

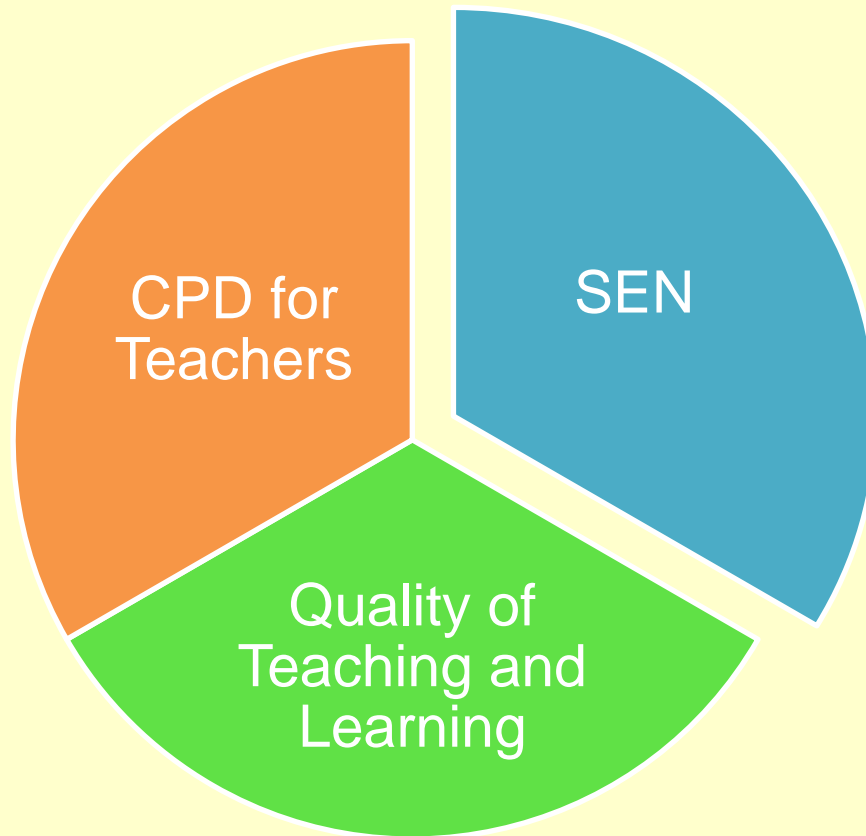
SPECIAL EDUCATION
SUPPORT SERVICE
building on ability

SMEC Conference June 2016

**‘Promoting and advancing the
teaching of Science for students with
Special Educational Needs’**

Madeline Hickey and Pauline Connolly

SESS



www.sess.ie

[Home](#) | [About SESS](#) | [Contact SESS](#) | [How do I access SESS supports?](#) | [FAQ](#) | [Site Map](#) | [Accessibility](#) | [SESS Login](#)



[SIGNPOSTS](#) | [Support](#) | [Professional Development](#) | [Resources](#) | [Documents and Publications](#) | [Links](#)

Welcome to the SESS Website

The role of the Special Education Support Service (SESS) is to enhance the quality of learning and teaching in relation to special educational provision. [Read more about our role.](#)

[Calendar of Events](#) | [SESS eLearning](#) | [Book Borrowing](#)

Book Upcoming Events

(In order of close of application date)

-  [An Introduction to ASD \(Primary\)](#)
Tralee Education Centre
Event Date: 06/09/2016.
-  [An Introduction to ASD \(Primary\)](#)
Cork Education Support Centre
Event Date: 07/09/2016.
-  [An Introduction to ASD \(Post-Primary\)](#)
Blackrock Education Centre
Event Date: 07/09/2016.
-  [An Introduction to ASD \(Primary\)](#)
Limerick Education Centre
Event Date: 08/09/2016.
-  [An Introduction to ASD \(Post-Primary\)](#)
Dublin West Education Centre
Event Date: 08/09/2016.

