

Catering for students with diverse learning needs

Case study Pine Rivers Special School



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Pine Rivers Special School

This case study has been compiled to demonstrate the KISS method of planning adjustments to meet the learning needs of diverse learners, particularly students with disabilities. It consists of three items:

- 1 Background information on the school and its students
- 2 An overall plan for a unit of work
- 3 Sample adjustments for a student for this unit of work, planned using the KISS framework.

Background information

The Pine Rivers Special School is located in Lawnton, a suburb of the Pine Rivers Shire on the northern outskirts of Brisbane. It was established in 1986.

At Pine Rivers Special School there are currently 87 (85.2 FTE) students enrolled. Students' ages range from 5 to 19 years of age. All students (except three) have a severe intellectual impairment and are ascertained at level 6 or have had an Education Adjustment Profile (EAP) approved.

In addition to an intellectual impairment, 39 of our students have a second area of disability, and eight of these have a third area of disability. Thirty-two per cent of the students have Autistic Spectrum Disorder (ASD) in addition to their intellectual impairment. The majority of students are ambulatory and the school has facilities and programs to meet the needs of students in wheelchairs. There are a number of students with challenging behaviour or specialised health requirements.

Over the past three years there has been significant increase in student enrolment figures. The enrolment figure for February 2003 was 60 and April 2005 was 80. This is an increase of 33% in two years. In the past 12 months there has been a particularly large growth in enrolments. In November 2004 there were 71 students, and in October 2005 there are 87 students. This is a 22.5% increase in just one year. This has had huge implications for leadership, management, resources and facilities.

The Junior and Middle sectors of the Pine Rivers Special School will be using the Key Learning Area Years 1 to 10 syllabuses as the basis of the curriculum for students. Students who are age-equivalent Year 11 to 12, will have the curriculum organisers from the CPCSE Curriculum Plan as the basis of their curriculum.

Policy on inclusive practice

Inclusive practices are determined by programs, not placements. We are extremely inclusive, as we take the individual needs of all our students into account in developing all curriculum programs.

Students in the class

Class 1 – Middle School – seven 10 to 12-year-old students; all have an intellectual impairment; one also has autism and has very limited verbal communication skills; one also has a severe hearing impairment.

Class 2 – Senior School – six 12 to 14-year-old students; all have an intellectual impairment; four also have autism; one is non-verbal; one also has several life-threatening health requirements.

Unit title: Chickens

Overview of investigation: To care for a living thing		Cross Curricular Priorities						
Focus learning outcomes (What students need to know and do)	<p>SCIENCE: Life & Living Foundation Level statement <i>Students are developing an understanding that some things are living and some things are non-living, and can use observable features to communicate the difference.</i></p> <p>Foundation Level statements have been developed for students demonstrating a level of understanding before that of Level 1. These statements can be used to develop a range of specific learning outcomes which are tailored to the individual needs of students with disabilities and related to their individualised curriculum programs.</p> <p>Level 1 statement <i>Students understand that living things have needs. They understand that different living things and different environments have different identifying features.</i></p> <p>Core learning outcomes</p> <p>1.1 Students discuss their thinking about needs of living things. 1.2 Students group living things in different ways based on observable features. 1.3 Students observe and describe components of familiar environments.</p> <p>Discretionary learning outcome D1.4 Students collect information about sources of food and shelter for animals in their local environment.</p> <p>MATHEMATICS: Number Foundation Level statement <i>Students are developing a notion of counting and an awareness of number and money. Number names are becoming more meaningful.</i></p> <p>The following are examples of learning outcomes for students with disabilities demonstrating a level of understanding before that of Level 1. Learning outcomes that meet the individual needs of specific students with disabilities can be developed from the level statement. Such outcomes should relate to the individualised curriculum programs of those students.</p> <p>Example learning outcomes <i>Topic — Number concepts</i> Students rote count to a specified number (e.g. 3, 5).</p>	Literacy		Numeracy		Futures		
		Yes		Yes				
		Valued attributes of a lifelong learner						
		Knowledgeable person	Complex thinker	Responsive creator	Active investigator	Effective communicator	Participant in an interdependent world	Reflective and self-directed learner
Yes		Yes	Yes		Yes			
Length of unit: One Term (10 weeks)								
CLOs / school developed learning outcomes for the level:								
<ul style="list-style-type: none"> Understand that chickens are living things Develop procedures for caring for chickens Observe the changes in a chicken’s height, weight and features over time. Share responsibilities of caring for the chickens 								
CORE CONTENT								
<p>SCIENCE: Life & Living Needs of living things Observable features of plants and animals Observable behaviours Characteristics which differ or are similar among living things</p> <ul style="list-style-type: none"> methods of obtaining nutrition <p>Types and features of environments Human influence</p> <ul style="list-style-type: none"> modification of habitat: agricultural practices – monoculture, grazing, irrigation 								

