teacher starts where the students are "at" rather than where the curriculum says that students should be. The teacher understands that the students learn in a variety of ways and that their interests need to be taken into account. A student in a differentiated classroom is not in competition with his peers but rather with him or herself.

To be a successful teacher in the field of differentiation, you need to (Tomlinson, 1999):



- Recognise that one student will have a different learning path to another. Your job is to find the fastest route for them along their path.
- Hold students to high standards.
- Cater for the struggling, the advanced and the in-between student.
- Help students to recognise that learning involves an element of risk taking and that through hard work, they will achieve success.
- Be flexible with your use of time.
- Be creative enough that you can take the set one-size-fits all curriculum and adapt it to meet the needs of all learners.

Passow's criteria (1982, as cited in MacLeod, 2005, p.13) states that you should ask yourself the following questions when designing your differentiation:

- **Would** all students **want to be involved** in such learning experiences?
- **Could** all students **be involved** in such learning experiences?
- **Should** all students **be expected to succeed** in such learning experiences?

If you want the activities to be suitable for all students in your class, then you should be able to answer "yes" to the above questions. A "no" answer indicates an activity that is suitable for gifted and talented students.

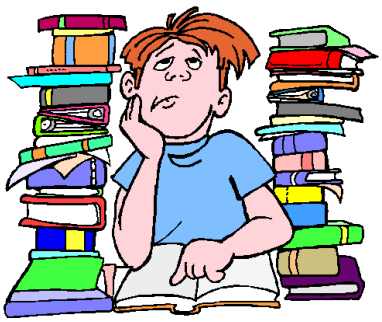
Tomlinson (1999, p.16) also compares a traditional classroom to a differentiated classroom. Use her table below as a checklist for your own classroom. This table will help you isolate where you need to make the most changes in your classroom.

Comparing Classrooms	
Traditional classroom	**Differentiated Classroom**
❑ Student differences are masked or acted upon when problematic.	❑ Student differences are studied as a basis for planning.
❑ Assessment is most common at the end of learning to see "who got it".	❑ Assessment is ongoing and diagnostic to understand how to make instruction more responsive to learner need.
❑ A relatively narrow sense of intelligence prevails.	❑ Focus on multiples forms of intelligences is evident.
❑ A single definition of intelligence exists.	❑ Excellence is defined in large measure by individual growth from a starting point.
❑ Student interest is infrequently tapped.	❑ Students are frequently guided in making interest-based learning choices.
❑ Relatively few learning profile options are taken into account.	❑ Many learning profile options are provided for.
❑ Whole class instruction dominates.	❑ Many instructional arrangements are used.
❑ Coverage of texts and curriculum guides drives instruction.	❑ Student readiness, interest, and learning profile shape instruction.
❑ Mastery of facts and skills out-of-context are the focus of learning.	❑ Use of essential skills to make sense of and understand key concepts and principles is the focus of learning.
❑ Single option assignments are the norm.	❑ Multi-option assignments are frequently used.
❑ Time is relatively inflexible.	❑ Time is used flexibly in accordance with student need.
❑ A single text prevails.	❑ Multiple materials are provided.
❑ Single interpretations of ideas and events may be sought.	❑ Multiple perspectives on ideas and events are routinely sought.
❑ The teacher directs student behavior.	❑ The teacher facilitates students' skills at becoming more self-reliant learners.
❑ The teacher solves problems.	❑ Students help other students and the teacher solve problems.
❑ The teacher provides whole-class standards for grading.	❑ Students work with the teacher to establish both whole-class and individual learning goals.
❑ A single form of assessment is often used.	❑ Students are assessed in a multiple of ways.

How did you go? I am guessing that, like most teachers, you currently have more ticks in the Traditional Classroom column than that you do in the Differentiated Classroom column. But if you are reading this resource it means that you are ready to make a change and create a differentiated classroom – just make it a qualitative differentiated classroom.

What is the difference between 'qualitative' and 'quantitative'?

Quality verses quantity. I would predict that many of us, myself included, have believed that we have successfully differentiated for our gifted students by providing a *quantitative* approach to differentiation in our classes.



The gifted student finished early so I gave them another three (four, five…) pages of reading/math problems/vocabulary exercises/scientific equations/(*insert your subject here*). The student was occupied and quiet while the rest of the class was able to keep learning. But, and this is a big BUT, the gifted student was not learning. Quantitative is about 'more of the same' and it should not be our method (Thomson, 2006) for catering to the needs of gifted learners because it simply does not cater to their needs.

Qualitative differentiation is about creating learning experiences that that truly meets the needs of gifted and talented learners. A classroom that allows gifted students to "learn at an appropriate pace, develop their critical and creative thinking skills, pursue their passions, represent their knowledge in a variety of ways and interact with mental age peers" (Pyryt & Bosetti, 2006, p.144) meets their needs. This is a huge challenge, there is no debating that. But qualitative differentiation goes a long way towards meeting these needs. Enrichment, acceleration, curriculum compacting and flexible pacing (Thomson, 2006), these are more beneficial to the gifted learner than 'more of the same'.

What should qualitative differentiation look like?

If we only look at that basic idea of teaching in a variety of ways then we often incorrectly believe that we are differentiating (Nunley, 2006) – lecture on Monday, worksheet on Tuesday, make a poster on Wednesday, group work Thursday and, wahoo, video on Friday!

This is **not** differentiation and it is certainly not qualitative differentiation.

If the assessment is the same and all students have completed the same work, then you have not adapted your teaching to the needs of the individual student.

It is not about providing games when students finish early. It is not about having some hard and some easy questions on the same piece of paper. It is not about marking the students differently.

So, if it is not all of that, then what is it?

Tomlinson (1995, as cited in Riley, 2000a, p.2) identifies what differentiation is and is not.

Differentiation…	
…is	**…is not**
provision of a variety of ways to explore curriculum content.	making all the tasks the same, with adjustments consisting of merely varying difficulty level of questions.
provision of an array of processes for understanding and "owning" information.	marking some students harder than others.
provision of options for demonstrating or exhibiting what has been learnt.	letting those who finish early play games for "enrichment".
	giving students extra problems, extra reports, or "extension" assignments.

Coil (2007b, p.1) suggests that differentiation is:

1. Different ways to take in the information
2. Differing amounts of time to complete work
3. Different levels of learning
4. Different assignments
5. Different means to assess what has been learned

"Appropriately differentiated curriculum produces well-educated, knowledgeable students who have had to work very hard, have mastered a substantial body of knowledge, and can think clearly and critically about that knowledge." (Berger, 2000, p.3). Sounds good, doesn't it? So, first let us take the elements of content (different levels of learning), process (different ways to take in information, differing amounts of time to complete work) and product (different assignments, different means to assess).

CONTENT

Content is what the students learn – facts, ideas, concepts, skills, information (Berger, 2000).

For gifted and talented learners, the content needs to dive below the surface into deeper and deeper knowledge. The gifted and talented learner needs to make connections between ideas, learn intricate details and find the underlying meaning (Riley, Bevan-Brown, Bicknell, Carroll-Lind & Kearney, 2004). Often, as secondary teachers, we focus too much on teaching only what the curriculum asks us to. We do not take into account the students who already know the curriculum or who learn it at a faster pace to others.

