

An integrated unit of work emphasizing Quality Teaching with a focus on Enterprise Education in the Primary School.

Quality Teaching Overview

Intellectual Quality				
Deep Knowledge	DK	Focus on a number of key concepts and the relationship between these concepts.		
Deep Understanding	DU	Students demonstrate meaningful understanding of concepts and relationship between these.		
Problematic Knowledge	PK	Students encouraged to address multiple perspectives and/or solutions.		
		Students learn that some knowledge is constructed and open to question.		
Higher Order Thinking	HOT	Students engaged in thinking that requires organizing, applying, analysing, synthesising, and		
		evaluating knowledge and information.		
Metalanguage	M	Lessons explicitly name and analyse knowledge as a specialist language.		
		Lessons provide frequent commentary on language use.		
Substantive Communication	SC	Students regularly engaged in sustained communication about ideas and concepts.		
		Quality Learning Environment		
Explicit Quality Criteria	EQC	Students provided with explicit criteria for quality of work they must produce.		
Engagement	Е	To what extent are most students, most of the time, seriously engaged in the lesson.		
High Expectations	HE	Are high expectations of all students communicated?		
Social Support	SS	Strong positive support for learning and mutual respect among teachers and students.		
		To what extent is the class free of negative comments and put-downs.		
Students' Self Regulation	SSR	To what extent do students demonstrate autonomy and initiative resulting in less discipline.		
Student Direction	SD	To what extent do students have some direction over their activities and the means and		
		manner by which these activities will be done.		
		Significance		
Background Knowledge	BK	To what extent do lessons regularly and explicitly build from students' background knowledge?		
Cultural Knowledge	CK	To what extent do lessons incorporate the cultural knowledge of diverse social groupings?		
Knowledge Integration	KI	To what extent do lessons demonstrate links between and within subjects and KLAs?		
Inclusivity	1	To what extent do lessons include and value the participation of all students across social and		
		cultural backgrounds?		
Connectedness	С	Do lessons rely on school knowledge in real life contexts?		
		Do students have opportunities to share their work beyond the classroom and school?		
Narrative	N	To what extent do lessons employ narrative to enrich student understanding?		

Appendix - Brooding Box to Tucker Box

These additional information, worksheets and spreadsheets can be found on the same site as this unit of work. They are an important component of this unit, so I recommend you download each of them too.

The site you found this unit on should have been: Rollands Plains Public School, NSW, Australia.

Worksheets

The Egg	Stage 1	Stage 2	Stage 3
The Chicken	Stage 1	Stage 2	Stage 3

Chicken Parts - stage 3 (This is a large page of the sheet found in "The Chicken" file.

Chicken Parts - stage 3 - BLANK

Great Tucker	Stage 1	Stage 2	Stage 3
Breeding Chickens	Stage 1	Stage 2	Stage 3
Caring for Chicks			Stage 3

PLUS - A few find-a-words and Crossword Puzzles and a PROJECT PAGE.

Spreadsheets

Building a shed and chicken run (One file has the blank and an example)

Daily Chick Food Consumption

Daily Chick Growth

Food Consumption and Chick Growth - BLANK (for your students to use)

Weekly Planner

Week	Literacy	Numeracy	HSIE	Science	Arts	PD/H/PE	Technology Integrated
1	Questions - needs and wants	Graphing	Needs and Wants Goods and Services			Healthy foods	Mind Mapping Graphing
2	Questions – needs and wants		Goods and Services	Chick needs			
3	Write procedure		Identify businesses	Chickens satisfy some needs			Mind Mapping
4	Reading/comprehension Writing play,		Poultry Industry	About eggs and chickens	Scene from video		
5	Reading/comprehension Exposition, procedure		Create advertising		Design sandwich	Needs of human body	Internet Research
6	Reading/comprehension						
7	Reading/comprehension Discussion			Discuss & Design chicken feeder	Design Brooder		
8		Costs of construction and building		Discuss chicken needs	Design chicken shed		Create budget for project
9		Tracking chick growth and food consumption					
10	Talking/listening Present projects Create slogans and advertisements				Design labels and signs		

Note: A QT chart exists for each week of lessons. This is to assist the teacher in identifying what QT elements he/she should be incorporating within these lessons, but is not limited to the highlighted ones.