<p>Students recognise numerals in their lives and environments. Students recognise money in various forms. <i>Topic — Addition and subtraction</i> Students show an awareness of 'more', 'less' and 'same' in life situations. <i>Topic — Multiplication and division</i> Students share a quantity of everyday objects with their peers. Level 1 statement <i>Students are developing a sense of number by knowing number names and counting in sequence. They recognise, compare, order and represent small whole numbers and use concrete materials to explore the concept of parts of a whole. They are developing an awareness of the cost of goods and recognise and represent notes and coins. Students identify and distinguish between situations that require them to add or subtract, to share equally or to create equal groups.</i> Core learning outcomes <i>Topic — Number concepts</i> N 1.1 Students identify, compare and order small whole numbers, make and match representations of these numbers and identify coins, notes and their uses. <i>Topic — Addition and subtraction</i> N 1.2 Students identify and solve addition and subtraction problems involving small whole numbers. <i>Topic — Multiplication and division</i> N 1.3 Students identify and describe equal groups and equal sharing within everyday situations.</p> <p>THE ARTS: Visual Arts Foundation Level statement <i>Students are becoming aware of visual arts in their everyday lives. They are engaging in explorations of materials and processes to develop ways of expressing themselves and their experiences of their familiar environments. Students are beginning to demonstrate an attention to visual art and design elements and identified concepts to make, display and appraise images and objects.</i> The following are examples of learning outcomes for students with disabilities demonstrating a level of understanding before that of Level 1. Learning outcomes that meet the individual needs of specific students with disabilities can be developed from the level statement. Such outcomes should relate to the individualised curriculum programs of those students.</p> <ul style="list-style-type: none"> • Students make images and objects that express their sensory awareness. • Students show their images and objects to peers, teachers and carers. • Students identify images and objects they like and dislike. 	<p>MATHEMATICS: Number – number concepts</p> <p>Numeration</p> <ul style="list-style-type: none"> • whole numbers 0 to 10 • number names 0 to 100 • parts of a whole – whole, part, slice, bit, piece <p>Number sense</p> <ul style="list-style-type: none"> • conservation of number 0 to 10 • position and order of numbers 0 to 10 • different representations of numbers (concrete, verbal, pictorial, symbolic) <p>Addition</p> <ul style="list-style-type: none"> • totals to 10 • joining model • language of joining • two or more addends <p>Subtraction</p> <ul style="list-style-type: none"> • whole numbers to 10 • take away model • language of take away <p>Connections</p> <ul style="list-style-type: none"> • inverse – addition undoes subtraction – subtraction undoes addition <p>Mental computation strategies</p> <ul style="list-style-type: none"> • count on (in 1s, 2s) • count back (in 1s, 2s) <p>Computation methods</p> <ul style="list-style-type: none"> • mental computations • written recordings – words for addition (add) – words for subtraction (cover up, take away, left) • calculators, computers • symbols – addition (+) – subtraction (-) <hr/> <p>THE ARTS: Visual Arts</p> <p>Elements:</p> <ul style="list-style-type: none"> • colour • line • shape • texture <p>Concepts:</p> <ul style="list-style-type: none"> • length • repetition • sequence • similarity and difference • size • weight <p>Processes:</p> <ul style="list-style-type: none"> • describe • experiment • explore • plan • view <p>Functions:</p> <ul style="list-style-type: none"> • personal expression • substitution
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Integrated Unit – Cross KLAS	Evidence of Learning / Assessment and sources	Tools / Techniques
<p>Phase 1: Investigating</p> <p>Science (select from)</p> <ul style="list-style-type: none"> • Introduce students to a live chicken / hen and have them observe and list the characteristics of the animal. • Ask questions to find out what children know about chickens / living / non-living things. • Diagram / label parts of a chicken • Picture matching – living / non-living • Students observe animal behaviour – eating, walking, sitting etc – over a period of time <p>Maths</p> <ul style="list-style-type: none"> • Counting; 1-to-1 correspondence; addition, subtraction e.g. 20 eggs, 5 hatched, how many eggs left? • Calculating the amount of food eaten daily; weight of foods; weight of chicks; graphing; problem solving – one chick weighs 21 grams, how much do 100 chicks weigh? <p>Visual Arts / Media (select from)</p> <ul style="list-style-type: none"> • Sketch/draw a live chicken, observing the shape and textural qualities of the animal and/or take digital photos of the animal(s) from different views and angles. • Use feathers and ink to draw the animal(s) on large sheets. Develop a sense of texture, shape and size for the illustration. • Show examples of artists' works that represent chickens in their environment. • Discuss how and what the artist is representing about the animal. • Experiment with different drawing and painting media to decorate egg shapes. • Explore Easter illustrations and the stories and metaphors about eggs • Read stories about farm chickens and/or view the 'Chicken Little' / 'Chicken Run' movie, observing the characters of chickens. 	<p>Science: Do students</p> <ul style="list-style-type: none"> • Discuss their thinking about needs of living things. • Identify observable features of some living things. • Group living things in different ways based on observable features. • Identify features about themselves that show they are living things. • Identify and label living and non-living things • Recognise that non-living things have particular characteristics – do not breathe, etc. • Observe and describe components of familiar environments. • Collect information about sources of food and shelter for animals • Identify the characteristics of living things in their local environment • Identify change in plants and animals (including humans) e.g. aspects of growth, ageing etc. <p>Maths: Do students</p> <ul style="list-style-type: none"> • Select the appropriate attribute to compare and order the size of objects and measure with non-standard units • Rote count to a specified number (e.g. 3, 5). • Recognise numerals in their lives and environments. • Show an awareness of 'more', 'less' and 'same' in life situations. • Share a quantity of everyday objects with their peers. • Identify, compare and order small whole numbers, make and match representations of these numbers and identify coins, notes and their uses. • Identify and solve addition and subtraction problems involving small whole numbers. <p>Identify and describe equal groups and equal sharing within everyday situations.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Discussion <input type="checkbox"/> Observation/ Anecdotal <input type="checkbox"/> Questioning/ Consultation <input type="checkbox"/> Focused analysis <input type="checkbox"/> Worksheets <input type="checkbox"/> Self assessment <input type="checkbox"/> Peer assessment <input type="checkbox"/> Photos and photo display <input type="checkbox"/> Video/Animations <input type="checkbox"/> Audio <input type="checkbox"/> Testing <input type="checkbox"/> Sketches, drawings, designs <input type="checkbox"/> 3-D representations <input type="checkbox"/> group collage, mural