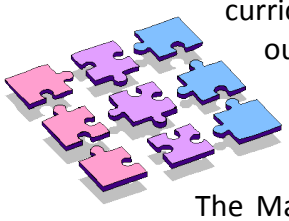
Content should be:

- Abstract, centred around broad-based themes, issues and problems
- Integrated, making multidisciplinary connections
- In-depth and with breadth
- Self-selected based upon student interests and strengths
- Planned, comprehensive, related and mutually reinforcing
- Culturally, inclusive, appropriate and relevant
- Advanced in both complexity and sophistication
- Gender balanced and inclusive
- Enriched with variety, novelty and diversity
- Embedded within methods of inquiry, emulating work of 'professionals'
- Inclusive of moral, ethical and personal dimensions
- Explored through the use the study of the lives of gifted people

Riley (2004, p. 355)

It is important to keep in mind that our job is make sure that students know the content that they need to know. But it may not be our jobs to 'teach' it to them (Winebrenner, 2001). We can differentiate how the students learn the content and also have some students learn it in more breadth and depth while other students will only learn the basic knowledge to advance them to the next curriculum level (Coil, 2007a).

Riley (2004, p.356) recommends using "broad based themes" and taking a multidisciplinary and conceptual approach to content. Roberts and Roberts (2001, as cited in Riley, 2004) believe that this allows gifted students to make connections between subject areas as well as ensuring that the content contains both depth and breadth. The content, aside from being based upon the curriculum, should also be pertinent and have meaning in the student's life or the outside world (Riley, 2004). Differentiated content should be like creating a jigsaw – the students choose the pieces, work out how they relate, and what the final product should like it.



The Maker Model (1982, as cited in MacLeod, 2005, p.10) suggests that teachers should modify their content in terms of the level of "abstraction, complexity, variety and organisation." It should also include the study on the method of inquiry and the study of people. See Appendix A for ideas on how to provide a catalyst for differentiating content.

PROCESS

Process is how students interact with the content, for example Bloom's Taxonomy (Coil, 2007a). You should provide a variety of means to encourage self directed learning and differentiate the process (Berger, 2000). This self directed learning can either be individual or in a cooperative learning arena. Group work is especially important in regards to gifted Māori where the gifts and talents can be 'owned' by the group rather than the individual (Bevan-Brown, 2004).

The Maker Model (1982, as cited in MacLeod, 2005) suggests that teachers should modify their process in terms of using higher level thinking skills and open-ended questions and activities. It also suggests that the process includes "discovery, proof and reasoning, freedom of choice and group interactions" (p.10).

Processes should be:

- Independent and self-directed, yet balanced with recognition of the value of group dynamics
- Inclusive of a 'service' component, or opportunity to share outcomes for the good of others, like the community or whānau
- Stimulating higher levels of thinking (analysis, synthesis and evaluation)
- Creative, with the chance to problem-find and problem-solve
- Accelerated in both pace and exposure
- An integration of basic skills and higher level skills
- Open-ended, using discovery or problem-based learning strategies
- 'Real' – mirroring the roles, skills and expertise of practitioners
- Designed to develop research skills; time management, organizational and planning abilities; decision-making processes and personal goal setting
- Metacognitive, allowing students to reflect upon their own ways of thinking and learning
- Created with an aim of developing self-understanding, specifically in relation to giftedness
- Facilitated by mentors, as well as teachers

Riley (2004, p. 355)

It is important to include processes that involve skilful critical and creative thinking where the students learn how to use the information they have (Riley, 2004). Thinking skilfully is an important aspect of being a lifelong learner as it allows us to understand the world around us and make wise decisions (Swartz, Costa, Beyer, Reagan & Kallick, 2008). When including critical and creative thinking processes remember to include "advanced, meaningful content and integration of basic skills" (Riley, 2004, p.359).

Teachers are also responsible for meeting the social and emotional needs of gifted students (Ministry of Education, 2000) and differentiation of process can help them do this. You can offer processes that improve communication skills, give back to the community or have students examine their own (or other's) giftedness (Riley, 2004). See Appendix A for ideas on differentiating the process.

PRODUCT

You would probably be more familiar with differentiating product than you have been with content of process. In differentiating product, you want to give your students the opportunity to show what they have learnt, how they have manipulated their ideas and how they can synthesise information rather than summarise or regurgitate (Berger, 2000). This allows for more variety in the classroom and allows the students to work in their preferred learning style (Coil, 2007a).

Products should be:

- The result of 'real' problems, challenging existing ideas and creating new ones
- Developed using new and 'real' techniques, materials and ideas
- Evaulated appropriately and with specific criteria, including self-evaluation
- Self-selected
- Wide in variety
- Designed for an appropriate audience
- Transformations of ideas, shifting students from the role of 'consumers' to 'producers' of knowledge

Riley (2004, p. 355)

The Maker Model (1982, as cited in MacLeod, 2005, p.10) suggests that teachers should modify their 'products' to include "real world problems, real world audiences, real deadlines, evaluation and transformations". While Berger (2000) believes that a self-evaluation process should also be included in the final product.

Products can be separated into different categories: written, visual, performance, oral and multicatergorical (Karnes & Stephens, 2000, as cited in Riley, 2004, p.361). The important aspect of product differentiation is choice. In my own experience, I have dealt with many students coming to me to complain that they are being "made" to present material in a certain manner. There are times in secondary school when we cannot allow students to choose their products (external exams for example) but in class activities we should provide a variety of product choices with the provision of accepting another product if the student discusses their own personal idea with the teacher.

Students do need to be guided as to what is expected of different products. This can be in the form of a "how-to-library" (Stephens & Karnes, 2001, as cited in Riley, 2004, p.361) or product criteria cards (Coil, 2007a). These guidelines need to be accessible to the students so that they can independently check that they are on the right track with their product. This criteria does need to open-ended in that it should not have a 'ceiling' that will hold the gifted and talented student down. Rather, they should be based on 'real' products that are used in the outside world.

Allowances should also be made if the student wants to develop their product in the 'real' world. Year 10 Business Studies projects are often sold to the public through websites like Trade Me. If a student has created a marketable product they should be encouraged to try and produce and market that product. For example, revision board games on popular texts or theories would have a market in teachers or other students. Likewise, if students have produced letters voicing opinion on current issues these should be sent to newspaper editorial

pages or put on politician's blogs etc. See Appendix A and B for ideas on differentiating the product.
The Maker Model (1982, as cited in MacLeod, 2005, p.10) includes a fourth element to this style of qualitative differentiation and that is the learning environment. Our classroom should be modified to include opportunities for "student-centred learning, independence, openness, acceptance, complexity in setting, varied groupings and high mobility".

As gifted students spend the majority of their time in heterogeneous, mixed ability classrooms (Riley, et al., 2004) it is important that they receive "enriched and accelerated educational experiences that provide alternative approaches to content, process, and products of learning, all within a responsive learning environment" (Kearney, Bevan-Brown, Haworth & Riley, 2008).