Quality Teaching

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HSIE

MATHS

Teaching and Learning Activities

Needs and Wants - Goods and Services

General class discussion about personal needs and wants.

important wants. Students rank these from 1 to 5. 1 is MOST important. Students team up with another pair and share and compare. In groups of four, students list all different needs and wants. Students negotiate this list down to 5 most important needs and wants for the GROUP. Note: A group strategy will need to be implemented to get a consensus that is fair to all.

In pairs, students identify 5 most important personal needs and 5 most

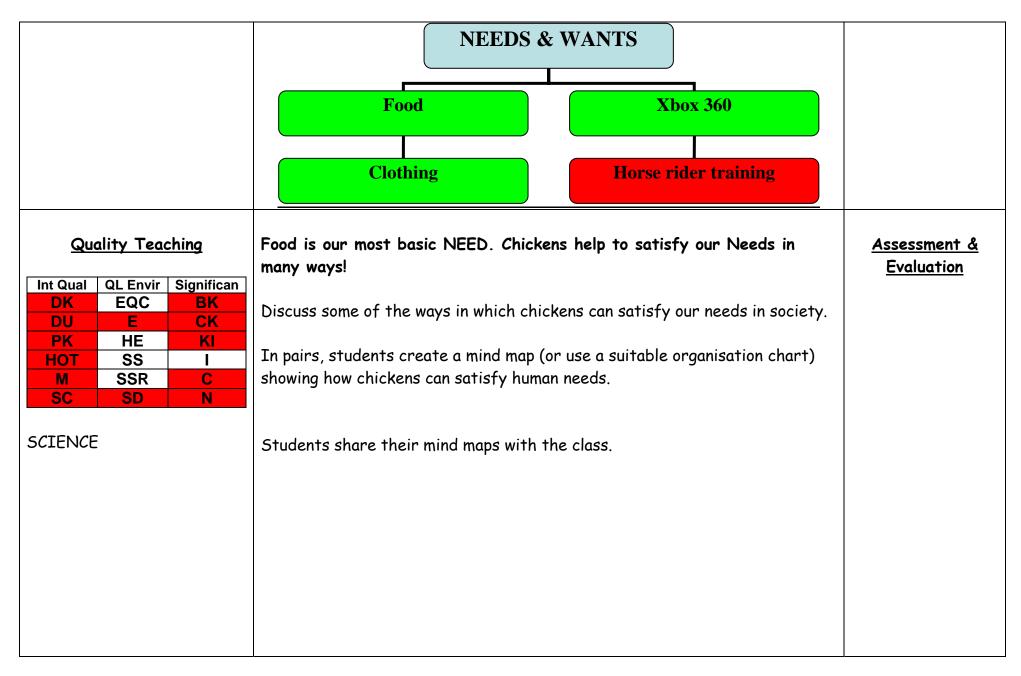
In pairs or fours, students try to use an appropriate organization chart (in MS Word or similar program) to list needs and wants. This is saved to use again later.

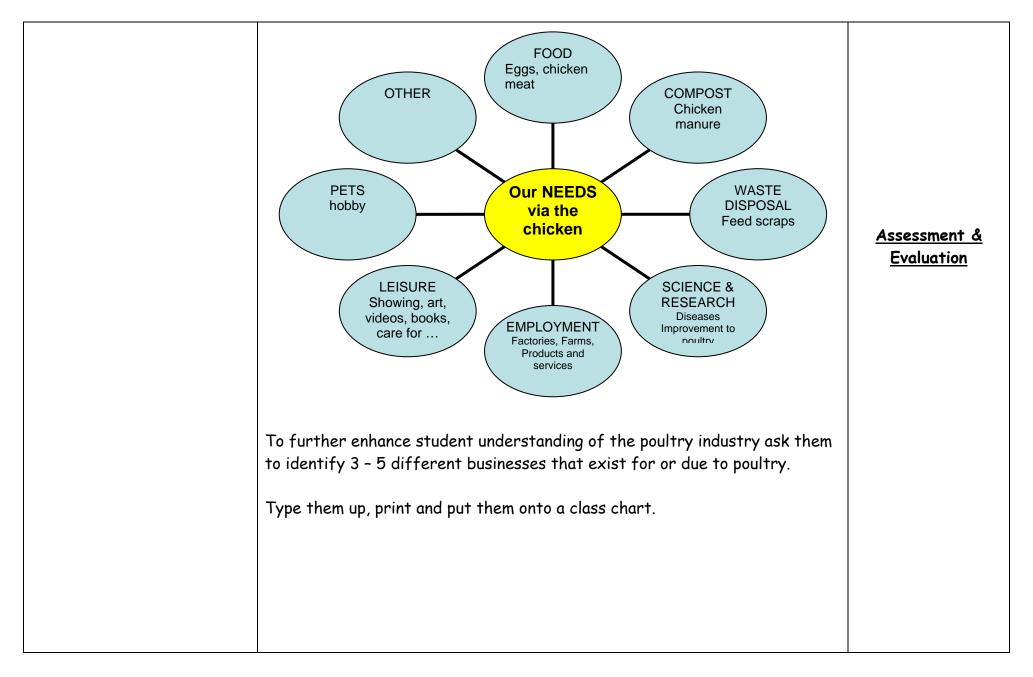
On board or computer (with data projector) create a class survey and graph the results. Groups see how many of the whole class needs and wants match their own when the overall tally is done.