APPLY TO SESS FOR IN-SCHOOL SUPPORT

[Click here to apply for appropriate support](#)

Post-Primary CPD

[Click here for Course Information and Application forms](#)

Primary CPD

[Click here for Course Information and Application forms](#)

Updates 2016/2017

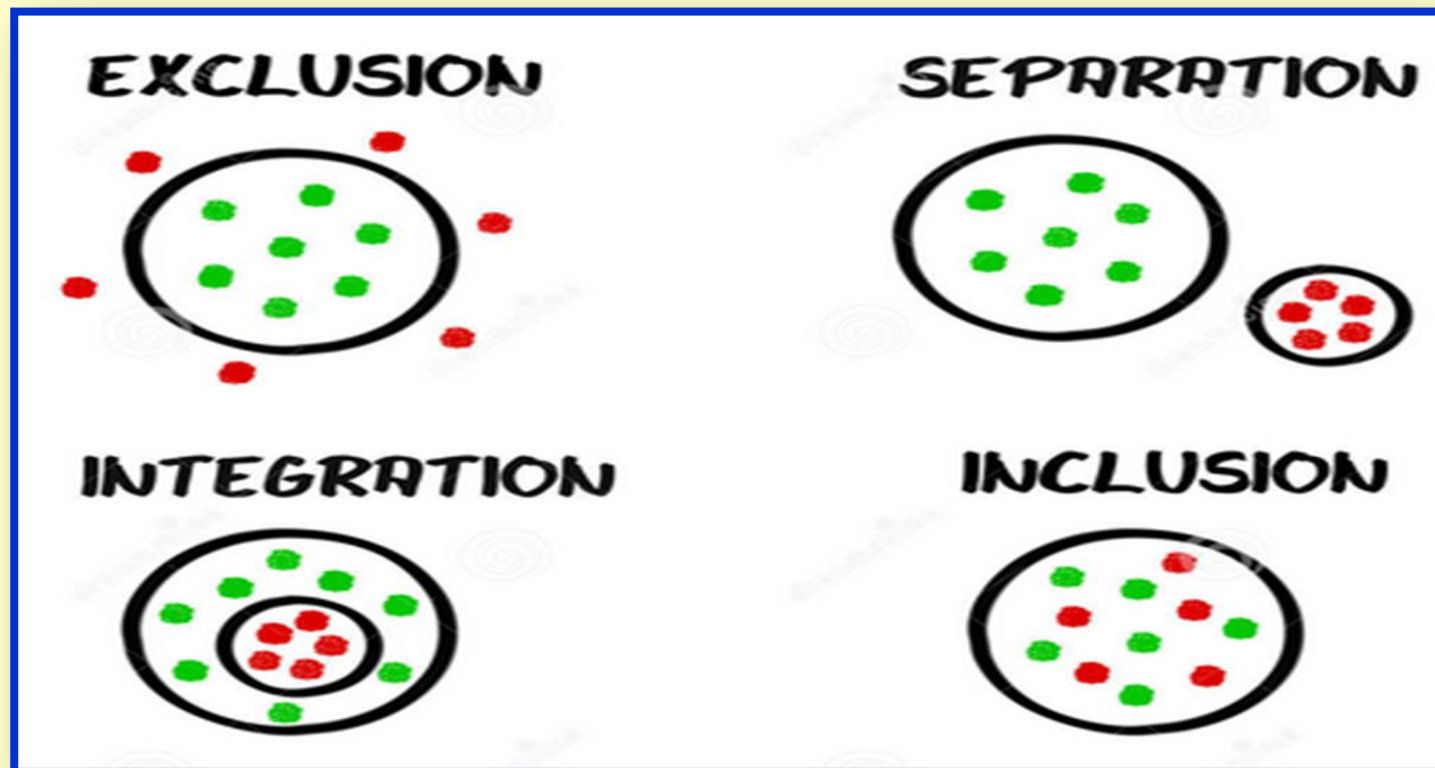
Continuous Professional Development (CPD) for all teachers

SESS models of support:

- Online support www.sess.ie
- Telephone / email Support
- In-School Support (School Visit/School Seminar)
- SESS-designed seminars, conferences and courses
- Online Learning
- External providers

January - December 2015 SESS CPD Figures	Total Number of Teachers			Total Number of Days Training Provided		
	Primary	Post Primary	Total (P+PP)	Primary	Post Primary	Total (P+PP)
SESS run seminars	7,456	3,059	10,515	9,803	3,550	13,353
School Visits & Presentations	2,606	1,170	3,776	2,606	1,170	3,776
Professional Development Funding including PGSEN (ASD)	272	92	364	272	92	364
E-Learning Online Co-Operative Teaching	232	213	445	232	213	445
E-Learning Online Dyslexia	474	301	775	474	301	775
Middletown Centre for Autism	156	49	205	279	92	371
Total	11,196	4,884	16,080	13,666	5,418	19,084

Inclusion is not about placing children in mainstream schools. It is about changing schools to make them more responsive to the needs of all children.