Integrated Unit – Cross KLAs	Evidence of Learning / Assessment and sources	Tools / Techniques
<p>Phase 2: Responding</p> <p>Science (select from)</p> <ul style="list-style-type: none"> Identify equipment needed for hatching: dome (thermometer, humidity, light, heat); cage; water; food; bedding. Observe and document hatching – when first chick appears; number of chicks hatching, hatched, survival, survival rate Document the ideal environment – where the chicks congregate; Why – comfort, warmth, security, instincts Handling of chicks – hygiene needed before and after handling chicks Egg experiments: eating; counting; floating; vacuum into a bottle Construct an ‘outside cage’ that is functional and/or make a bird feeder / water source from available materials <p>Maths</p> <ul style="list-style-type: none"> Estimate, calculate and document time it takes to: hatch; move freely; eat; drink Count the colours of chicks – noticing the similarities and differences. Develop concepts of ratio for groupings. Measure and record the rate of growth over 2 weeks – weight, height, measurement <p>Visual Arts / Media (select from)</p> <ul style="list-style-type: none"> Use clay (or another construction material) to construct a 3-D model of chicken/hen. Pay particular attention to the dimensions of the animal. Ink and print feathers onto a coloured sheet in a repeated pattern Use digital photos to produce the sequence of a chicken hatching in a photo display Use plasticine to create a 3-D chicken character that can be used as the foundation of an animation using FLASH software. Create Easter cards using images of their ‘chickens and eggs’. 	<p>Visual Arts: Do students</p> <ul style="list-style-type: none"> Identify and represent the shape and texture of the chicken(s) Compare the size and weight of chickens and represent this in their work Experiment with different mediums to create their representation of a chicken(s) Observe and apply subtle changes in colour and surface of the chicken(s) Digitally document and display the hatching process from egg to chicken . Display their artwork to support their understanding of the animal Manipulate 3-D materials to construct a representation of the chicken(s) Make images and objects that express their sensory awareness. Show their images and objects to peers, teachers and carers. Identify images and objects they like and dislike. Describe how they have used the elements of design in their work(s) and that of others. 	