ENRICHMENT

Enrichment activities are areas of study that are not from the set curriculum (Coil, 2007a). These activities help provide breadth and depth to students learning. An example of enrichment that I have used in the field of Classical Studies is utilising outside organisations and bringing them into the school. I have had a history-in-action group called *Second Legion Augusta* come into the school to perform a mock gladiatorial battle and to show the students replicas of Roman weaponry. Although, Roman weaponry and gladiators are not part of the Year 13 curriculum that I taught, the enrichment allowed the students to see into the world of the Romans and to gain insight into ancient lives. It also connected students who were passionate about Classical Studies with adults who continue their passion by meeting on weekends to re-enact classical battles or re-create ancient weapons. By looking outside the square, it is possible to find enrichment resources in all subject areas.

Enrichment can also be facilitated by allowing students to make links between what is being studied and the outside world. This can then be turned into an independent inquiry for gifted students.

ACCELERATION

Acceleration means that students are moved faster through the curriculum levels than their peers. This often means that they are completing subjects in a year level higher than their age level. Each school approaches acceleration differently, with some putting groups of students up a Year in all subjects and others only putting some students up in some subjects. One idea that does assist acceleration is the naming the subjects on their curriculum level instead of their year level. For example, instead of calling an English class Year 11 English, call it Level 1 English. This way it takes the focus away from the year level and places it on the curriculum level. Which means that students are more accepting of having younger students (and sometimes older students) sitting in the class with them.

COMPACTING

Curriculum compacting was developed by Renzulli and Smith at the University of Connecticut (Coil, 2007a). It is a way that teachers can discover what students already know and then remove that from the unit that is about to be taught. Successful curriculum compacting relies on your pre-assessment or assessment for learning (refer to page 20) which may be done before you teach the unit or after the first few days of instruction (Coil, 2007a). Students who have mastered the knowledge or skills are then 'excused' from learning those in class or for homework. Instead they are given enriched or accelerated work to complete at that time. Curriculum compacting works best on specific skills like those in mathematics, grammar, vocabulary, identification etc.

GROUPING

Flexible group is an essential element in a qualitative differentiated classroom. Experts acknowledge that it is very difficult to cater to every individual student's learning in a personalised way every lesson (Coil, 2007a). Being flexible in how you set up your groups will make it easier to differentiate. As teachers, we often make the mistake of setting up groups at the beginning of the year and never change them. This can lead to 'labelling' of the groups (Coil, 2007a) – 'nerds',

'dummies' etc. Gifted students, like all students, need to participate in a 'group' in order to develop the social skills necessary for these lifelong learners to contribute to adult society. "An isolated, lonely, unsocialised gifted adult not only experiences deep personal frustration and unhappiness but society is deprived and impoverished by the absence of any contribution from him or her (Whybra, 2000, p.38).

While gifted students do benefit from being grouped together in 'cluster grouping' it is important that this is not a permanent arrangement. This will often create a negative atmosphere in the classroom where the gifted students may feel socially uncomfortable and may result in ostracism or name calling (Davies & Rimm, 2004). We must also remember that giftedness does not solely focus on intellectual ability but can also include "visual/performing arts, spirituality, creativity, leadership, physical ability/sport, and cultural abilities and qualities" (Kearney, et al., p.115). Therefore they are not all 'gifted' in the same field.

Coil (2007a, p.19) states that it is important to ask yourself the following question before setting up your groups:

What are my learning outcomes, and how can I best group my students in order to accomplish them?

There are different ways that you can form your groups:

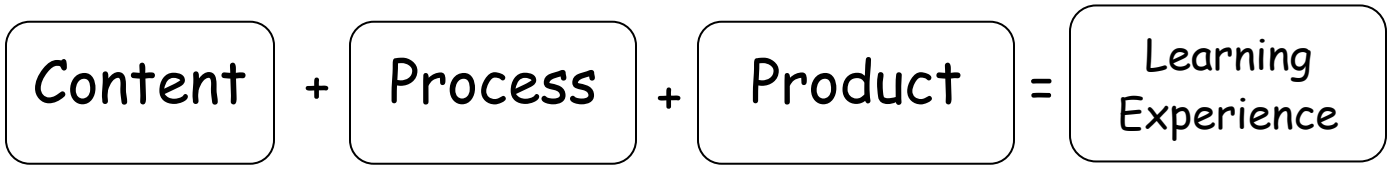
- Homogeneous/ability/cluster grouping
- Heterogeneous/mixed ability grouping
- Individualised instruction/independent study
- Whole group instruction

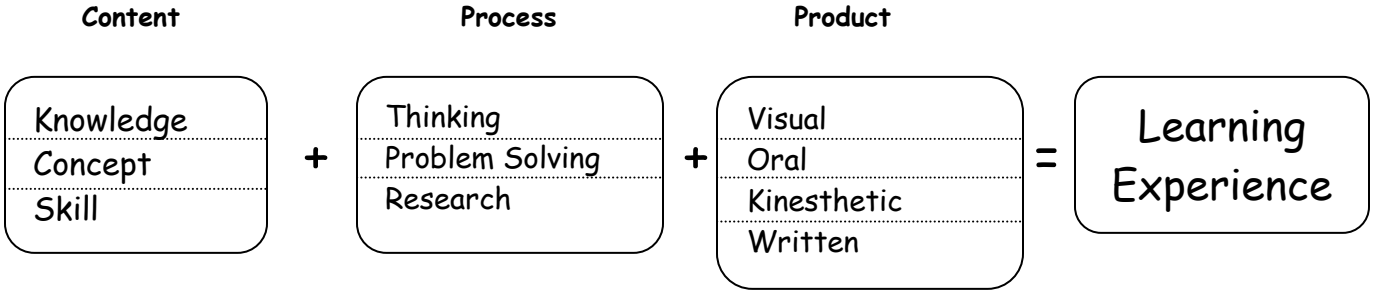
When you are planning your learning experience, you need to consider which form of grouping will best assist the students in meeting your intended learning outcomes. Remember that each type of grouping has its good and bad points and that students will need to be given clear guidelines as to how to work successfully in a group situation.

Adding it all up: Creating a learning experience

Roberts and Roberts (2009) stress that planning is the most important element in qualitative differentiation. It is through planning that you are able to create learning experiences that meet the needs, abilities and interests of your students.

The elements of a learning experience can be outlined as below (Roberts & Roberts, 2009, p.199)





By using the above formula, you will be able to create qualitative differentiated units that meet the needs of all learners in your classroom.

WHY *should I use qualitative differentiation in my classroom?*

The most important words for you to remember when attempting to meet the needs of your gifted and talented learners are "choice, variety, flexibility, appropriateness, relevance, and comprehensively planned" (Riley, 2009, p.631). Qualitative differentiation covers all of these words and allows you to include "enriched, accelerated, real, meaningful, inclusive, integrated, stimulating, complex, depth and breadth" (Riley, 2009, p.632). "To teach all students well, teachers must tailor their curriculum and instruction so that their students will be engaged in meaningful work (Banks, Cochran-Smith, Moll, Richert, Zeichner, LePage, Darling-Hammond, Duffy & McDonald, 2005, p.254).

I find it frustrating when students are not motivated in my class. Can qualitative differentiation improve their motivation?

