



Professional Development  
Service for Teachers

An tSeirbhís um Fhorbairt  
Ghairmiúil do Mhúinteoirí



**Leaving Certificate  
Agricultural Science  
National Workshop 5**



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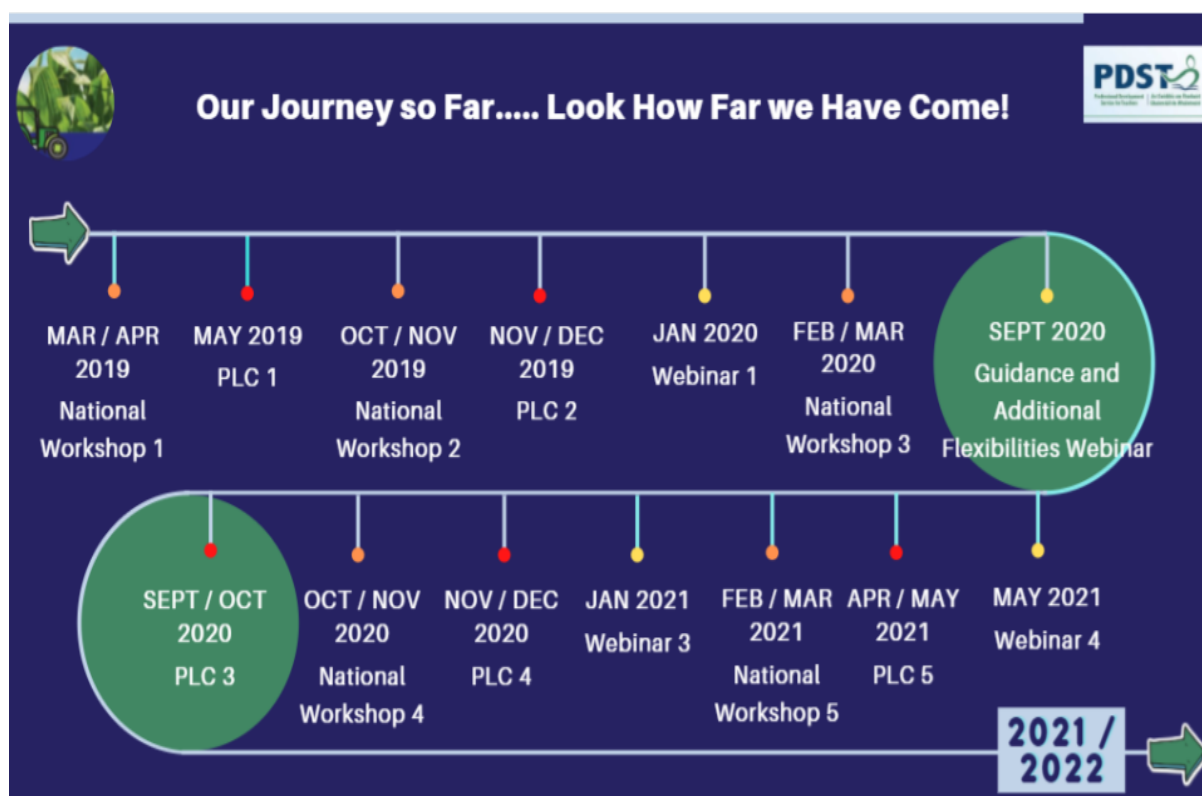
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## Key messages

- Using the Universal Design for Learning (UDL) and the Gradual Release of Responsibility model to scaffold an inclusive learning environment.
- Action verbs in learning outcomes provide insights into how learning might be differentiated by content , process and product.
- Reflecting on your CPD journey to date will allow you to appreciate how you have become more engaged with the specification, more resourceful, confident and active in teaching and learning.