Create questions for students to answer ranging from simple to complex.

Assessment & Evaluation

	Have students each create three questions. Share these, then have the class answer some of these questions.	
	Read a common story to students about a chicken.	
Quality Teaching	Eg. The little red hen. Henny Penny. The sky is falling. Hattie and the Fox.	Assessment & Evaluation
Int Qual QL Envir Significan DK EQC BK	Discuss and record needs of baby chicks	<u>=</u>
DU E CK PK HE KI HOT SS I M SSR C	Answers will include: food, water, protection, care, warmth, clean environment, fresh air, shelter.	
SC SD N	Discussion: How do these compare to our own needs?	
	How do they compare to the needs of a human baby?	
SCIENCE	Students write a general statement about needs and wants.	
3322.132	Eg. All living creatures have needs that are essential to their wellbeing.	
HSIE	Looking at Goods and Services	
11022	Discuss the differences between goods and services.	
	Students use previously created Needs and Wants list. Using these, sort them via colour coding into Goods and Services.	





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Learning about the EGG! (See worksheets for each stage - "The Egg")

Discuss what students know about eggs.

Can they name any parts of the egg. Load the file up on computer and display the picture of an egg on a data projector. Try to identify the parts to gather students' existing knowledge.

SCIENCE

Complete worksheets - The Egg.

Learn about the Chicken, Chicken Industry and History of the Chicken (See worksheets for each stage - "The Chicken)

Read some sections of relevant books.

The book titled "The Story of eggs" - Workboot Series which is available to purchase online is a GREAT book to start with.

Complete worksheets - The Chicken.

LITERACY

Video - Watch the video "Chicken Run".

Discussion about video"
What sort of farm was it?

Why did the lady want to change it?

How did she try to sell her new product? When?

Why do you think the hens productivity had decreased?

Would these chickens have been suitable for eating? Why / Why not?

ART Draw/Paint a picture of your favourite scene from the video. LITFRACY Write a newspaper article briefly outlining what the video is about. Write about your favourite part of the video. At the end of this write a conclusion with some type of recommendation regarding the video and whether people should watch it. Students write a PLAY Imagine you are a hen in the movie "chicken Run". You over hear the owner of the chicken farm saying she might kill you because you have not been laying well. Create a play for the next scene. Include a number of characters in your play. Quality Teaching What are the benefits of eating eggs? Assessment & (See worksheets for each stage - "Great Tucker") Evaluation QL Envir | Significan Int Qual **EQC** BK DK Discuss healthy foods. Look at 5 food groups. CK DU Ε Identify what is so special about the benefit to the human body from the 5 HE PK KI food groups. Research dietary needs of the human body. HOT SS М **SSR** SC Ν SD Use the internet to discover what food intake is required by different age groups. HEALTH / PD Complete worksheets - Great Tucker to enhance student understanding of TECHNOLOGY the nutritional benefits of eggs.

LITERACY

Design and make a healthy sandwich that tastes great.