Teachers often make quick assumptions about their students – we often label students as unmotivated when, in fact, they are not being challenged and therefore are 'bored' (Banks, et al., 2005). When gifted students repeat work that they already know or work at a level below what they are capable of it has negative results on their learning. Cathcart (2005, p.36) says that students report being "frustrated, angry, helpless, resentful and confused" when they are not challenged in class. They become disillusioned with the education system (school, teachers and authority) and they "turn off" from learning (Cathcart, 1994, as cited in Riley, 2000b, p.1). In fact, many successful gifted adults do not see their schooling as having significantly contributed to their development (Milgram, 1989).

Teachers are becoming more aware of the effect that self efficacy has on academic success. This, in turn, is also linked to student motivation. Adults and students who enter into a situation believing that they can accomplish their goals are more likely to achieve them. Whereas, people who do not expect to achieve their goals are not likely to achieve them. (Brophy,2010). Self efficacy is built through students having *mastery experiences* (Brophy, 2010, p.51, italics in the original) that are accredited to internal and controllable forces like hard work and effort. If a gifted student is not given work that allows them to create mastery experiences then they will not build upon self efficacy while at school. Winebrenner (1999, p.13, as cited in Roberts & Roberts, 2009 p.189) agrees stating that "self esteem is actually enhanced when success is attained at a task that has been perceived as difficult or challenging". Considering that self efficacy perceptions influence our choice and how we engage in activities (Brophy, 2010), a gifted students self efficacy will effect what they achieve in their life.

The figure below (Bandura, 1982, as cited in Schunk, Pintrich, & Meece, 2008) illustrates the behavioural and affective reactions with self efficacy and expected outcomes.

	Outcome Expectation	
Self-Efficacy	Low-outcome expectation	High-outcome expectation
High self-efficacy	Social activism Protest Grievance Mileu change	Assured, opportune action High cognitive engagement
Low self-efficacy	Resignation Apathy Withdrawal	Self devaluation Depression

For gifted students to be motivated in your class the following formula must be taken into account (Brophy, 2010, p.15):

Expectancy	×	Value	=	Motivation

This formula states that a student's motivation is a result of how successfully they think they can perform/complete the activity times the value that the activity holds for them. If a gifted student is given an activity too below their academic level then their expectancy is high but the value is low which results in low degrees of motivation. Likewise if a student is given a task that they hold value in (a 'real' world task for example) but it is set too high above their ability level, then they will not be motivated. Also, keep in mind that students are often "selected consumers" – they are motivated in areas that they choose to be and ignore the rest (Ministry of Education, 2008, p.110).

As teachers we should be setting how learning experiences 'just above' our gifted students' abilities. This means that while they do need to 'reach' for the success, they still expect to succeed in the task. We should create learning experiences that our students value and see as applicable in the 'real world'. By doing this we will increase our students' motivation.

How can qualitative differentiation benefit both my gifted students and the other students in my class?

The New Zealand Curriculum aims to create students who are confident, connected, actively involved lifelong learners (Ministry of Education, 2007). The principles of differentiation are relevant to all students and allow teachers to cater to both low and high ability students.

Research has shown that the brain reacts to meaningful activities and resists meaningless ones (Tomlinson, 1999). For students to succeed in school and become lifelong learners they need to see the links between working hard and gaining success. They see these links through challenges and these challenges must grow and change with their learning needs (Tomlinson, 1999).

However, it is important to keep in mind that we do not want a "one-size-fits-all" approach to learning and this is still true in differentiation. If we do not consider the specific needs of our gifted students then "everyone benefits somewhat, but the gifted child benefits somewhat less than others in the classroom" (Delisle, 2000, p.36, as cited in Riley, 2009, p.634). Therefore, you need to use a combination of strategies to ensure that you are meeting the needs of all the students in your class (Riley, 2009).

I know this change won't be easy, what are the challenges that I will need to overcome?

Change, by nature, is not easy, especially when we (and our students) are used to doing things a certain way. VanTassel-Baska and Stambaugh (2005, as cited in Riley, 2009, p.661) stated that the following challenges will need to be overcome when initiating differentiation.

- lack of teacher subject knowledge for advanced content differentiation,
- limited classroom management skills,
- attitudes and beliefs about learning,
- inappropriate curricular modifications,
- difficulty locating and using resources,
- lack of planning time,
- lack of administrative support,
- lack of pedagogical skills.

Many of these challenges can be overcome by more professional development or by working collaboratively with your Department.

However, there are other issues that may develop from the students themselves. Many gifted students have 'cruised' through their time at school and have received high grades without really putting in any effort. A qualitative differentiated unit will mean that the students will need to work harder to gain the results that they are used to. For students sitting NCEA at their age level, this does not mean that in their Internal Assessments or External Assessments they will be marked harder. Rather that the knowledge and skills that they are gaining will move beyond their curriculum level. So while they will still meet the achievement standard with their peers, their in class work will be at a higher level.

The 'harder' work may not be appreciated by the student – especially if they have already gone through many years of schooling not being catered for and creating a learned behaviour of achievement through no effort. That is why it is important to communicate fully with the students about what pedagogy you are bringing into the class and why. Ask for their opinions and what they would like to be able to do to improve their own learning. This is 'student voice'. Research has shown that where student voice is listened to, students felt more in control, had more connection with the school and could identify with their teacher's perspectives (Mitra, 2004; Rudduck, Chaplain, & Wallace, 1996, as cited in Bourke, 2008).

GIFTED *learners' differentiation verses differentiation*

When you are planning your differentiation, remember that gifted students require different differentiation to the rest of the students in your class. Heacox (2009, p.137) synthesised the findings of The Council for Exceptional Children and the National Association for Gifted Children in the following table:

Differentiation…	
…for all students	**…for gifted students**
Applies state academic standards or provincial goals	Extends academic standards or goals into "next levels" of the curriculum area
Provides activities that reflect vigor and variety	Incorporates advanced, in-depth and complex content and processes
Provides modeling, guided practice, and scaffolding as appropriate	Provides cognitively complex learning
Engages students in choices based on interest in topic, process or product	Provides students with opportunities to pursue interests that may be outside the school curriculum
Uses appropriate pacing; may remediate or accelerate	Accelerates leaning as appropriate to the student's talents
Provides opportunities for collaboration with like readiness, interest, or learning preference peers	Plan for associations with expert-level mentors to extend learning
Adjusts instruction in response to ongoing learning progress	Individualizes learning plans and experiences based on interests, need, and readiness
Selects, adapts, and plans for differences in readiness, interests, and learning preference	Selects, adapts, and/or creates materials and activities that respond to exceptional gifts and talents
Incorporates appropriate technologies to lead to mastery or enrichment	Uses technology to extend content, product, or process differentiation
Provides descriptive feedback on learning progress	Provides "expert" feedback on authentic tasks
Increases independence, responsibility, and self management	Increases skills for autonomous learning to reach high levels of independence
Uses assessment tools to identify and plan for learning preferences, readiness, and interests	Uses assessment tools to identify mastery and then eliminates, replaces, or extends learning tasks
Uses multiple assessment methods to monitor learning progress	Uses assessment data to identify exceptional learning needs and prescribe appropriate academic interventions

HOW *can I implement qualitative differentiation in my classroom?*

So we know **what** it is and **why** we should use it. But as teachers, the most important question for us is **how**. Too many times, we are told that we must do something but are never given practical strategies in which to implement it. This is not fair on us and it means that students will never have the benefit of the new strategy because we do not have time to work out **how**.