## Our CPD Journey



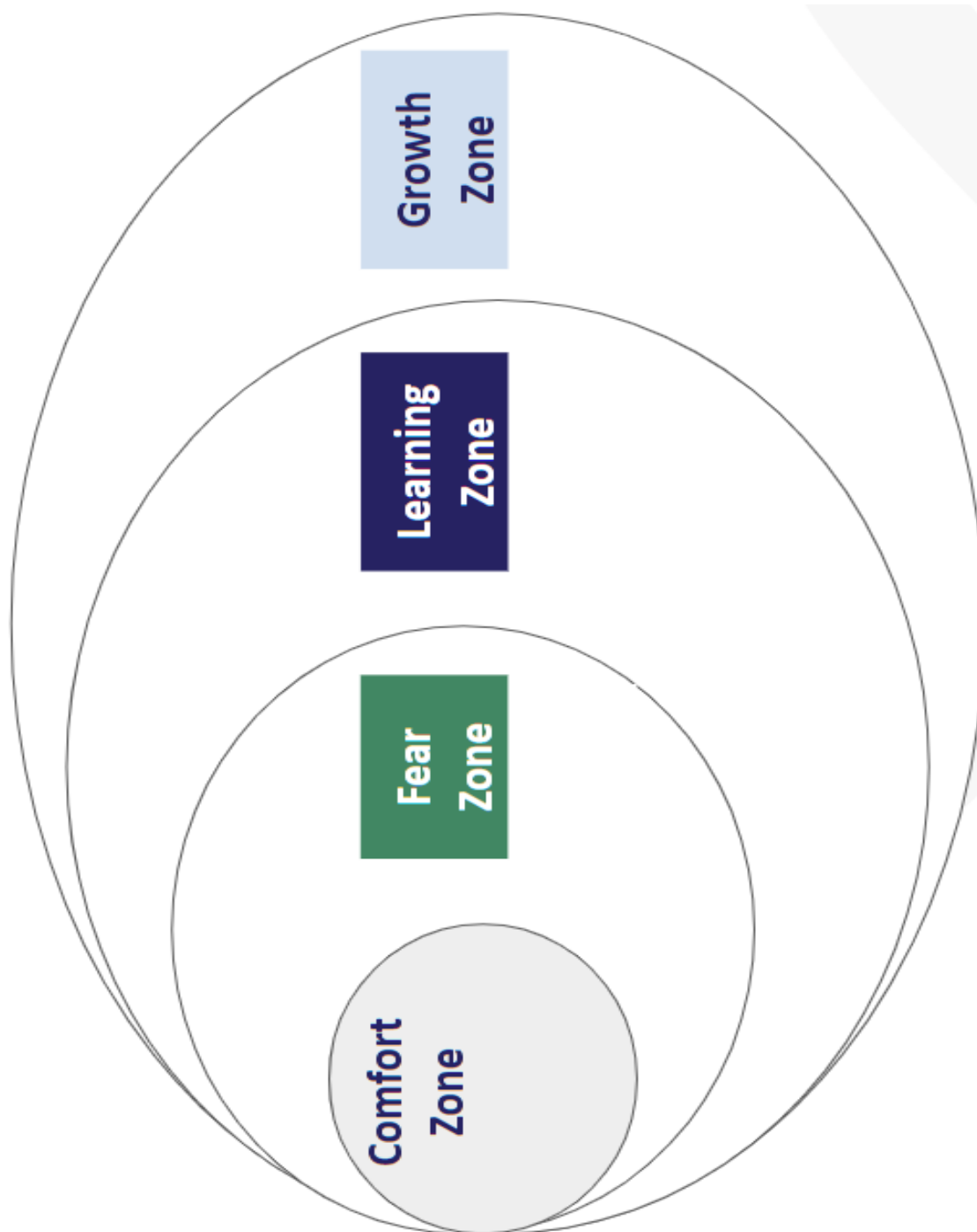
## Our Journey, your Reflection

**How has your CPD journey enriched your teaching, learning and assessment?**

**What approaches have had the biggest impact on your teaching, learning and assessment?**

**How could PLCs help to consolidate and progress your learning?**

## Your Journey so Far....



(Adapted from Danger in the Comfort Zone,  
Judith Bardwick, 1991)

## Think - Pair - Share

Question	My thoughts/Ideas	My Partners thoughts/ Ideas	Combined Ideas
<p>What does this picture reveal to us about inclusion?</p>			
<p>What does inclusion mean to you?</p>			
<p>What inclusive practices have you used in Ag Science?</p>			

## Definitions of Inclusion

### The NCSE define Inclusion as a process of:

Addressing and responding to the diversity of needs of learners through enabling participation in learning, cultures, and communities and removing barriers within and from education through the accommodation and provision of appropriate structures and arrangements to enable each learner to achieve the maximum benefit from his/her attendance at school.

### Winter and O’Raw note that:

“The goal, therefore, is inclusion, not integration..... Essentially, the difference is between “being there” and “taking part” with integration prioritising the placement of students in particular settings and inclusion promoting actual participation and accommodation.”(Winter and O’Raw, 2010: 39).

**Spratt and Florian (2013)** use the term 'inclusive pedagogy' to describe “an approach to teaching and learning that supports teachers to respond to individual differences between learners but avoids the marginalisation that can occur when some students are treated differently.”

### Committee on the Rights of the Child, describes it as:

“a set of values, principles and practices that seeks meaningful, effective, and quality education for all students, that does justice to the diversity of learning conditions and requirements not only of children with disabilities, but for all students.”

### Background Notes & readings for participants:

CRC Committee, General Comment 9 on Children with Disabilities (2006), UN Doc CRC/C/GC/9, 27February 2007, para 67

(The Committee on the Rights of the Child is a body that monitors the implementation of the United Nations Convention on the Rights of the Child.)

Lani Florian & Jennifer Spratt (2013) Enacting inclusion: a framework for interrogating inclusive practice, European Journal of Special Needs Education, 28:2, 119-135, DOI: 10.1080/08856257.2013.778111.

National Council for Special Education (2011). Inclusive Education Framework. Meath:NCSE

Winter,E.& O’Raw,P.(2010).Literature review on the principles and practices relating to inclusive education for children with special educational needs. Meath:NCSE. Available at [https://ncse.ie/wp-content/uploads/2014/10/NCSE\\_Inclusion.pdf](https://ncse.ie/wp-content/uploads/2014/10/NCSE_Inclusion.pdf)

<https://www.cast.org/impact/universal-design-for-learning-udl>



## Inclusive Practice in the Agricultural Science Classroom

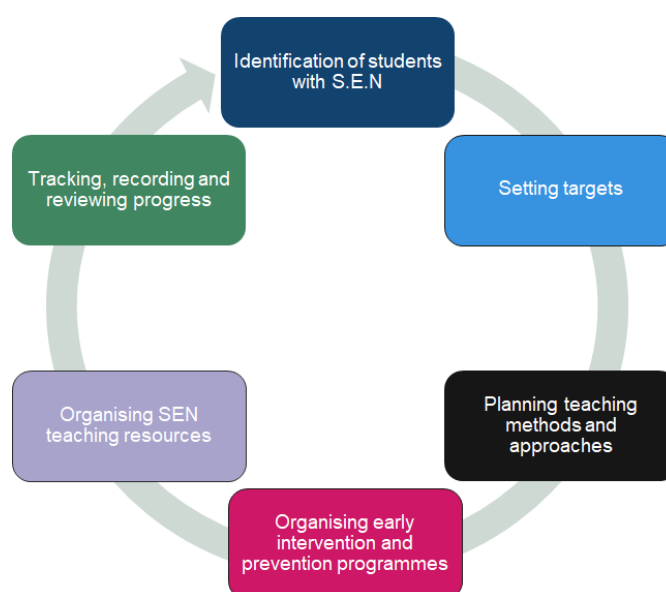
Key questions	Actions to be considered
<p>How does the student support plan and student assessment data (standardised test results, junior cycle results and schools own assessment data) influence our teaching, learning and planning?</p>	
<p>Through considering frameworks such as UDL, how could we make our lessons more inclusive?</p>	