Your sandwich must have between 3 and 5 items on it. Students draw sandwich and write a procedure for making it. Students publish this on the computer and scan drawings to include with work.

Students present their sandwich to the class (in written form) explaining what makes it healthy and why it tastes so great.

• Students vote for the sandwich they think would be the healthiest and tastiest.

Students write an advertisement to sell this sandwich.

Extension: Students make a commercial (using their written advertisement) to sell the sandwich. Students edit their video on the computer and link it to their web site.

Teacher organises ingredients for most popular 3 sandwiches and students celebrate a healthy lunch day. Note: Some of this could be video to help students create their commercials.

SCIENCE

Experiment: Fresh or Foul! Design and carry out an experiment to determine how long eggs will stay fresh and what is the best method for keeping them.

EG. Using three groups of eggs (3, 6 or a dozen in each group) place one group in the fridge in their carton, another group in the egg holders inside a fridge and the third left in a carton on a shelf.

After the fourth week (and each week after that) test two eggs from each group for freshness. Do this by placing each in a glass of water.

	If it floats consider it to be OFF! If it sinks it is probably still okay. Repeat this process over the following weeks and record the results. Note: After wetting egg that are still fresh, quickly dry them and put them back where they were.	
PROJECT	Give students a research project about chickens. See the PROJECT SHEET .	
Quality Teaching	Breeding Chickens (See worksheets for each stage - "Breeding Chickens")	Assessment & Evaluation
Int Qual QL Envir Significan DK EQC BK DU E CK PK HE KI	Extend students' knowledge of the chicken industry.	
HOT SS I M SSR C SC SD N	EXCURSION: Take students on an excursion to either: Poultry (Broiler) Growing Farm, Hatchery, Egg Farm - Cage or free range, Hobby Breeders Farm, Local High School.	
HSIE	Read books or extracts about: Chicken farms, chicken factories, egg farms.	
SCIENCE	See the book titled "The Story of eggs" Access an incubator and some fertile eggs and incubate some eggs.	
	Note: The teacher's federation paper sometimes has an ad by a company who can provide all these items for you or you might be able to borrow an incubator from a local high school.	

	Briefly discuss how an incubator works. This will be done in greater detail in a later lesson. Cover key words such as Time, Temperature, Fertility, Humidity, Turning. Complete worksheets - Breeding Chickens to enhance student understanding of some factors involved in successfully breeding and hatching chicks.	
Quality Teaching Int Qual QL Envir Significan DK EQC BK DU E CK PK HE KI HOT SS I M SSR C SC SD N HSIE SCIENCE	Caring for Chicks Needs (See worksheets for each stage - "Caring for Chicks Needs") Review discussion of needs of young chicks. Expand on the basic needs of chicks to enhance student knowledge and understanding in this area. Here are some basic examples: Food - Needs to be an appropriate size. Chick crumbs are ideal. These often have a coccidiostat in them. Why? What is coccidiosis? Containers for feed - Keep vermin out of sack of food. Keep it fresh. Chick feeders to allow good access for all chicks. Fresh water each day or two. Why? Why clean water container?	Assessment & Evaluation

To remove chick droppings which can cause infection and/or spread disease if chicks are eating or drinking it.

Warmth from brooder - to keep chicks at appropriate temperature else they will chill and die. Chicks have no means of controlling their own body warmth. No feathers!

Fresh air - no draughts. Ammonia builds up and can harm chicks.

Complete worksheets - Caring for Chicks

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SCIENCE

Show students an incubator and have photos of other incubators. Discuss the various features of the incubator and purpose.

Eq. Fan - to circulate warm air evenly

Bulb - to produce heat

Thermostat - control temperature

Egg turners - importance of rotating eggs

To learn about incubators and see examples try:

www.multiquip.com.au www.bellsouth.com.au Assessment & Evaluation

SCIENCE	Design a chicken shed and run. As a class discuss chickens needs and possible materials and costs. Have students make estimates. Try to define FREE RANGE.	
	Hint: FREE RANGE – exists when there is $10m^2$ for each 1 and a half chickens. This makes for some fun conversation.	
	Use spreadsheet - Building a shed and chicken run! More details are provided on the next few pages.	
ART	Draw an above view of your shed and chicken run. Add other design elements such as feeders, drinkers and nesting boxes.	
MATHS	Present some problems to students. Eg. How much space is required for 12 chickens if we are going to say they lay free range eggs? Ans: 80m²	
	Be aware: This is not enough space to keep the grass growing. You need about 20-40 m^2 to maintain grass in your chicken run.	