The following sections are a 'toolbox' for you to try. Experiment with different strategies, adapt them to suit your needs. What works successfully with one class may not work for another. Above all, communicate with your students, listen to their 'voice'. They will give you the feedback on how these strategies can be improved to meet their needs.

When you are starting out, start small. If you were in a pizza eating competition, you would not try to shove the entire pizza in your mouth at once. You would take it one bite at a time. Choose one class from one subject and start with one unit. Try to introduce one aspect of qualitative differentiation in one lesson each week. As you build confidence, and begin to see successful results, you can add more in. This process will take time but eventually you will have fully qualitative differentiated units.

'Buddy-up' with another member of your department. They work on one unit, you on another. Swap your resources. Observe each other's differentiated lessons. Have another pair of eyes watch your students and see how they are learning differently. Coach each other on what improvements can be made on your resources and/or strategies.

Use all of these points below as a checklist when you plan your differentiated lessons.

In looking at your curriculum, Renzulli (1977, as cited in Hertzog, 2004, p.83) provided the following instructions:

- Teachers must move above and beyond regular curriculum;
- Teachers must take into account specific content interests of students;
- Teachers must accommodate students' preferred styles of learning; and
- Teachers must give gifted/talented students opportunities to pursue topic areas to unlimited areas of inquiry.

Maker (1982, as cited in Hertzog, 2004, p.83) suggested the following when looking at your curriculum:

- It must be more advanced or accelerated;
- It must be more complex;
- It must move beyond the regular curriculum;
- It must be selected by the students according to their interests; and
- It must be concerned with the more abstract concepts in each content area.

Riley (2000a, p.4-5) suggests that you ask yourself the following questions when you are differentiating for gifted and talented students:

- How do I ensure that all students "know" it? How do I determine that the objectives have been met? How do I assess that the core knowledge, skills, and concepts are obtained by all students?
- What do I provide for those who already have this knowledge, skills, or concepts?
- Do I move beyond the core content?
- Do I allow a different path for learning?
- Do I expect different outcomes of learning?

You also need to keep in mind that research has shown that gifted students respond best to the following provisions in the classroom (Eyre, 2002, p.23):

1. build on what we know about how gifted and talented children think and learn;
2. offer opportunities to reveal ability as well as operate at high levels;
3. offer structured access to higher levels of achievement;
4. use assessment for determining learning as well as assessing learning outcomes;
5. require children to strive, persist and self regulate;
6. make learning enjoyable and challenging and rewards intellectual risk taking and innovation.

Let's not forget Passow's criteria (1982, as cited in MacLeod, 2005) that was mentioned on page 4. This criteria is difficult to follow when catering to a number of different learning needs in your classroom. But by using open-ended activities this can help to meet the needs of gifted learning while not adhering specifically to Passow's criteria. Open-ended activities allow the students to work at their own pace, choose their preferred learning style, produce work based on their own interests that is at their personal curriculum level (Hertzog, 2004).

ASSESSMENT

Assessment is more than just "grades in a markbook" (Riley, 2009, p.639). Classroom assessment is an integral part of what we teach and how our students learn. For students, assessment is linked to their self worth as well as their motivation to engage in educational activities (Earl, 2003; Rawlins & Poskitt, 2008). For us as teachers, assessment gives us information on what we should cover in the curriculum, what knowledge individual students need to learn, and gives performance evidence that we can comment on for parents or whanau (Earl, 2003). However, just 'doing' an assessment does not contribute to student learning (Earl, 2003) especially when looking at traditional forms of assessments like tests or exams.

Nuthall (2007) comments that "tests have little or no personal significance for students and do not measure what the students know, or can do. Instead, tests reflect students' motivation and test-taking skills" (p. 41). Nuthall (2007) discusses the private world of the student's mind and that this is where individual thinking and learning happens. Wilkinson and Anderson (2007) summarise that while the way all students learn is essentially the same, it is differentiated by their past, their interests and their motivation. Therefore it makes sense that we need to consider assessment when we are looking at qualitative differentiation. When we use assessment to guide our planning and differentiation it means that our teaching decisions are more relevant to our gifted and talented learners (Riley, 2009).

Assessment for Learning

Assessment for learning is also known as pre-assessment. This is one of the most important aspects of catering for gifted students (Riley, 2009). There are four types of assessment for learning that are typically used: a brief test to check prior knowledge, teacher observation, class discussion, and checklists (Sparapani, et al., 2009). This is an important step as it allows the teacher to gauge where the student is in regards to the topic. That way you do not teach what the student already know, rather you advance their learning from where they currently are. In regards what you do with the data from pre-assessment, "you do not have to reinvent the wheel, just rotate and re-align it" (Riley, 2000b, p.2).

Riley (2000b) gives us some general principles regarding Assessment for Learning.

- Pre-assess before you begin teaching a topic or unit.
- It should be continuous or on-going. Just because you have done one, do not assume that you are finished.
- It should be comprehensive and assess strengths, needs, interests and learning preferences.
- Consider and align your pre-assessment for gender, age plus the wide variety of cultures, abilities and disabilities that we have in our New Zealand classrooms.
- Link the pre-assessment to your learning experiences (content + process + product) that you are planning.
- Use a variety of methods with alternative forms to pre-assess.
- Use the data gained to create your differentiation. Do not pre-assess and then do nothing with the data as the students will notice if you do this.

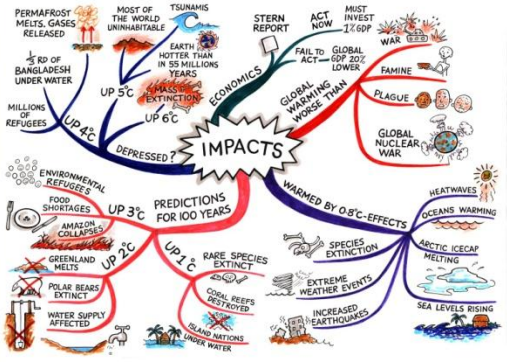
As mentioned, you can Assess for Learning by using a number of strategies. Two specific strategies are outlined below (Riley, 2000b, p.3):

1. <u>Five Most Difficult Questions</u>

   Ask the five most difficult questions at the start of the unit rather than at the end of the unit. If a student can answer then before you teach them, then you need to differentiate their learning experiences for this unit.

2. <u>Mind map of prior knowledge</u>

   Have students create a mind map of all that they know about the key words from the topic. Have them link ideas of these key words to display prior knowledge.



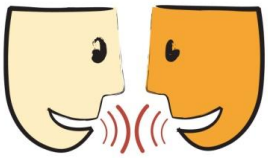
3. <u>KW Chart</u>

   Create a T-Chart with *What I know* on the left side and *What I want to know* on the right side. Have the students complete the chart. Use the right hand side as the beginning of your inquiry learning (Ministry of Education, 2007).

