



Royal Agricultural Society of NSW

# Teacher Manual

Sydney Royal  
School Purebred Egg  
Laying Competition

6 - 17 April 2023  
Sydney Showground  
Sydney Olympic Park  
[www.rasnsw.com.au](http://www.rasnsw.com.au)



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## INVITATION

The Poultry Committee of the Royal Agricultural Society of NSW is pleased to invite all NSW schools with poultry keeping facilities to participate in the Sydney Royal School Purebred Egg Laying Competition.

## WHAT THE COMPETITION AIMS TO ACHIEVE

The School Egg Laying Competition aims to:

- Give students an insight into exhibition poultry.
- Allow students to compete in a curriculum-linked trial that provides insights for the growing of purebred laying chickens
- Offer students a practical, hands-on insight to future employment opportunities within the growing poultry industry.
- Provide students with the opportunity to compete with other NSW Schools at the Sydney Royal Easter Show and, in particular, to provide competition for schools without the space for larger livestock.
- Encourage school participation and progression into purebred poultry competitions

## WHAT THE COMPETITION INVOLVES

The Sydney Royal School Purebred Egg Laying Competition will run as a trial at your school before the Sydney Royal Easter Show and culminate at the Show by exhibiting three (3) of your layers.

Schools will require three (3) purebred laying hens or pullets to compete. There is no age limit on the layers however we recommend sourcing layers who will be between the ages of 15 weeks to 18 months at the time of the Easter Show. Schools are then required to prepare the layers to compete at the Sydney Royal Easter Show.

The Competition is judged by the exhibition poultry industry and consists of three (3) components:

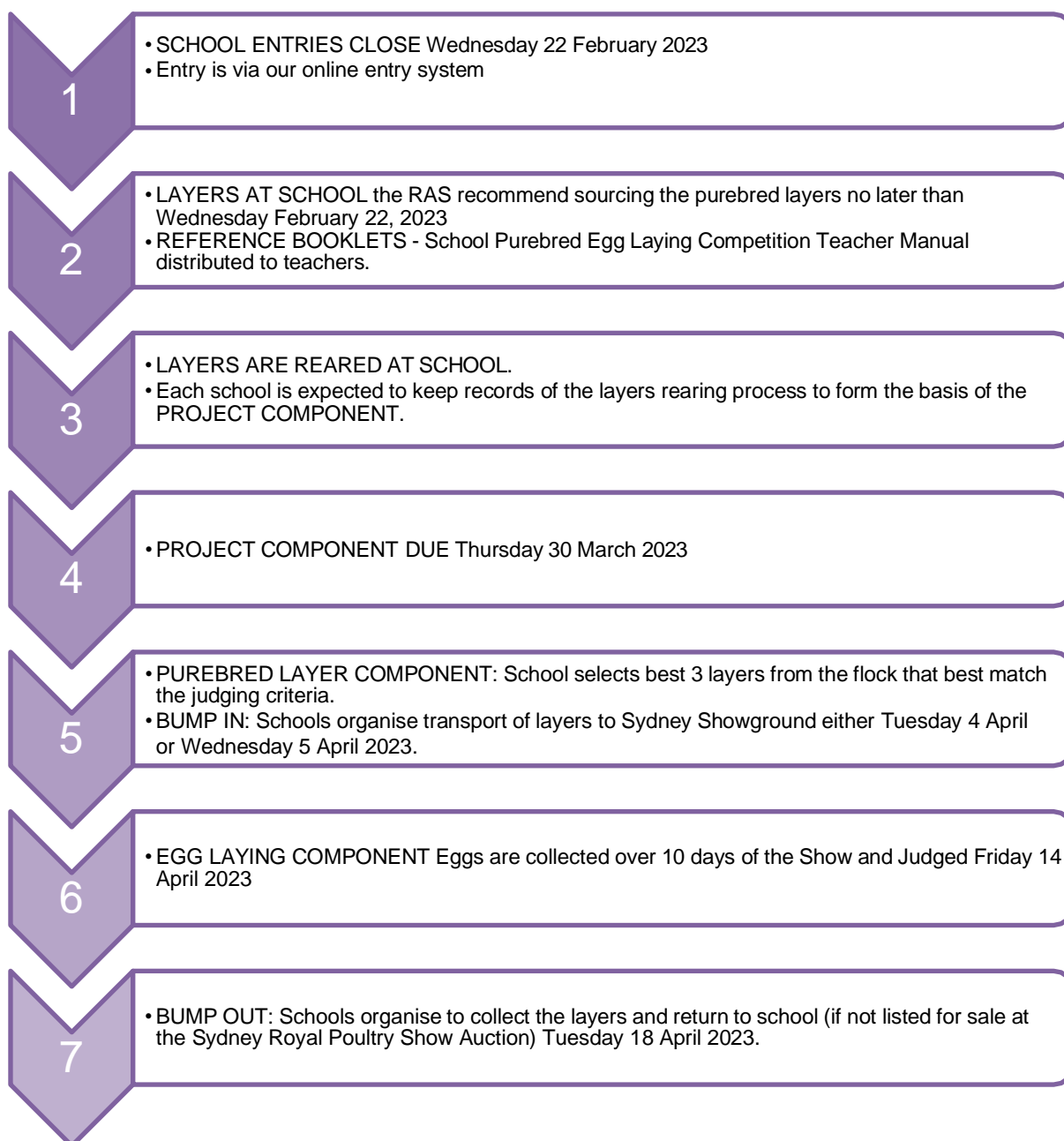
- **Presentation of Exhibits:** Three layers are chosen by the school for judging. Layers are judged based on uniformity and fitness for showing.
- **Project Component:** students are asked to create a PowerPoint presentation detailing how the layers were raised and prepared for the Show. To be submitted online. The Project Component is separated into Primary and Secondary categories to ensure fair competition.
  - **Primary:** PowerPoint Presentation (min.5 - max. 10 slides) detailing how students prepare for and raise the layers, referring to the Australian poultry industry and the school trial data.
  - **Secondary:** PowerPoint Presentation (min.15 - max. 20 slides) detailing how students prepare for and raise the layers, referring to the Australian poultry industry and the school trial data.
- **Egg Laying Component:** the quality of the eggs laid by the three birds (over 10 days of the Competition) are judged to commercial standards.