## Principles to Guide the Implementation Process

- Resources provided to support students with special educational needs should be used to facilitate the development of truly inclusive schools.
- Supports provided to students with special educational needs should be based on identified needs and be informed by regular reviews of progress (in consultation with parents and students) as outlined in the Continuum of Support Guidelines.
- The subject teacher has primary responsibility for the progress and care of all students in the classroom, including students with special educational needs.
- Special education teaching supports provided to schools should be used solely for the support of students with identified special educational needs, including those students for whom English is an Additional Language (EAL). The special education teaching supports cannot be used to reduce the student-teacher ratio for general subject teaching or to provide additional subject options for students who do not have special education needs.
- Students with the greatest levels of need should have access to the greatest level of support, and whenever possible, these students should be supported by teachers with relevant expertise who can provide continuity of support.
- Schools should establish and maintain a core team of teachers to meet the needs of students with special educational needs. All members should have the necessary experience and access to continuing professional development to support the diverse needs of students with special educational needs.

These principles are further explored throughout this document and should inform a whole school approach to provision for students with special educational needs.

## Guiding Actions



## Actions to Support Schools in Planning and Documenting Provision for Students with Special Educational Needs at Whole-School Level

<p><b>Action 1:</b> Identification of students with special needs</p>	<p>Review existing information on students' needs, using school based data and information from primary schools, parents and external professionals. Engage in additional screening and data gathering as required, using informal and formal assessment approaches. Identify <b>all</b> students with special educational needs in the school. Match their needs to the appropriate level on the continuum of support.</p>
<p><b>Action 2:</b> Setting targets</p>	<p>Based on identified needs, set clear targets for Support For All, School Support and School Support plus levels of the Continuum of Support.</p>
<p><b>Action 3:</b> Planning teaching methods and approaches</p>	<p>Identify the level and type of intervention required to meet targets for each student on the Continuum of Support. Consider methodologies best suited to promoting meaningful inclusion such as differentiation, heterogeneous grouping, team teaching, small group and individual teaching. They should also be mindful that the interventions and supports that they are using are evidence-informed.</p>
<p><b>Action 4:</b> Organising early intervention and prevention programmes</p>	<p>Based on identified needs, choose evidence informed early intervention / prevention programmes to address concerns. Identify time needed and staffing commitment required.</p>
<p><b>Action 5:</b> Organising and deploying special education teaching resources</p>	<p>Cross reference the needs of students at School Support and School Support Plus levels and consider common needs that can be met through in class / team teaching, small group and individual support to ensure effective and efficient teaching and learning approaches. Agree which teacher(s) will cater for these students and where the teaching will occur. Be mindful of the requirement that students with the greatest level of need should receive the greatest level of support from teachers with relevant experience.</p>
<p><b>Action 6:</b> Tracking, recording and reviewing progress</p>	<p>Establish a tracking and recording system, to ensure that the progress of all students in meeting their individual targets is monitored:</p> <ul style="list-style-type: none"> <li>● At <b>whole-school (Support for All) level</b> by all teachers.</li> <li>● At the <b>School Support (for some) and School Support Plus (for a few) levels</b> by subject teachers and special education teachers.</li> </ul>

## Menti Reflection

*“As a teacher who differentiates instruction, you become both a facilitator and a collaborator” (Heacox, 2002).*

**Reflect on your experiential teaching practices. How do the concepts I have learned today connect to learning from previous workshops?**

## The Gradual Release of Responsibility (GRR) Model

The GRR model emphasizes differentiated instruction that supports and mentors students into becoming capable thinkers and learners when handling tasks with which they have yet to develop expertise in. It is a successful model and has been documented as an effective approach in teaching many subject areas and a variety of skills.

### Stage 1 - Modelled teacher centred instruction. Dialogic differentiation and think aloud

**strategies (I do):** Explicitly describe the skills and strategies needed for researching. Teacher demonstrates, thinking aloud and verbalizing while students are observing.

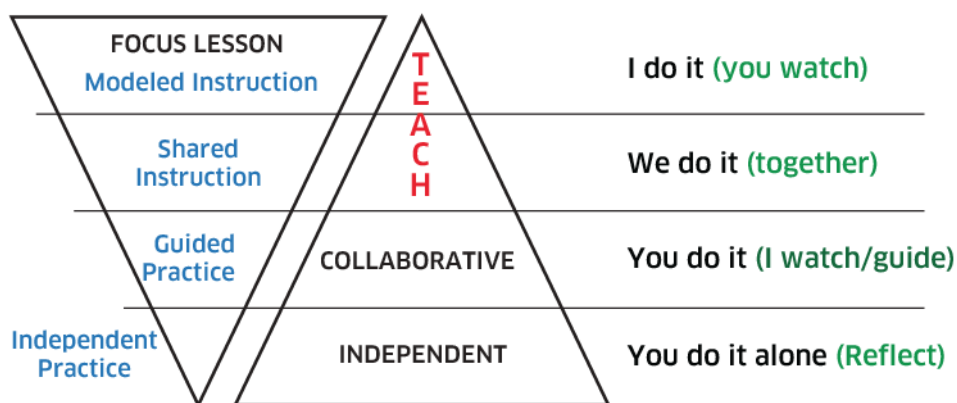
**Stage 2 - Guided instruction (We do):** Students are encouraged to start using the skills and strategies modelled above in a whole class setting.