Legislation – Common Themes

An Inclusive Education

Access

Participation

Benefit

**TRANSPARENCY &
ACCOUNTABILITY**

An Appropriate Education

Level of Support in Schools

SEN Budget = €1.4 Billion (2015/2016)

This is greater than the budget for 3rd level

This accounts for 17% of the total Education Budget

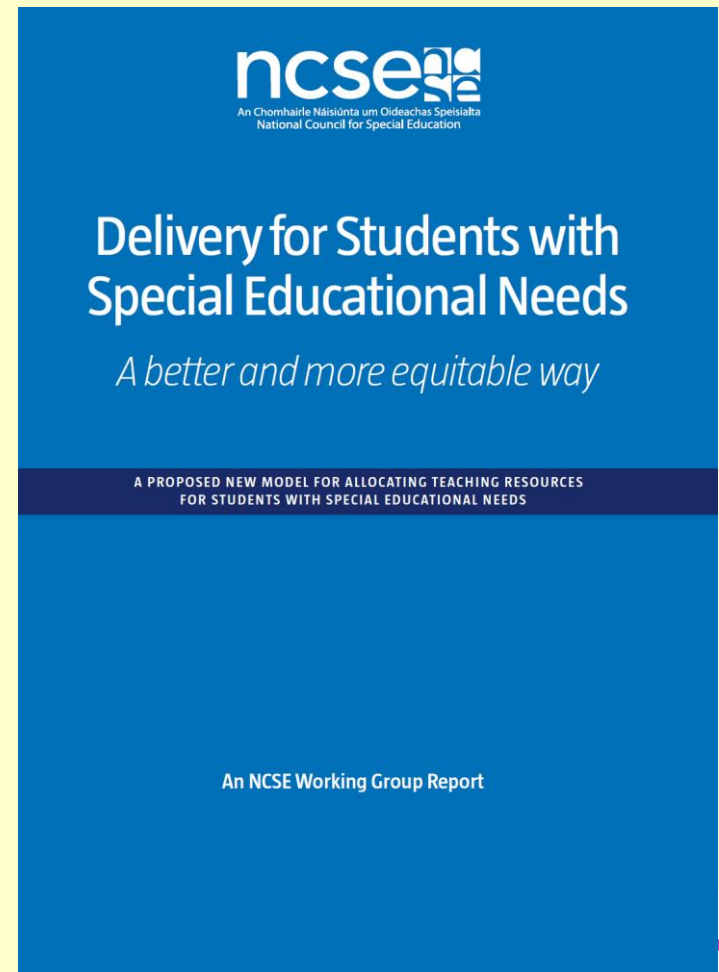
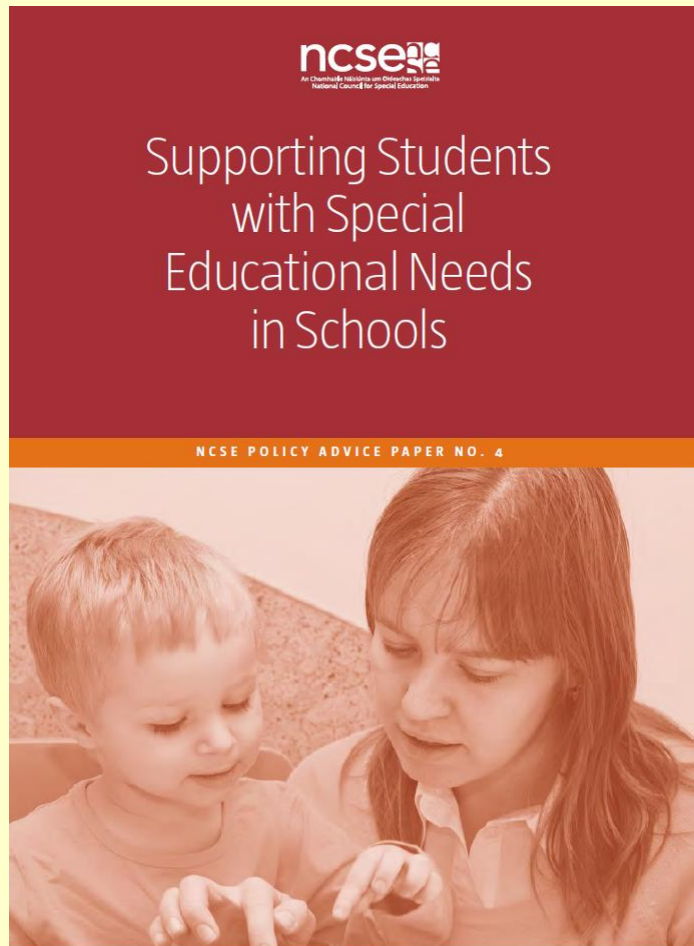
SERC 1993