Assessment in Learning

Assessment in Learning is also known as formative assessment. It is what teachers do each lesson to ensure that students are learning and provides feedback to both teachers and students about progress of the learning. It provides a record of what the student has learnt in relation to what the teacher expected them to learn (Sparapani, et al., 2009).

Some ways to include Assessment in Learning is through peer evaluations, portfolios, class discussion, journal entries, exit cards etc. It is important to provide means of formative assessment that is not teacher orientated. There are many reasons for this, the most obvious being that there are a large number of students in your class and formative assessment can be time consuming. But a more important reason is that students benefit through assessing other students and evaluating the work on set criteria. Therefore, students should be using self assessment and peer assessment as part of their Assessment in Learning.



Some ideas for using Assessment in Learning are:

1. CRC
   Have the students peer assess and then complete the following table:

Commend:	
Recommend:	
Commend:	

2. Peer and Self Assessment of Practice Exams
   In your practice exams, mark your students work but do not put the grade on the paper. Instead, give back the exams with a copy of the mark schedule and try these steps.

   1. Discuss the mark schedule as a class and then ask your students to swap their paper with someone else's.
   2. Have the students mark those papers using the mark schedule.
   3. Then have them write on the paper: *I gave you a N/A/M/E* [circle one] *because you did* [list three points based on the mark schedule].
   4. The student then reads the comment and writes on the paper: *I agree/disagree with the points mentioned because…*
   5. Now give them your mark that you gave them. Have this written on a piece of paper set up in the following way.

Name: Grade:

I received a N/A/M/E (circle one) for this standard because I:

-
-
-

To improve and gain a N/A/M/E in my external, I need to:

-
-
-

What I did right about my study for these practice exams:

-
-
-

What I need to improve on before my next set of exams:

-
-
-

---

6. Then do some metacognition with the class. Discuss the following questions:

a) How close was your partner's mark to my mark?

b) How has looking at the mark schedule and your partner's work changed your opinion on what you are expected to write for this Standard?

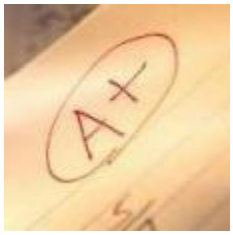
c) Do you think you can now improve on this grade in the next set of exams?

d) What steps are you going to have to take to improve on this grade?

e) Where do you need to go with your learning now? Do you need more revision or more breadth and depth?

Assessment of Learning

Assessment of learning is also known as summative assessment. It gauges what the student has learnt over a period of time. Traditional summative assessments would be exams or tests and in our Secondary context National Certificate of Educational Achievement (NCEA) examinations at the end of the year.



Ideally, with qualitative differentiation you would use more than one summative assessment to gauge your students' learning (Sparapani, et al., 2009). This is because one type of summative assessment (e.g. unit test) may not allow for the student to accurately demonstrate all their knowledge. By combining two forms of summative assessment (e.g. unit test plus a demonstration assignment) you will be able to gauge the students' learning more successfully (Sparapani, et al., 2009).

One way of producing differentiated summative assessment is through using assessment portfolios. The benefits of assessment portfolios are outlined below (Trenwith, 2010).

> Assessment portfolios allow flexibility for differentiation of the set curriculum. They can be diversified to meet the needs of all learning styles and needs in the classroom (Belgrade, Burke & Fogarty., 2008; Epstein, n.d.; Green & Johnson, 2010; Gronland & Waugh, 2009). For gifted students, assessment portfolios allow them choice and creativity in studying their own personal interests. Their format allows in depth studies that can be completed over a long period of time (McAlpine, 2000). For less able students, assessment portfolios can help students experience academic success by allowing more chance of achievement with completing the tasks several times. By clearly examining the set criteria and through the use of conferencing, lower ability students are able to improve their grades. This can then help these students to raise their achievement level closer to their peers as well as increasing their motivation and self confidence (Stiggins & Chappuis, 2005, as cited in Green & Johnson, 2010). Teachers are still able to evaluate knowledge and skills that students learn in the classroom but assessment portfolios do not limit the students' creativity (Epstein, n.d.).

Internal assessments would also fall in the category Assessment of Learning. Many Achievement Standards do allow for differentiated assessment. Let us take Year 13 Classical Studies as an example. The six credit internal is an Independent Study. The explanatory notes state (New Zealand Qualifications Authority, 2006):

1 Students will research an area from one of the following topics: Alexander the Great, Greek vase painting, Aristophanes' comedies, Socrates, Greek science, Augustus, Art of the Roman empire, Virgil's *Aeneid,* Juvenal's *Satires*, and Roman religion.

It is common for teachers to write one internal assessment task based on one of the topics above. However, you can differentiate this assignment by writing a generic task to give out along side your specific assessment. For each of the above topic areas you would outline ideas or themes that the student could focus on for those subjects listed above. This would allow students to choose between your specific task or an area that interests them.

The Achievement Criteria is outlined below (New Zealand Qualifications Authority, 2006) will allow you to grade whatever topic the students choose.

Achievement	**Achievement with Merit**	**Achievement with Excellence**
• Select relevant evidence. • Analyse evidence. • Reach conclusions based on evidence.	• Select a range of relevant evidence. • Analyse a range of evidence. • Reach conclusions based on a range of evidence.	• Select a wide range of relevant evidence. • Analyse a wide range of evidence. • Reach developed conclusions based on a wide range of evidence.

One obvious advantage of using this form of differentiated assessment is that you do not have to read the same material over and over. When I have graded this assessment in the past, I have had sixty students write between 2500-3000 words with very little difference between them. This does not make for exciting reading! Another advantage is that students will have access to more resources as all the students will not be working on the same topics.

Many Achievement Standards do not state how the evidence must be produced. Therefore, you are able to allow your students to choose the format of their product. Once again, take it back to differentiating content, process and product.

If you are writing your own summative assessments, keep the following points in mind:

- Offer a choice in the content of the assessment.
- Provide guidelines on length.
- Offer choice in the presentation or product.
- Provide guidelines for what you expect from different types of products.
- State the option that if students have other ideas, then they can discuss them with you.
- Have a generic grading schedule that will allow you to assess a range of content, process and product.

IN CLASS

The following are templates that you can adapt and use in your classes to assist you in your qualitative differentiation.

Target

This is a very effective tool to get all students to work at their own level. Harder activities are placed in the centre of the target while easier ones are on the outside. Divide your class into four levels of ability and then assign the number of tasks. See Appendix C for templates.

For example:
High ability students: one from the outside, two from the middle, three from the centre.
High - mid range: one from the outside, three from the middle, two from the centre.
Low – mid range: two from the outside, three from the middle, one from the centre.
Low ability: three from the outside, two from the middle, one from the centre.

Tic-Tac-Toe

These can form a basis for the curriculum or can be used as extension activities. When you plan the activities, write each one on a post-it note and then you can rearrange them until you have a layout that you are happy with. See Appendix D for the layout.

They can be set up in different ways:

1. Students choose three activities either across, down or on a diagonal.
2. Use Bloom's Taxonomy or learning modalities for each line.
3. Make square 5 a must do – all rows of three must go through 5.
4. Tiered rows - easiest on the top, then the mid range, most difficult on the bottom.