**Stage 3 - Collaborative learning - peer cooperation (you do):** students engage in collaborative learning where they actively use the skills and strategies modelled above. Working in scaffolded groups peer cooperation is encouraged. This is where we witness the gradual release of responsibility.

**Stage 4 - Independent learning - self assessing (you do it alone) :** students work independently using the new skills and strategies they have acquired. They can self assess their progress against agreed success criteria.

## The Gradual Release Model

### TEACHER RESPONSIBILITY



### STUDENT RESPONSIBILITY

Figure 1: The Gradual Release Model

“Fisher & Freyer, 2008”

## How to Use the Gradual Release of Responsibility Model

GRR Stage	Teacher Focus	Student Focus
<p><b>Stage 1</b> Modelled teacher centred instruction</p> <p>The focus lesson</p> <p>I do it – you watch</p> <p>Concrete</p>	<ul style="list-style-type: none"> <li>Establish purpose based on learning outcomes / skill sort.</li> <li>Use dialogic differentiation – instructional scaffolding.</li> <li>Models think aloud strategies</li> <li>Demonstrations</li> <li>Explicitly describe the skills and strategies required</li> </ul>	<ul style="list-style-type: none"> <li>Actively observing and listening</li> </ul>
<p><b>Stage 2</b> Guided instruction</p> <p>Shared instruction</p> <p>We do it – together</p>	<ul style="list-style-type: none"> <li>Uses questions, prompts and cues.</li> <li>Encouraging students to start using skills and strategies from stage 1.</li> <li>Use whole class setting</li> <li>Uses formative assessment to close learning gap</li> </ul>	<ul style="list-style-type: none"> <li>Start contributing ideas and information.</li> <li>Discussing ideas with teacher</li> <li>Start using skills that have been modelled.</li> </ul>
<p><b>Stage 3</b> Collaborative learning</p> <p>Peer cooperation</p> <p>You do it – I watch / guide</p>	<ul style="list-style-type: none"> <li>Provide written and verbal feedback</li> <li>Creating heterogeneous groups</li> <li>Facilitating carefully scaffolded instructions</li> </ul>	<ul style="list-style-type: none"> <li>Engage in collaborative learning</li> <li>Actively using new skills and strategies</li> <li>Peer cooperation and peer assessment</li> <li>Being scientifically literate</li> <li>Consolidating understanding</li> </ul>
<p><b>Stage 4</b> Independent practice</p> <p>Using the new skills</p> <p>You do it alone – Reflection</p> <p>Abstract</p>	<ul style="list-style-type: none"> <li>Offers support and encouragement</li> <li>Uses formative assessment</li> </ul>	<ul style="list-style-type: none"> <li>Work independently applying new skills and understanding</li> <li>Self-assessing their progress</li> <li>Applying new skills and knowledge in familiar and unfamiliar situations</li> </ul>

## Working with the GRR Model

If I was going to use this in my class, how would I teach it?

Notes from stage 1:

Notes from stage 2:

Notes from stage 3:

Notes from stage 4:

## 2022 IIS References (Coursework Brief)

Some references to get you started in your research – this list is not exhaustive.

- [Science for Environment Policy Thematic Issue: Agri-environment schemes: impacts on the Agricultural Environment, \(June 2017\), issue 57, published by European Commission.](#)
- [Environment and Agriculture \(2016\), chapter 12, published by the Environmental Protection Agency.](#)
- [Farming for nature, the role of results based payments \(2020\), published by Teagasc.](#)
- [Food Wise 2025 – a 10 year vision for the Irish agri-food industry \(2015\), published by Department of Agriculture, Food and the Marine.](#)
- [National Mitigation Plan \(2017\), published by Department of Communications, Climate action and Environment](#)
- [Farming and the environment \(2018\), published by Teagasc.](#)

### Other useful references:



## My Personal Reflection

How would you use the GRR model, support documents and research resources to enhance the inclusive classroom?

What similar strategies am I using?

What differentiated supports will I now provide for inclusion?

## References for Session 1

<https://www.cast.org/impact/universal-design-for-learning-udl>

<https://www.curriculumonline.ie/getmedia/f668d804-6283-4d4a-84ab-c71e5b37d198/Specification-for-Junior-Cycle-Science.pdf>

*CRC Committee, General Comment 9 on Children with Disabilities (2006), UN Doc CRC/C/GC/9, 27February 2007, para 67*

Lani Florian & Jennifer Spratt (2013) Enacting inclusion: a framework for interrogating inclusive practice, *European Journal of Special Needs Education*, 28:2, 119-135, DOI: [10.1080/08856257.2013.778111](https://doi.org/10.1080/08856257.2013.778111)

National Council for Special Education (2011). *Inclusive Education Framework*. Meath: NCSE

Winter, E. & O'Raw, P. (2010). Literature review on the principles and practices relating to inclusive education for children with special educational needs

[http://ncse.ie/wp-content/uploads/2014/09/Supporting\\_14\\_05\\_13\\_web.pdf](http://ncse.ie/wp-content/uploads/2014/09/Supporting_14_05_13_web.pdf)