1309 Remedial Teachers
390 Special Classes
251.5 SNAs

2015/2016

5,000 posts in schools GAM + LS
6,832 RTs allocated by NCSE
1,000+ Special Classes (740+ P & 260+ PP)
1,100+ Teachers in Special Schools
11,940 SNAs available to NCSE

A proposed new model for allocating teaching resources for students with special educational needs



SIGNPOSTS

Support

**Professional
Development**

Resources

**Documents and
Publications**

Links

**Assessed
Syndromes**

**Autism/Autistic
Spectrum
Disorders**

Dyspraxia

**Emotional
Disturbance
and/or
Behavioural
Problems**

**Exceptionally
Able**

**General
Learning
Disabilities**

**Specific Speech
and Language
Disorders**

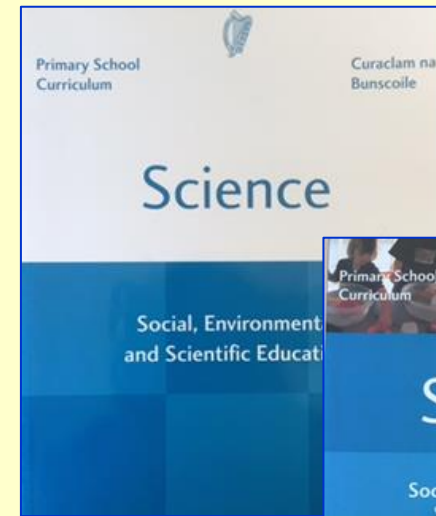
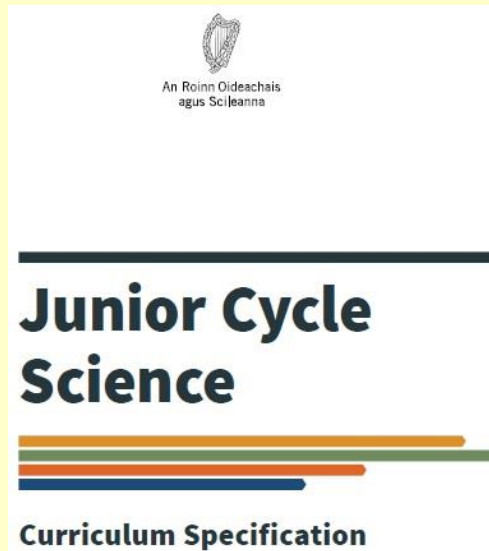
**Sensory
Impairments**