Integrated Unit – Cross KLAs	Evidence of Learning / Assessment and sources	Tools / Techniques
<p>Phase 3: Reflecting</p> <ul style="list-style-type: none"> • Question and answer sheet / tick sheet of knowledge and understanding • Verbal discussion / anecdotal records about their findings for animal behaviour • Summarise the needs of chickens to survive and grow – repeat initial checklists / diagrams / labelling to gauge knowledge and learning • Discuss their representations of chickens in 2-D and 3-D forms. Use language that reflects line, shape, colour, texture, size, weight, length, difference, similarity, repetition • Display their art work in a context that promotes an understanding e.g. in the constructed chicken cage, Easter parade, FLASH animation • Find homes for chicks 		

Unit title: Chickens

Date: _____

Learning outcomes for the unit of work Science: Foundation Level & Level 1 <i>Life & Living</i> Mathematics: Foundation Level & Level 1 — Number (Number concepts, Addition & subtraction, Multiplication & division) The Arts: Foundation Level & Level 1 <i>Visual Arts</i>			Unit overview To care for a living thing. Students interact with live chickens to understand their behaviours and to develop knowledge about living things				
Student	Area of concern	What they need support to do	K Know and do	I Interactions	S Situation	S Success	Future considerations
S1	Intellectual Impairment	(Individualised record of their needs)	Provide students with an outline of what is to be learnt, with a focus on key concepts and opportunities to practise in a number of ways. Teach the use of organisers such as colour coding, pictorial labels, visual timetables and sequences, now/later charts. Break the task into smaller, achievable steps	Increase the opportunities to practice new skills and concepts – teaching a younger child, demonstrating to other adults in the school, practising on the computer with a peer. Teach other class members to use communication devices if needed for the student. Use class meetings to solve problems, and to explore concepts such as 'fairness'. Deliver instruction in small groups, not just whole class.	Use available human resources – peer tutoring, teacher aides, special educators, therapy services. Consider teamwork for task completion, with a range of responsibilities within the student team, e.g. recorder, designer, store person, encourager, researcher, explainer, speaker.	Directly teach routines and expectations of behaviour. Celebrate successes, however small they may appear to those who are unfamiliar with them. Reduce the amount and complexity of materials where appropriate. Provide additional modelling and concrete examples.	
S2							