TECHNOLOGY

Students maintain two spreadsheets.

- 1 Showing daily food consumption.
- 2 Showing daily chick growth.

Note: Some leg rings may be required to track individual chick growth and some reasonable scales for weighing food and chicks.

DAILY FOOD CONSUMPTION				
Day Food weight No of chicks Food/chick				
1	xxx grams	20	xxx grams	GRAPH

DAILY CHICK GROWTH				
Day	Chick description	Height	Weight	Weight increase

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Looking after your hens (See worksheets for each stage - "Looking After Your Hens")

Note: You may NOT kill any poultry at school. See the DET policy on keeping animals in schools.

Students discuss the needs of poultry (hens) and how to care for them at school. Construct a class mind map or brainstorm all the things you need to consider to look after your chickens.

Assessment & Evaluation

HSIF Design Competition (project) - Students are to design a poultry shed for the SCIENCE school. They have a budget of \$10 000 to create a poultry shed and free range run. MATHS The tasks that need to be completed for this project include: • A series of scaled drawings (100cm: 1cm) showing an overview of the school with all boundaries and buildings on it. Graph paper will be handy. • Indicate on your map where your shed and chicken run should go with dimensions on the chicken run. • Draw your shed (100:1) showing the front, rear and top views with dimensions on it. (Do this by hand or on a computer) • Write a paragraph explaining why this is the best location to build a shed and chicken run. • Calculate the costs of building your shed and chicken run based on the following costs. Show these costs with your project. Use a spreadsheet. **NOTE**: A spreadsheet is already provided with this unit. The file name is: Building a shed and chicken run! Costs for some items that you could use: Concrete \$100/sqm (10cm thick) $$250/m^2$ Metal for shed Electricity \$50/m Fencing Posts \$20 each (Gap between posts to be 3m each) Fencing Wire \$300/50m roll

Complete worksheets - Looking After Your Hens. This one doesn't exist. YOU (the teacher) can make this one up OR give it to your students as a task. Visit your local high school to learn how they care for their animals and how waste management operates there. Students complete find-a-word puzzles and/or crossword puzzles about chickens and eggs. Students create their own find-a-word puzzles and/or crossword puzzles using appropriate software. A 30 day trial program title Vocabulary Worksheet Factory can be downloaded and used for this purpose. www.worksheetfactory.com RESEARCH Students share research with class and discuss their findings.

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HSIE

SCIENCE

ENGLISH

Marketing Magic

Discuss ways in which you could market your eggs.

Students design labels for egg cartons.

Students create posters that advertise eggs for sale.

Invite a guest speaker who has knowledge of marketing to share their secrets with the students.

Eg. A local green grocer, A marketing guru from the local council or Farmers' Markets.

K-2 Students write about why having chickens at school would be good.

Yr 3-6 Students write an **argument** as to why each family (where all live on quarter acre blocks or larger) or school should/should not keep a few chickens in their backyard/playground.

Students write articles about keeping and breeding poultry or benefits of eggs.

Students create a pamphlet about the benefits of free range poultry and eggs. These could be shared within the community or at Farmer's Markets when students are selling eggs.

A writing TASK is included in the worksheets section.

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Advertising affects the decisions we make

View a selection of commercials from TV. Discuss which items interested you and why?

How do advertisers make products attractive to buy?

Students write a script for an advertisement to sell either bay chicks, hens for eggs, chickens for meat, or eggs.

Students act out their script and video their advertisement.

HSIE

LITERACY

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HSIE

SCIENCE

Extension Activities

Students create a web site about breeding and keeping poultry in their school

Students write articles describing the benefits of poultry and eggs.

Give students an example of a "Poultry Budget Sheet" with various questions to answer.

RESOURCES to consider getting	
Beginning of Life document from PennState University in America. This is a great resource with much information.	
A powerpoint or PDF file called Embryology in the Classroom - a closer look by Phillip J Clauer available from the Pennsylvania State University (America) or try http://poultryextension.psu.edu	
BOOKS	