APPROACHES FOR

INCLUSIVE EDUCATION

DIGITAL TECHNOLOGIES FOR ALL

Inclusive education is education that is accessible to every student, including students with additional educational needs.

It is important for educators to design lessons that reflect differences in the ways that students think and engage with content.

DISABILITY CATEGORIES

The Nationally Consistent Collection of Data on School Students with Disability (NCCD) identifies four broad categories of disability: physical, cognitive, sensory, and social/emotional.
A student may need adjustments in multiple categories.

PHYSICAL

A physical disability is a limitation in the mobility of a person that cannot be cured through rehabilitation. These disabilities can be inherent from birth, developed as the person ages, or acquired through an accident. Those with a physical disability often adapt or adjust their day-to-day routines in order to achieve similarly to someone without a physical disability. These disabilities can affect many body parts (as in paralysis) or just a few (as in a wrist disability).

FUNCTIONAL ADJUSTMENTS:

- Poor fine motor control
- Limited mobility or Gross motor skills

COGNITIVE

Those with a cognitive disability have delayed development from birth, achieve milestones much later than typically developing children, and are academically and socially behind their typically developing peers.

FUNCTIONAL ADJUSTMENTS:

- Working memory
- Limited abstract thinking skills

SENSORY

Sensory disability can include hearing loss and vision impairment. Deafness is typically when a person has no ability to hear sounds. Having limited, low or no vision – Sometimes referred to as experiencing blindness or vision loss, vision impairment is a disability that, even when corrected (such as with glasses), affects day-to-day living.

FUNCTIONAL ADJUSTMENTS:

- Deaf or hard of hearing
- Having limited, low or no vision

SOCIO/EMOTIONAL

Those with socio/emotional differences may present a range of conditions, including repetitive and obsessive behaviours and interests, as well as a lack of understanding of social skills and routines. The person's thought processes, perception of reality, emotions or judgement may be impaired or atypical.

FUNCTIONAL ADJUSTMENTS:

- Anxiety
- Additional scaffolding

UNIVERSAL DESIGN FOR LEARNING

One method for writing lesson plans that meet a wide variety of needs is the UDL approach, consider the following three principles:

1. MULTIPLE MEANS OF REPRESENTATION

The 'what' of learning

Provide information in a variety of forms and media.

2. MULTIPLE MEANS OF EXPRESSION

The 'how' of learning

Offer different ways of demonstrating knowledge.

3. MULTIPLE MEANS OF ENGAGEMENT

The 'why' of learning

Give students choice and an appropriate level of challenge.

DIGITAL TECHNOLOGIES HUB

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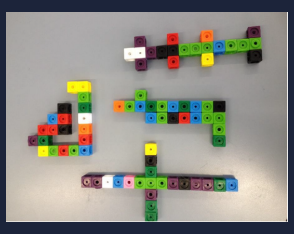
UNIVERSAL DESIGN FOR LEARNING



In this Year 2 task, students create a model using 'snap' blocks 1 block high and create a code so someone else can build your model. This task requires an understanding of symbols/coding and of sequencing.

1. MULTIPLE MEANS OF REPRESENTATION

The 'what' of learning

Provide information in a variety of forms and media.

Symbols/coding:
Students need to understand the concept that symbols or letters can represent other ideas such as colours or words.

Sequencing:
Students need to comprehend that some activities require steps and that some steps are repeated.

2. MULTIPLE MEANS OF EXPRESSION

The 'how' of learning

Offer different ways of demonstrating knowledge.

If students cannot colour squares in a grid accurately, supply them with real, physical coloured blocks.

Alternatively, supply larger grids with larger boxes.

Students who are able to write letters within a grid square could code each colour with a letter; for example, G for green, R for red, and P for purple.

3. MULTIPLE MEANS OF ENGAGEMENT

The 'why' of learning

Give students choice and an appropriate level of challenge.

Students could create a code with a limited number of blocks and colours. Start with two colours and five blocks. Then progress to larger numbers and more colours.

B → R → B → R → B

B → R → B → G → G → P → Y → B

B → R → B → G → G → P → Y → B
↓ R → Y → P → Y → Y

If able to, students could make a model using up to 20 blocks., incorporating a colour key and writing their own code.

Here's another example, in this typical Yr 7 task, students develop their understanding of networks and ways in which data is transmitted and validated.

1. MULTIPLE MEANS OF REPRESENTATION

The 'what' of learning

Provide information in a variety of forms and media.

What is a network? Use the analogy of a transport system to learn about a computer networks.

In both networks there are multiple ways to get from one station to the other. Just as train networks move people, computer networks move data.

2. MULTIPLE MEANS OF EXPRESSION

The 'how' of learning

Offer different ways of demonstrating knowledge.

Use maps and diagrams to represent network connections and routes.

Relate computer networking components to familiar objects.

3. MULTIPLE MEANS OF ENGAGEMENT

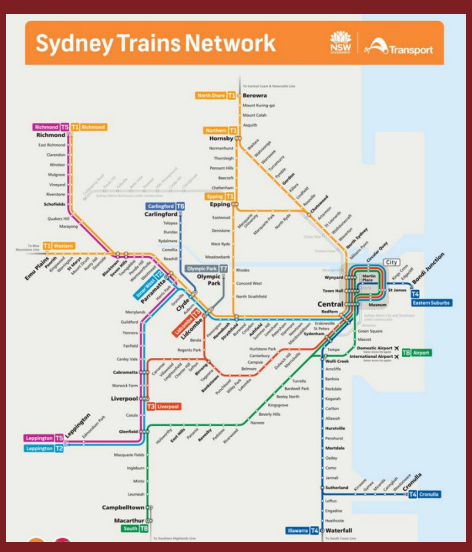
The 'why' of learning

Give students choice and an appropriate level of challenge.

Instead of the transportation map, use a simpler and more familiar example, such as a school map. Choose two locations and look for alternative routes to them.

Instead of using a transportation network map to represent a computer network, simplify the task and use a school-based example. Role-play sending a message to the office.

For example, if a student brings a note (data) to the principal, they first look at the school map (DNS) to choose a route to the school office, where the receptionist (router), redirects the student to the principal's office. The principal responds to the note and sends a new message or document (data) back. This mimics an internet request.



UNIVERSAL DESIGN FOR LEARNING

Search for lesson ideas on the DT Hub that incorporate universal design for learning.

We have used icons to call out approaches to accommodate different learning needs.

Lesson ideas are presented at three levels of difficulty, to provide students with choice and an appropriate level of challenge.