**Specific
Learning
Disabilities**

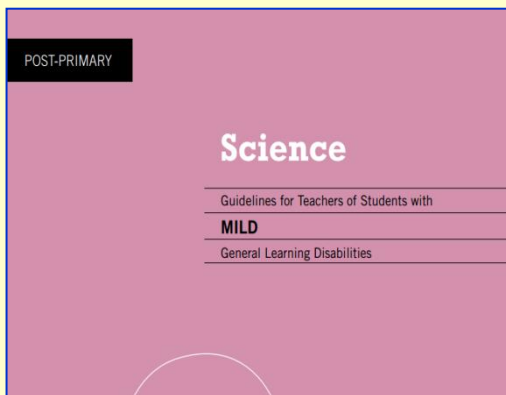
**Physical
Disabilities**



Curriculum



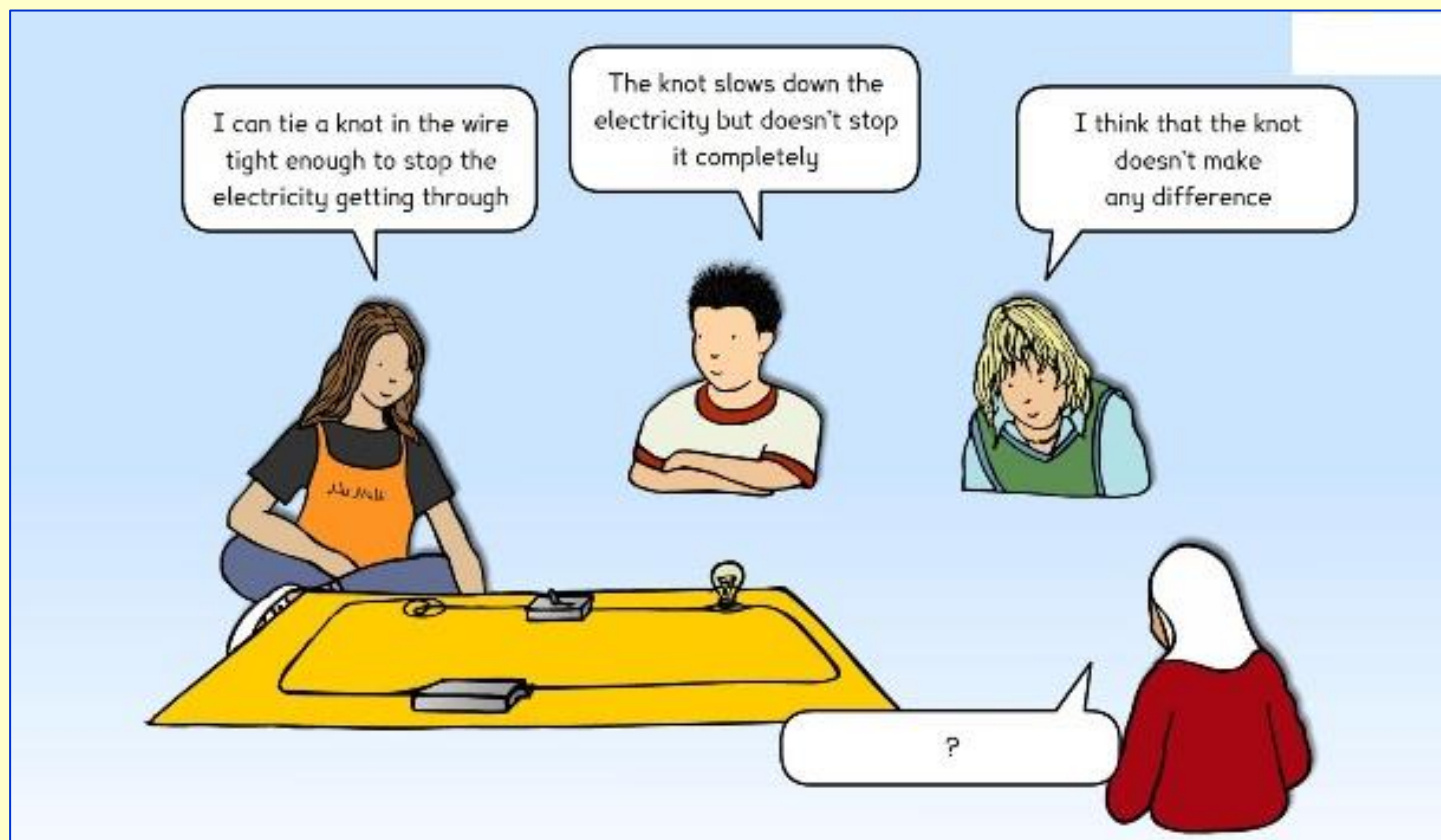
NCCA Short Courses		
Civic, Social and Political Education	Social, Personal and Health Education	Physical Education
Coding	A Personal Project: Caring for Animals	Exploring Forensic Science
Digital Media Literacy	Chinese Language and Culture	Artistic Performance



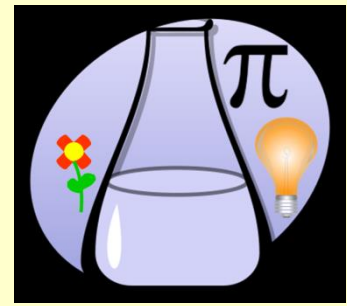
Leaving Certificate Level:

- Agricultural Science
- Biology
- Chemistry
- Physics
- Chemistry & Physics

'Science for Scientists' and 'Science for All'



Science for 'All'



The notion of “science for all” suggests that all students—irrespective of achievement and ability—should engage in opportunities to understand the practice and discourse of science.