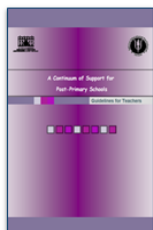
[education.ie/en/Circulars-and-Forms/Active-Circulars/cl0014\\_2017.pdf](http://www.education.ie/en/Circulars-and-Forms/Active-Circulars/cl0014_2017.pdf)

[http://www.education.ie/en/Schools-Colleges/Services/National-Educational-Psychological-Service-NEPS-/neps\\_post\\_primary\\_continuum\\_teacher\\_guide.pdf](http://www.education.ie/en/Schools-Colleges/Services/National-Educational-Psychological-Service-NEPS-/neps_post_primary_continuum_teacher_guide.pdf)

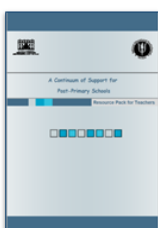
The British Dyslexia Association's dyslexia friendly style guide provides principles that can help ensure that producers (teachers) of written material (lesson notes, emails, presentations and printed materials) consider the difficulties experienced by some people with dyslexia:

<https://www.bdadyslexia.org.uk/advice/employers/creating-a-dyslexia-friendly-workplace/dyslexia-friendly-style-guide>

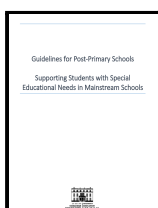
## Key Policies for Inclusion



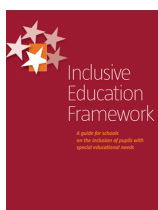
A Continuum of Support framework for Post Primary Schools” Guidelines for Teachers, and “Inclusion of Students with Special Educational Needs: ” Using this framework helps to ensure that interventions are incremental, moving from class-based interventions to more intensive and individualised support, and that they are informed by careful monitoring of progress.



A Continuum of Support for Post Primary Schools” **Resource Pack for Teachers**. This resource pack should be used in conjunction with the document, A Continuum of Support for Post-Primary Schools. It is a publication by the National Educational Psychological Service which aims to support post-primary schools in their work with young people.



“Guidelines For Post-Primary Schools Supporting Students with Special Educational Needs in Mainstream Schools” provides guidance on the use, organisation and deployment of additional teaching resources for students with special educational needs, in the context of the revised SET model.



The NCSE inclusive education framework which provides guidance to schools on what constitutes good practice for including students with special educational needs and is designed to provide clear sign posts to schools on their journey towards inclusion.



Circular No 0014/2017 offers a lot of information about the revised S.E.T. allocation process for mainstream post-primary schools.

## Differentiation in Agricultural Science

### So what exactly is differentiation?

Heacox (2002) defines differentiation as *'changing the pace, level, or kind of instruction you provide in response to individual learners' needs, styles or interests'* while Willis, S. & Mann, L., (2000) states that *'differentiation is a teaching philosophy based on the premise that teachers should adapt instruction to student differences'*.

In discussing differentiation some educationalists argue that differentiation should be about matching the level of the curriculum content to the differing capabilities of the children. Others argue that it is less about changing the level or type of work set by teachers but more about providing alternative paths to enable all children to reach their potential.

(Differentiation in Action, PDST)

*"When we reach out to the individual within the wider group we are engaging in differentiation, which relates at its simplest to any strategies that help a teacher to make a move away from 'teaching to the middle' of a class group"*

(NCCA, 2015)

Differentiating instructions means 'shaking up' what goes on in the classroom so that students have multiple options for taking in information, making sense of ideas and expressing what they learn. This means that a range of learning possibilities are available for students to acquire the content, understand the information and meet the learning objectives.

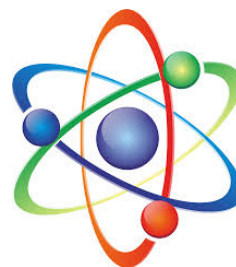
(Tomlinson, 1999)

*"When a teacher tries to teach something to the entire class at the same time, chances are one-third of the kids already know it; one-third will get it; and the remaining third won't. So two-thirds are wasting their time."*

(Katz, 2016)

## 5.1 Science Differentiation in Action “Toolkit”

1. Adjust curricular aims to suit the **needs and abilities** of all students.
2. Promote **creative thinking** and encourage students to apply their learning as much as possible.
3. Use a **variety of instructional approaches**, such as whole-class teaching, small group work, paired work, cooperative learning, individual teaching and team teaching.
4. Use a **variety of instructional strategies** (e.g. demonstrations, role plays, video, active learning etc.) to appeal to visual, auditory and kinesthetic learners.
5. Group students for **learning within the classroom based on their needs** rather than always relying on the same groups.
6. Offer students a **choice of learning activities** based on their needs, strengths, interests or learning preferences.
7. Promote **high-level thinking** rather than just focusing on recall of basic content.
8. When revising a topic, use **differentiated instructional strategies** to the ones used originally to teach the topic.
9. Use whole-class discussion (or pre-assessment) when beginning a new topic to **determine what students already know**.
10. Allow students to show what they have learned **in different ways**.



## Differentiation in the Specification

# 5

## Assessment

Assessment of Leaving Certificate Agricultural Science for certification is based on the aims, objectives and learning outcomes of this specification. Differentiation at the point of assessment is achieved through examinations at two levels - Ordinary level and Higher level.

### Differentiation

The Leaving Certificate Agricultural Science specification is differentiated in three ways: through the learning outcomes of the specification, in the process of teaching and learning, and through assessment. Coursework is assessed at a common level.

#### ORDINARY LEVEL

The learning outcomes that are presented in normal type apply at Ordinary level. Students engage with a broad range of knowledge, mainly factual in nature, but with some elements of abstraction or theory. Students at Ordinary level will be expected to demonstrate and use a moderate range of practical and cognitive skills and tools, select from a range of procedures, and apply known solutions to problems in both familiar and unfamiliar contexts.