Independent Learning Plans

These are based in a graphic organiser format. They take a while to set up but then can be used every year with very different results from each student. You can choose how you want to set them up – that is based on learning styles or modalities, Bloom's Taxonomy or multiple intelligences.

Bloom's Taxonomy

1. Remembering
2. Understanding
3. Applying
4. Analysing
5. Creating
6. Evaluating

Multiple Intelligences

1. Linguistic
2. Logical
3. Interpersonal
4. Intrapersonal
5. Musical
6. Visual/Spatial
7. Naturalistic
8. Kinaesthetic

Learning Styles or Modalities

1. Visual
2. Verbal
3. Kinaesthetic
4. Technological

Set deadlines for when a task is due in. The students choose which tasks to do in which ever order they like. You record in your workbook what activities they have chosen. They choose all activities in first lesson and cannot change their minds. Students write the deadline dates on to the ILP. See Appendix E for an example layout of an ILP.

Learning Contracts

This is the process that facilitates in-depth inquiry into an area of interest or into a topic that extends the regular curriculum.

Remember that our students are not used to learning independently and even the most 'gifted' will need guidance on organisation, collecting resources and time management.

Give the students examples of possible independent study and then let them choose. If they have a different idea, they can do it as long as you approve the topic. They then need to set out their objectives and what product they wish to come from their study. For example: DVD, poster, speech, PowerPoint…

All students should keep a learning log (Appendix G) of what they are doing as well as completing a learning contract. See Appendix F for an example of the layout of learning contracts.

Thinker's Keys

You can use these to help establish creative thinking in your classroom. They can be used independently as a differentiated section or can be placed into other differentiated models as a choice activity. These are also useful to have as differentiated "Do Now" activities that the students can choose from. Have them written on cards that the students pick through and choose which one appeals to them. For justification, instructions and to download the free list of Thinker's Keys please go to http://www.thinkerskeys.com/

SOME *final points*

FLEXIBILITY

- You need to be flexible in your planning, how you structure groups
- You must work within the curriculum constraints to provide flexibility
- Try teaching in new ways
- Give students multiple opportunities for learning
- Be continuously creative in your teaching

PLANNING

- All good teaching requires planning without it, learning time can be wasted or the classroom can quickly turn into chaos
- The booklet will give a start on some easy to use planning templates
- Start with one template that you like and then work it into one of your units
- Share your resource with other teachers and collect theirs – don't reinvent the wheel!
- Planning qualitative differentiation will become easier with time

RESOURCES

- Learn what resources you now have
- Look at the "Where to from here?" section
- Share with other teachers

CHOICES

- This does not mean giving unlimited or unstructured choices
- You can base the choices on learning styles, Bloom's Taxonomy or multiple intelligences
- The only choice the students don't have is to DO NOTHING!

WHERE *to from here?*

Websites:

- TKI Gifted and Talented Site
- Curriculum Differentiation
- Differentiating Instruction
- Differentiating Instruction For Advanced Learners In the Mixed-Ability Middle School Classroom
- Differentiation for Instruction
- Differentiation of Curriculum and Instruction
- Differentiation Resources
- Guidelines and Tools

National Organisations:

- Future Problem Solving
- Gifted Kids Programme
- GiftEDnz
- NZAGC The New Zealand Association for Gifted Children
- REACH Education
- The Gifted Education Centre

BEST READING *for classroom implementation*

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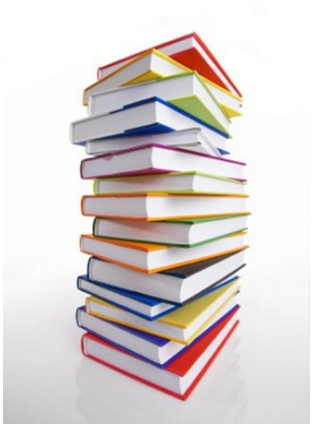

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APPENDIX A

The CCPP Toolkit

Directions: Choose one content catalyst, one process, and one product to design differentiated activities.

Content Catalysts

advertisement, commercial	demonstration	model	PowerPoint presentation
anecdote	diagram	moral dilemma	problem
art activity	display	movement	profiles of people from books of magazines
article	editorial	movie or video	quotations
artefact	editorial cartoon	music	scenario
artwork	excerpt	newspaper	simulation
autobiography	exhibit	novel	slogan
biography	fable, folk tale, myth	open-ended question	speaker
case study	field trip	panel discussion	speech
chart	historical fiction	picture, photograph, illustration	story
comic strip or cartoon	interview	picture book	survey or research results
computer software	letter to editor	plan	timeline
dance or drama performance	metaphor, analogy, mini lecture	poetry	Web site

Processes

adapt	demonstrate	formulate	manipulate	reflect
analyse	design	hypothesize	model	reformat
appraise	detect	illustrate	operate	research
assess	determine	implement	organize	respond
calculate	develop	incorporate	practice	review
categorize	diagram	infer	predict	select
choose	differentiate	initiate	prioritize	sequence/order
compare/contrast	distinguish	innovate	produce	solve
compose	dramatize	integrate	question	support
construct	employ	interpret	rate	synthesize
convert	estimate	invent	record	transform
create	examine	investigate	refine	translate
critique	experiment	judge	reflect	use
decide	express	justify	reformat	value
deduce	forecast	make	refine	verify
				write

Products

advertisement	critical review	limerick	policy statement
advice column	demonstration	magazine article	puppet show
animated film	experiment	mask	radio program
book jacket	fairy tale/folktale	oral presentation	rhyme/riddle
campaign for product or candidate	formula	photo essay	slide show/PowerPoint presentation
comic book	guidebook	pictorial tour	
costume design	investigative report	play	

(Heacox, 2001, p. 156)