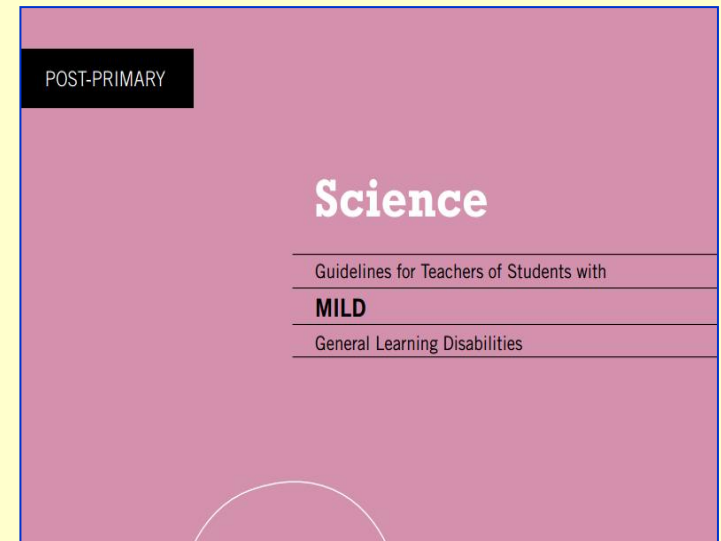
(Villanueva, 2011)

Why?

Science taps into a different way of thinking and exploring - an excellent way for students who may have difficulty with other academic areas to have authentic inquiry based experience and be successful.

Challenges and Barriers to Learning [Post-Primary]

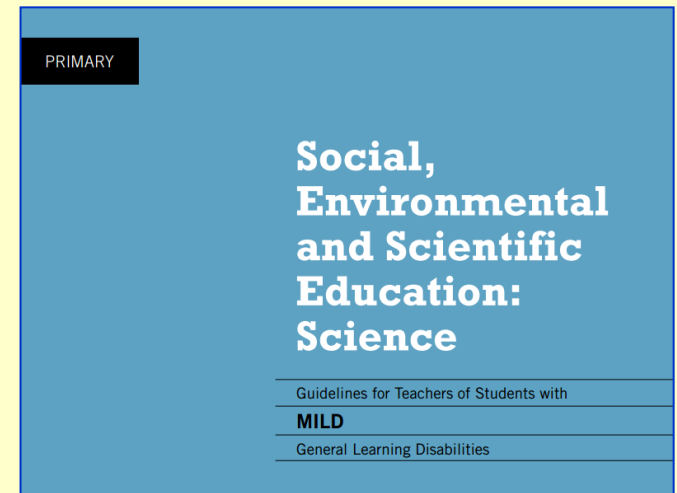
- Safety
- Fear of Apparatus
- Developing Ideas
- Communicating Ideas
- Overwhelmed by course content
- Vocabulary & Language
- Motor Skills
- Dexterity
- Concentration
- Attention Span
- Writing up Mandatory Experiments
- Time
- Poor Self-Esteem
- Behaviour



(NCCA Guidelines for teachers of students with mild general learning disabilities:
Science – Post - Primary)

Challenges and Barriers to Learning [Primary]

- Vocabulary & Language
- Fear of failure
- Poor Self-Esteem
- Fine/Gross Motor Difficulties
- Body Image/Awareness
- Organisation & Planning
- Short Term Memory
- Classification
- Time



(NCCA Guidelines for teachers of students with mild general learning disabilities: SESE Science – Primary)

Science for 'All'....Considerations

- How can learning environments be established to encourage the inclusion of all students in Science classrooms?
- How can scaffolded supports be used to support science learning?
- **TEACHERS** play a critical role in enabling children and young people to participate in Science.