#### HIGHER LEVEL

All learning outcomes, **including those in bold type**, apply at Higher level. Students engage with a broad range of knowledge including theoretical concepts and abstract thinking with significant depth in some areas. Students at Higher level will be expected to demonstrate and use a broad range of specialised skills and tools to evaluate and use information, to plan and develop investigative strategies, and to determine solutions to varied, unfamiliar problems, and to identify and apply skills and knowledge in a wide variety of both familiar and unfamiliar contexts.

### Assessment components

There are two assessment components at each level:

ASSESSMENT COMPONENT	PERCENTAGE
<b>Written</b> <ul style="list-style-type: none"> <li>▶ short answer questions</li> <li>▶ structured questions</li> <li>▶ synoptic questions</li> </ul>	<b>75</b>
<b>Coursework</b> <ul style="list-style-type: none"> <li>▶ Individual investigative study</li> </ul>	<b>25</b>

## Working with Learning Outcomes

### Learning outcomes, learning intentions and success criteria – Making the connection



Figure 1: Planning teaching learning and assessment

**Learning outcomes** provide the building blocks for teachers to plan their teaching, learning and assessment. Teachers can then use learning intentions and success criteria to take forward their planning and enable the learning outcomes to come alive in practice with their students.

The Figure 1 above shows the relationship between learning outcomes, learning intentions and success criteria.

#### What are learning outcomes?

Learning outcomes are statements in curriculum specifications to describe the knowledge, understanding, skills and values students should be able to demonstrate after a period of learning.

#### What are learning intentions?

A learning intention for a lesson or series of lessons is a statement, created by the teacher, that describes clearly what the teacher wants the students to know, understand, and be able to do as a result of specific learning and teaching activities. Clear learning intentions should help students focus not just on the

task or activity taking place but on what they are learning. Learning intentions are always linked to one or more learning outcomes in the specification.

#### What are success criteria?

Success criteria are linked to learning intentions and therefore to the learning outcomes. They are developed by the teacher and/or the student and describe what success looks like. They help the teacher and student to make judgements about the quality of student learning.



Resources to help you in planning using learning outcomes, learning intentions, success criteria can be found on the [NCCA website here](#).

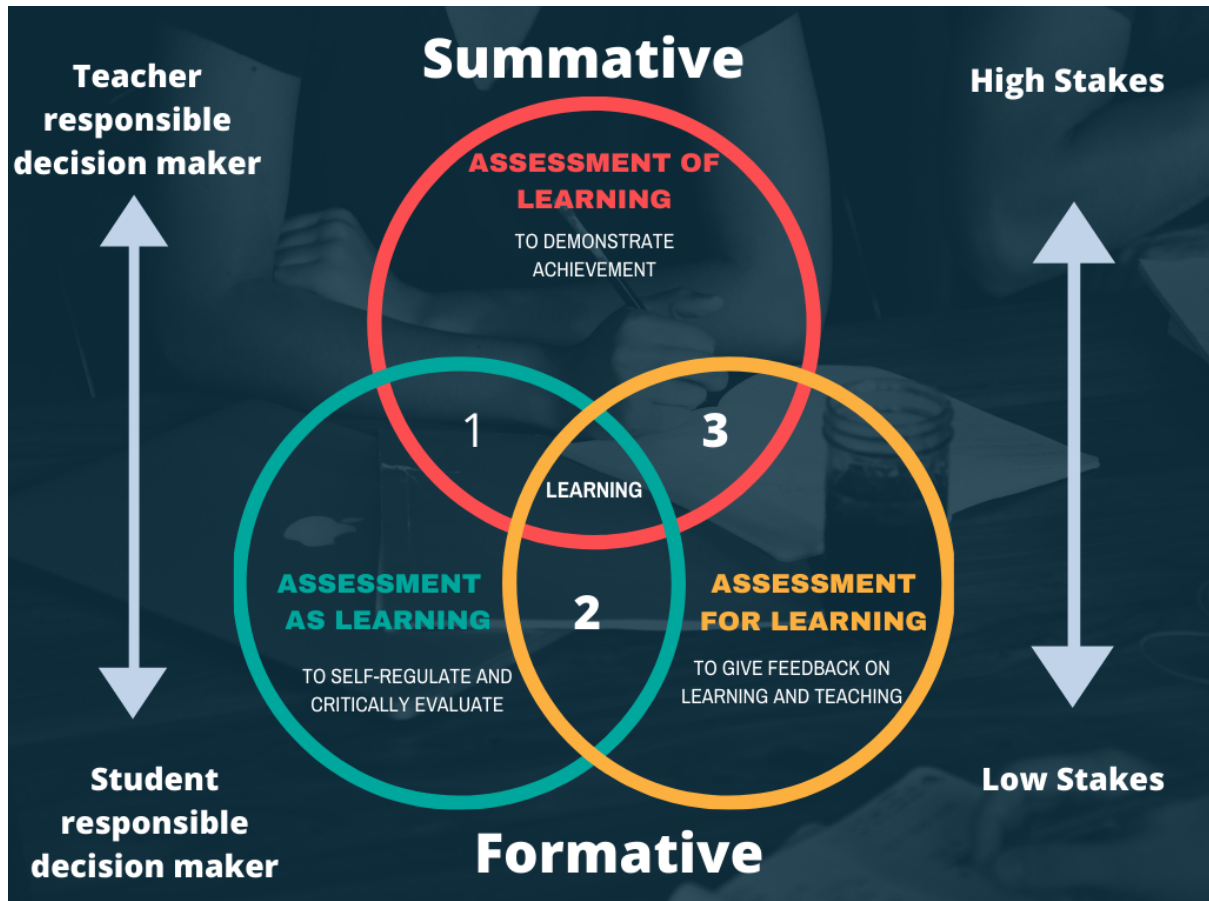
(NCCA, Focus on Learning, Learning Outcomes, Workshop 5)