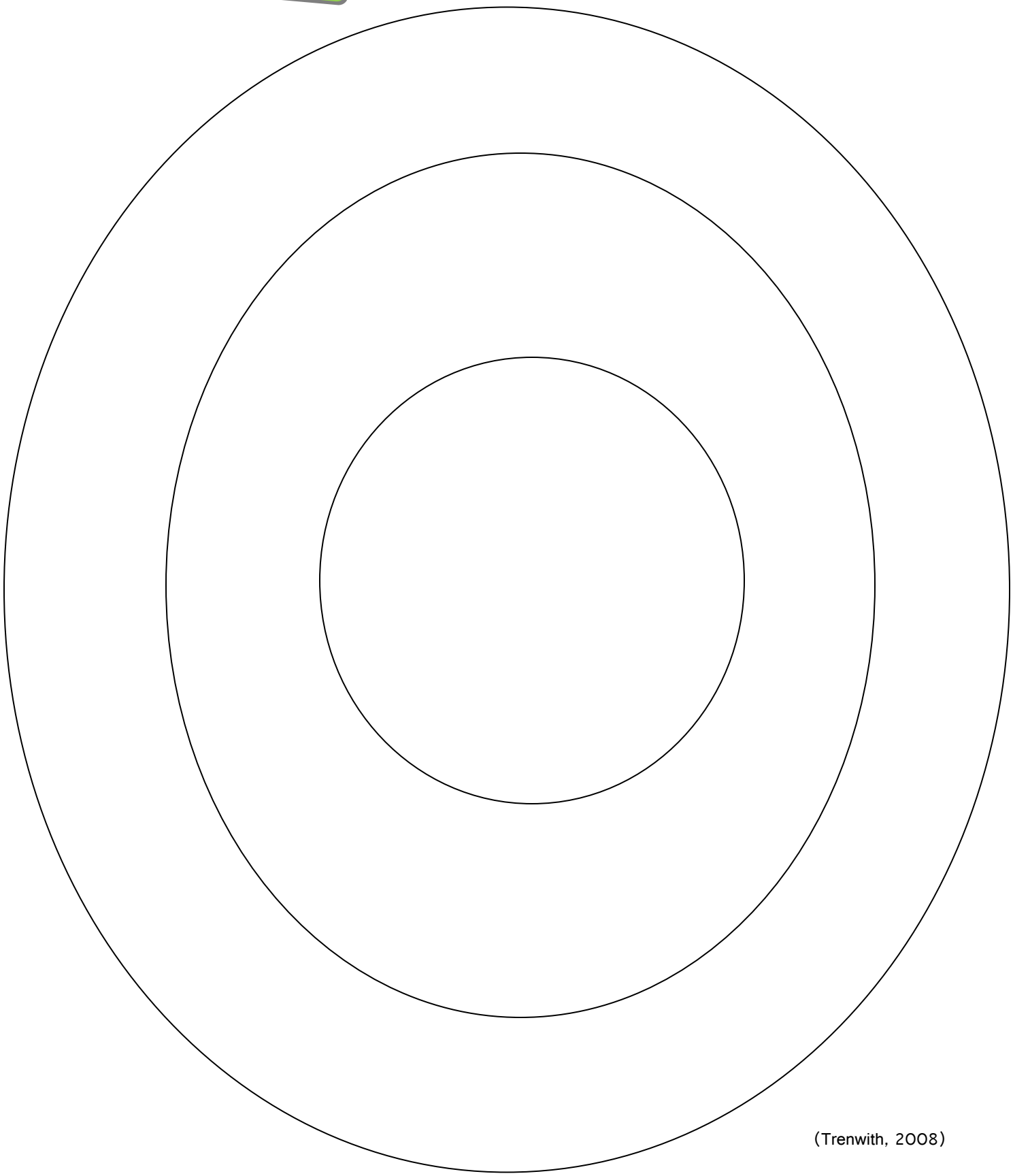
APPENDIX B

Product Choices Chart

Auditory	Visual	Tactile-Kinesthetic
Audio recording	Advertisement	Acting things out
Autobiography	Art gallery	Activity plan for trip
Book	Brochure	Animated movie
Classifying	Coat of arms	Collection
Commentary	Collage	Composing music
Crossword puzzle	Coloring book	Dance
Debate or panel talk	Comic book or strip	Demonstration
Dialogue	Costume	Diorama
Documentary	Decoration	Dramatization
Editorial	Design	Exhibit
Essay	Diagram	Experiment
Experiment	Diorama	Field experience
Fact file	Drawing or painting	Flip book
Family Tree	Filmstrip	Flip chart
Finding patterns	Flannel board	Game
Glossary	Flow chart	Game show
Interview	Graphic organizer	How-to book
Journal or diary	Greeting card	Invention
Learning Center task	Hidden pictures	Jigsaw puzzle
Letter to editor	HyperStudio or other multimedia presentation software	Learning Center – hands on tasks
Limerick or riddle	Illustrated manual	Manipulatives
Mystery	Illustrations	Mobile
Newspaper	Learning Center visuals	Museum exhibit
Oral report	Magazine	Papier-mâché
Pattern and instructions	Map	Photograph
Petition	Mural	Play or skit
Position paper	Pamphlet with pictures or icons	Pop-up book
Press conference	Photo album	Project cube
Reading	Photo essay	Puppet show
Scavenger Hunt	Picture dictionary	Rap or rhyme
Simulation game	Political cartoon	Reader's Theater
Song lyrics	Portfolio	Rhythmic pattern
Speech	Poster	Role-play
Story or poem	Rebus story	Scale drawing
Survey	Scrapbook	Sculpture
Teaching a lesson	Slide show	Simulation game
Trip itinerary	Transparency talk	Survey
Written report	Travelogue	TV broadcast
	TV program	
	Video	
	Web site	

(Winebrenner, 2001, p. 80)

APPENDIX C



(Trenwith, 2008)

Name: _____

Choose **three** activities from the outside circle: #___ #___ #___

Choose **two** activities from the middle circle: #___ #___

Choose **one** activity from the centre circle: #___

Name: _____

Choose **two** activities from the outside circle: #___ #___

Choose **three** activities from the middle circle: #___ #___ #___

Choose **one** activity from the centre circle: #___

Name: _____

Choose **one** activity from the outside circle: #___

Choose **three** activities from the middle circle: #___ #___ #___

Choose **two** activities from the centre circle: #___ #___

Name: _____

Choose **one** activity from the outside circle: #___

Choose **two** activities from the middle circle: #___ #___

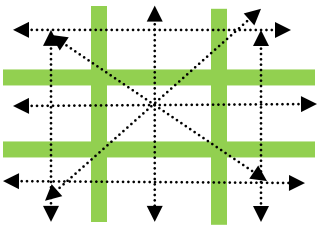
Choose **three** activities from the centre circle: #___ #___ #___

(Trenwith, 2008)

APPENDIX D

1.	2.	3.
4.	5.	6.
7.	8.	9.

Choose three of the above activities (one from each horizontal line) to form a noughts and crosses win.



You will be required to hand in one activity at each of the due dates given to you by your teacher.

(Adapted from Coil 2007a, p.115),

APPENDIX E

Individual Lesson plan:

Instructions: Chose **one** activity from each of the student choices. Write the number of your choice under the correct title and discuss with your teacher when each will be due in. You must complete all activities in the Teacher's Choice box.

Student Choices

Remembering	**Analysing**
Understanding	**Creating**
Applying	**Evaluating**

Teacher's Choice	**Products/performance Required**	**Assessment Required Activities**

Chosen Activities	**Products/performance Required**	**Due Date for Student Choice Activities**
Remembering		
Understanding		
Applying		
Analysing		
Creating		
Evaluating		

(Adapted from Coil, 2007a, p.106)

APPENDIX F

Learning Contract

Name:_____

Topic:_____

Materials that I plan to use:

_____

_____

Rules that I will follow while working on this independent assignment:

_____

_____

_____

The Process that I am going to use is: Blooms/Williams/Multiple Intelligences etc...

Explain what level you will be working on and how.

_____

_____

Checkpoints:

First checkpoint date:_____

Second checkpoint date:_____

Third checkpoint date:_____

Signatures:

Student: _____ Teacher: _____

(Adapted from Coil, 2007a, p.72)

APPENDIX G

Learning Log

Date	Work I plan to do	Work that I actually did	Adjustments to plan	Reflections on my work effort
Monday				
Tuesday				
Wednesday				
Thursday				
Friday				
Saturday				
Sunday				

(Adapted from Coil, 2007a, p.72)