TE4I – Profile of the Inclusive Teacher



Four core values relating to teaching and learning have been identified as the basis for the work of all teachers in inclusive education:



European Agency for Development in Special Needs Education (2012)

Universal Design for Learning

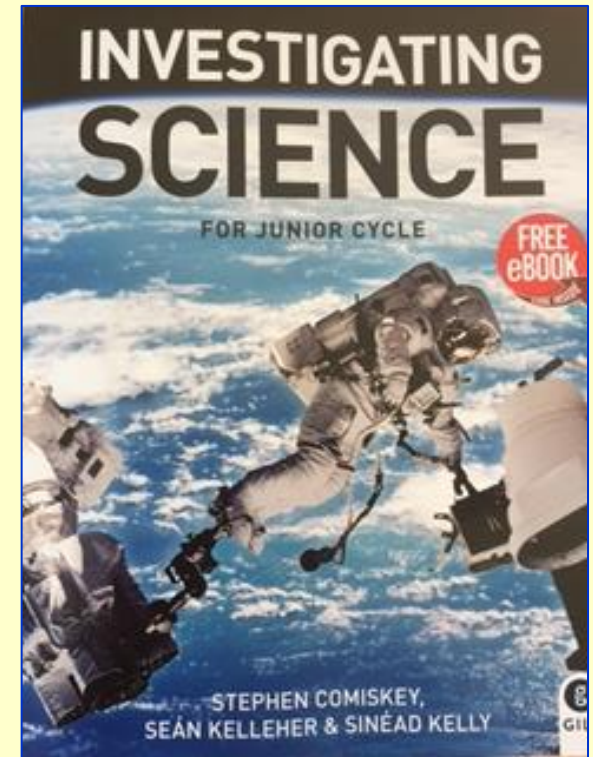
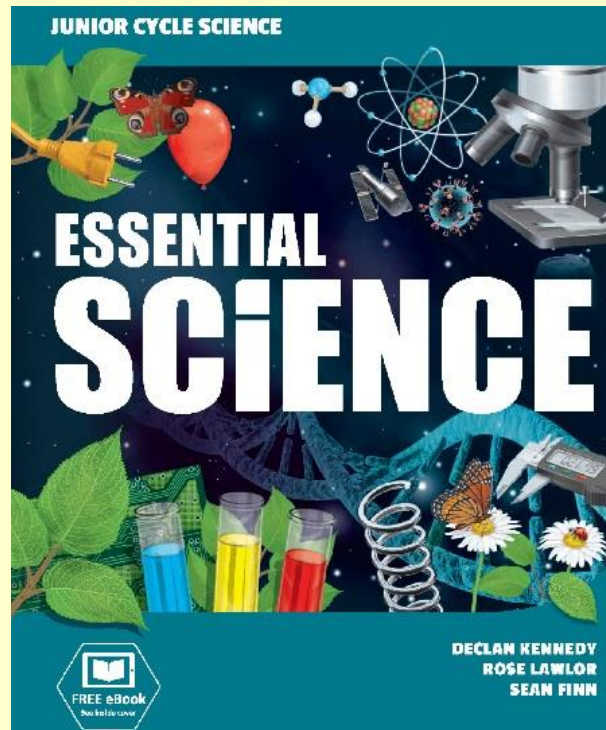
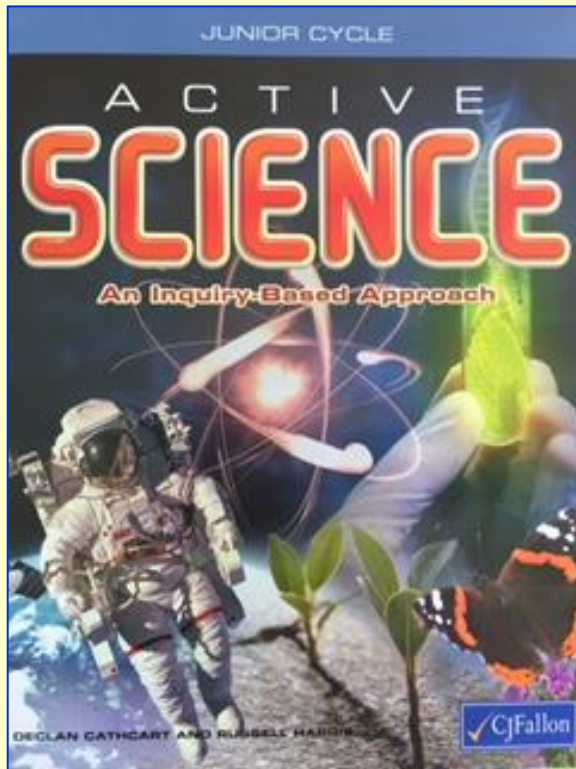
Universal Design for Learning (UDL) is a framework that provides educators with a structure to develop their instruction to meet the wide range of diversity among **all** learners.

The **UDL** framework enables the educator to remove barriers, by anticipating the needs of **all** students.