Bloom's Taxonomy of Critical Thinking - Sample Command Words					
A		B		C	
1	2	3	4	5	6
Knowledge / Remembering	Comprehension / Understanding	Application	Analysis	Synthesis / Creating	Evaluation
Count	Associate	Add	Analyse	Categorise	Appraise
Choose	Classify	Apply	Arrange	Combine	Assess
Define	Contrast	Build	Breakdown	Compile	Compare
Describe	Compare	Calculate	Combine	Compose	Conclude
Draw	Compute	Change	Design	Create	Contrast
Identify	Convert	Classify	Detect	Design	Criticise
Label	Defend	Construct	Develop	Devise	Critique
Match	Demonstrate	Complete	Diagram	Generate	Debate
Name	Discuss	Demonstrate	Differentiate	Invent	Deduce
Outline	Distinguish	Divide	Discriminate	Imagine	Determine
Quote	Estimate	Examine	Dissect	Modify	Disprove
Read	Explain	Graph	Examine	Order	Evaluate
Recall	Extend	Manipulate	Illustrate	Organise	Grade
Recite	Extrapolate	Modify	Infer	Plan	Interpret
Recognise	Generalise	Organise	Investigate	Rearrange	Judge
Record	Give	Prepare	Observe	Reconstruct	Justify
Select	examples	Produce	Outline	Reorganise	Measure
State	Infer	Present	Point out	Revise	Opinion
Write	Interpret	Show	Relate	Summarise	Prove
5 - W's - who, what, when, where, why	Outline	Solve	Relationship	Transform	Rank
	Paraphrase	Use	Select	Specify	Rate
	Predict		Separate		Recommend
	Rewrite		Subdivide		Support
	Rephrase		utilise		Test
	Summarise				

Please note: Some words can be used as an outcome verb in more than one level depending on context



## Assessment to Support Learning



1. Students can self assess or both student and teacher grade the work
2. Students request feedback based on their self monitoring
3. Low stakes graded in class participation (MCQs, Quizzes etc)

(Adapted from National Forum for the Enhancement of Teaching and Learning in Higher education)  
(<https://www.teachingandlearning.ie/wp-content/uploads/Picture1-1.png>)

## Learning Outcome Task 1

Learning Outcome	Action Verb	Key Learning	Learning Intentions
<p><b>Learning Outcome 4.3E</b>  <i>Investigate the factors that determine the output and quality of produce from a chosen enterprise breed variety, nutrition, housing, management</i></p>	<p>Observe, study, or make a detailed and systematic examination, in order to establish facts and reach new conclusions</p>		

## Learning Outcome Task 2

Learning Experiences	Success Criteria

## Assessment section

### Q.11 Higher Level (SEC Sample Paper)

Action Verb “Discuss”

#### Question 11

- (a) Discuss the factors that determine the output and quality of produce from a chosen animal enterprise under the following headings.

Name of enterprise:
(i) Breed variety:
(ii) Nutrition:
(iii) Housing:
(iv) Management:

### Q13 Ordinary Level (SEC Sample Paper)

Answer question 13 (iii) from the SEC Ordinary Level. Pay attention to the action verb/ command word and to the content.

(iii) State **three** reasons for reseeding grassland in Ireland.

1.
2.
3.

Action Verb	Topic: Reseeding grass
Discuss	
Explain	
List	
Outline	
Describe	
Identify	

**Skills based question**

**Q14. (c) Higher Level (SEC Sample Paper)**

- (c) Due to the nature of Derek’s autumn and spring calving suckler enterprise, silage quality is vitally important. This is to ensure that his concentrate feeding is kept to a minimum and to enhance the economic sustainability of his farm. His local feed merchant representative took a number of samples of silage for analysis. The table below contains the results.

Farm		
Derek, Millbrook, Co. Cavan		
Forage type: First cut pit silage (cut 3 <sup>rd</sup> June 2020)		
Date received	14 <sup>th</sup> August 2020	
Lab report number	12345	
Analysis (Dry Matter)	Results	
Dry Matter	%	26.5
Protein	%	13.1
DMD	%	68.7
Metabolisable Energy	MJ / kg	10.7
Sugars	%	3.2
Ash	%	7.3
Non Digestible Fibre	%	46.7
Lignin	g/kg	19.1
pH	-	4.8

- (i) Based on the results shown, discuss the quality of Derek’s silage.


- (ii) Outline the implications for the level of concentrate feeding required for the winter for both his dry cows and freshly calved cows. Support your answer with evidence from the table.


## References for Session 2

NCCA, *Focus on Learning Workshops:*

- *Workshop 1 Learning Intentions and Success Criteria*  
[https://ncca.ie/media/1927/assessment-workshop-1\\_en.pdf](https://ncca.ie/media/1927/assessment-workshop-1_en.pdf)
- *Workshop 2 Effective Questioning*  
[https://ncca.ie/media/1924/assessment-booklet-2\\_en.pdf](https://ncca.ie/media/1924/assessment-booklet-2_en.pdf)
- *Workshop 3 Formative Feedback*  
[https://ncca.ie/media/1925/assessment-booklet-3\\_en.pdf](https://ncca.ie/media/1925/assessment-booklet-3_en.pdf)
- *Workshop 4 Students reflecting on their learning*  
[https://ncca.ie/media/1926/assessment-booklet-4\\_en.pdf](https://ncca.ie/media/1926/assessment-booklet-4_en.pdf)
- *Workshop 5 Learning Outcomes*  
[https://ncca.ie/media/4107/learning-outcomes-booklet\\_en.pdf](https://ncca.ie/media/4107/learning-outcomes-booklet_en.pdf)
- *Learning Outcomes: An International Approach*  
<https://ncca.ie/media/3958/learning-outcomes-an-international-perspective.pdf>

*Differentiation in action!*

[https://pdst.ie/sites/default/files/Session%2020-%20Differentiation%20Resource%20\\_0\\_0.pdf](https://pdst.ie/sites/default/files/Session%2020-%20Differentiation%20Resource%20_0_0.pdf)

*Science Differentiation in Action Toolkit P91*

<http://www.sess.ie/sites/default/files/Resources/science/textbook.pdf>

*An Integrated Approach to Learning, Teaching, & Assessment*

[https://www.pdst.ie/sites/default/files/Integrated%20Approach\\_0.pdf](https://www.pdst.ie/sites/default/files/Integrated%20Approach_0.pdf)

## Reflection Log

**Your experience to date:**

**What have been the highlights of the specification?**

**How have your students engaged positively with the specification?**

**Do you have a vision for your Agricultural Science classroom going forward?**

**When teaching online:**

- 1. How did you differentiate for students online and make your classroom inclusive?**



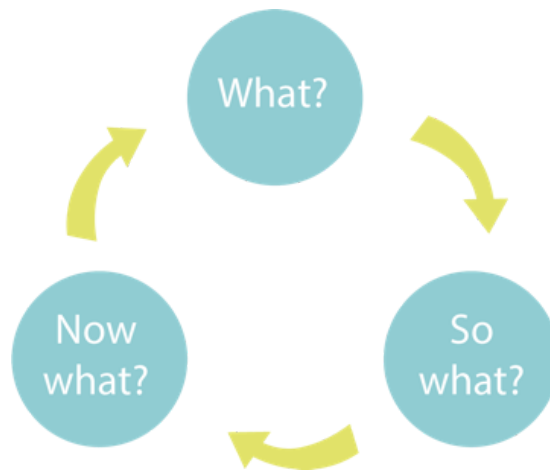
**2. How did you encourage student engagement?**

**3. What did assessment look like?**

**4. How did you support feedback?**

**5. How did you facilitate collaboration?**

### Next steps for you



*(Freshwater & Rolfe, 2001)*

**What are your next steps to create an effective environment for teaching, learning and assessment in your classroom?**

**What are the shared opportunities to collaborate in the PLCs?**

## How to Create a Learning Path on Scoilnet

[www.lcagscience.ie](http://www.lcagscience.ie)



1. Search for a resource.
2. Click on the Add to Learning Path function to the right of the resource.
3. Choose *Add to New Learning Path* if it's your first one. (Choose *Add to Existing Learning Path* otherwise)
4. Give the Learning Path a name.
5. Choose either to edit it or view the learning path.
6. Repeat steps 1-5 depending on the number of resources to be.

QR Code for Padlet:



**scoilnet**  
Learning Paths

PDST TECHNOLOGY  
IN EDUCATION

## How to Share a Resource on Scoilnet

### STEP 1: UPLOAD A FILE

Log in to your free Scoilnet Account and select 'add a resource' - either through the icon on the left or through the dashboard on the top pane. Then select 'add a resource'. Step 1 is to add the resource and indicate that you are entitled to upload this resource/ link. You will be asked to provide some information about the resource (eg. Title, type of resource, etc).

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### STEP 2: MAP TO CURRICULUM

During step 2, you will be asked to map the resource to the Irish curriculum, outlining what level, subject, strand/section and strand unit it addresses. You can also suggest ways this resource may be used - teachers often find this very useful.

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### STEP 3: ADD COPYRIGHT INFO

During this final step you will be asked to select which copyright the resource holds, or if you have made the resource you can select one type of copyright you are happy to share your resource under. You retain copyright ownership of any resource shared through Scoilnet. More info on copyright [here](#)

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## SHARING THE RESOURCE

Once uploaded and published, your resource will be available for teachers to use on Scoilnet. You can also share the link to your resource with others. All the resources you share can be viewed and edited through your dashboard.

www.pdst.ie

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## References for Session 3

Burke J., Dempsey M. , *Lessons Learned: The experiences of teachers in Ireland during the 2020 pandemic*. Department of Education at Maynooth University.

Garrison, D.R. and Kanuka, H., 2004. Blended learning: Uncovering its transformative potential in higher education. *The internet and higher education*, 7(2), pp.95-105.

European Commission (2020) Blended Learning in School Education – guidelines for the start of the academic year 2020-21

[https://www.schooleducationgateway.eu/downloads/Blended%20learning%20in%20school%20education\\_European%20Commission\\_June%202020.pdf](https://www.schooleducationgateway.eu/downloads/Blended%20learning%20in%20school%20education_European%20Commission_June%202020.pdf)

Freshwater, D. and Rolfe, G., 2001. Critical reflexivity: a politically and ethically engaged research method for nursing. *NT Research*, 6(1), pp.526-537.

PDST Technology Links:

All Technology in Education resources: <https://www.pdsttechnologyineducation.ie>

Information for online teaching: <https://www.pdst.ie/DistanceLearning/onlinetools>

Information about Digital Portfolios:

<https://sites.google.com/pdst.ie/digitalportfolios/home?authuser=0>