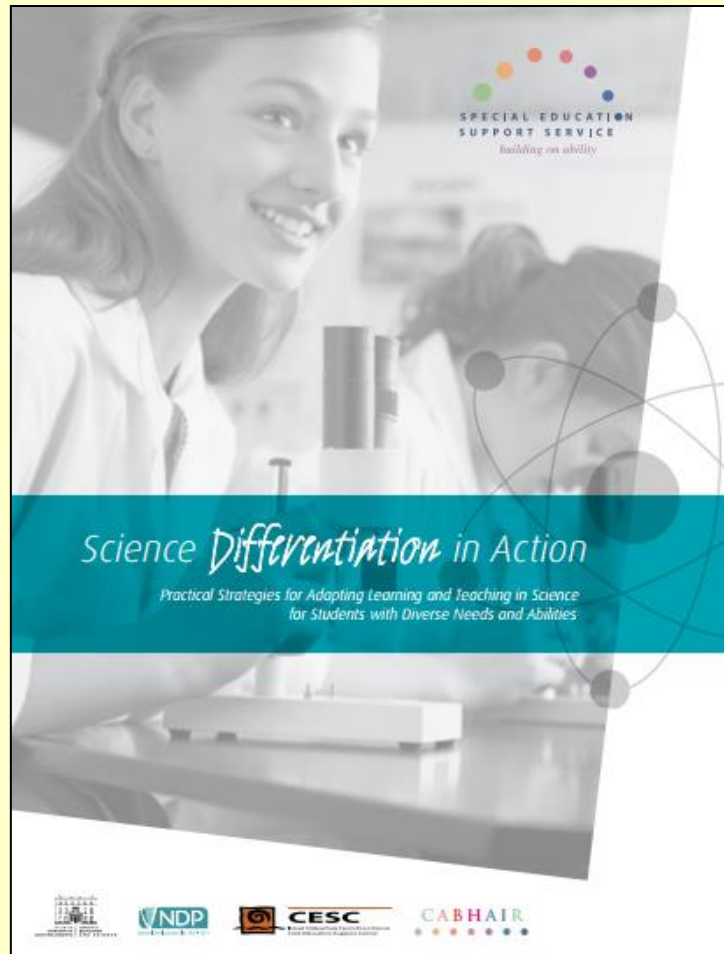
UDL strategies for instruction are frontloaded rather than retrofitted.



Readability



Science Differentiation in Action



Special Education Support Service
2016

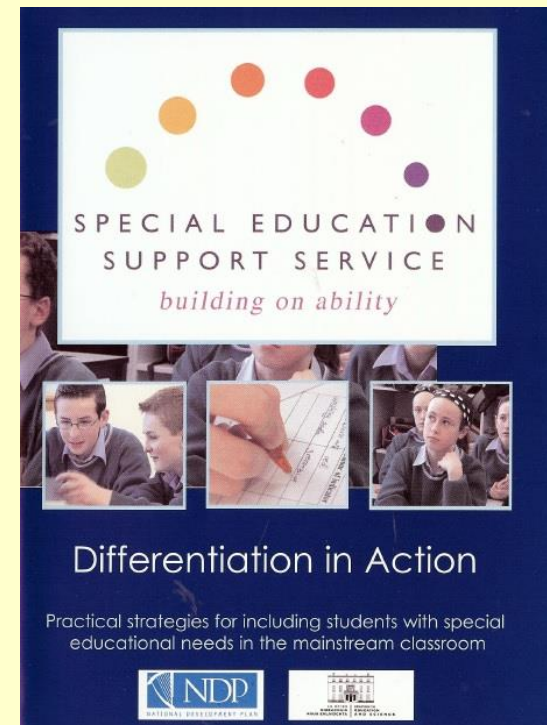
Differentiation in Action

Practical Strategies for including students with special educational needs in the mainstream classroom.

This DVD outlines strategies for providing students with diverse needs and abilities with opportunities to participate meaningfully in classroom activities.

Topics covered include:

1. Learning preferences
2. Co-operative learning
3. Paired learning
4. Active learning
5. Concept maps
6. ICT



Strategies



Contact Details

Special Education Support Service,
c/o Cork Education Support Centre,
The Rectory
Western Road
Cork

- Website: www.sess.ie
- Telephone: (021) 4254241
- E-mail: info@sess.ie
- Register your school for online communication at updates@sess.ie