## TO ENTER

To participate in the Sydney Royal School Purebred Egg Laying Competition at the Sydney Royal Poultry Show please complete an entry form found on the RAS Poultry Website ([www.rasnsw.com.au/poultry](http://www.rasnsw.com.au/poultry)).

The Competition is FREE to enter, should you have any questions regarding the Competition, please contact the Poultry Section on (02) 9704 1270 or email [poultry@rasnsw.com.au](mailto:poultry@rasnsw.com.au)

## COMPETITION TIMELINE



## COMPETITION JUDGING TIMETABLE

Competition Component	Due Date	Judging Date
Project Component	Submission Due Thursday 30 March 2023	Friday 31 March 2023
Purebred Layer Component	Penning 4 – 5 April 2023	Thursday 6 April 2023
Egg Component	Coordinated by SRES - eggs collected for 10 days from start of Show	Friday 14 April 2023

## USING THE COMPETITION FOR LEARNING

The 2023 Sydney Royal School Purebred Egg Laying Competition has been developed to engage students in many aspects of the commercial egg production and laying hens.

Participating in the rearing of egg laying layers with your students can cover a number of curriculum areas supporting a poultry unit of work.

<b>NSW Syllabus for the Australian Curriculum – Science K-10 Syllabus</b>	
<i>Early Stage 1</i>	
Skills	<b>STe-4WS</b> A student explores their immediate surroundings by questioning, observing using their senses and communicating to share their observations and ideas.
Knowledge and Understanding	<b>STe-8NE</b> A student identifies the basic needs of living things.
<i>Stage 1</i>	
Skills	<b>ST1-4WS</b> A student investigates questions and predictions by collecting and recording data, sharing and reflecting on their experiences and comparing what they and others know.
	<b>ST1-10LW</b> A student describes external features, changes in and growth of living things.
<i>Stage 2</i>	
Skills	<b>ST2-4WS</b> A student investigates their questions and predictions by analysing collected data suggesting explanations for their findings, and communicating and reflecting on the processes undertaken.
Knowledge and Understanding	<b>ST2-10LW</b> A student describes that living things have life cycles, can be distinguished from non-living things and grouped, based on their observable features.
<i>Stage 3</i>	
Skills	<b>ST3-4WS</b> A student investigates by posing questions, including testable questions, making predictions and gathering data to draw evidence-based conclusions and develop explanation.
Knowledge and Understanding	<b>ST3-11LW</b> A student describes some physical conditions of the environment and how these affect the growth and survival of living things.

### **NSW Education Standards Authority (Board of Studies) Agricultural Technology Years 7-10 Syllabus**

#### *Stage 4*

AG4-3 A student identifies and explains interactions between the agricultural sector and Australia's economy, culture and society.

AG4-10 A student implements and appreciates the application of animal welfare guidelines to agricultural practices.

AG4-11 A student undertakes controlled experiments in agricultural contexts.

AG4-12 A student communicates experimental data using a range of information and communicates technologies.

AG4-14 A student demonstrates plant and/or animal management practices safely and in collaboration with others.

AG4-7 A student identifies and uses skills to manage the interactions within animal production enterprises.

#### *Stage 5*

AG5-4 A student investigates and implements responsible production systems for plant and animal enterprises.

AG5-10 A student implements and justifies the application of animal welfare guidelines to agricultural practices.

AG5-12 A student collects and analyses agricultural data and communicates results using a range of technologies.

AG5-14 A student demonstrates plant and/or animal management practices safely and in collaboration with others.

AG5-7 A student explains and evaluates the impact of management decisions on animal production enterprises.

### **NSW Education Standards Authority Technology Mandatory Years 7-8 Syllabus(2017) - Agriculture and Food Technologies**

Outcomes	TE4-5AG A student investigates how food and fibre are produced in managed environments
Identifying and defining	Students investigate how food and fibre production is managed in environments as a system and how sustainability can be improved, for example: Plants and/or animal species grown in managed environments
Researching and Planning	Students investigate ideal conditions for growth and development of an agricultural plant or animal

## JUDGING CRITERIA - PRESENTATION OF LAYING TRIO

When selecting three layers for judging, consider the below criteria:

<b>Live Commercial Judging Criteria</b>				
<i>Criteria</i>	<i>Score</i>	<i>Guidelines /10</i>	<i>Guidelines /20</i>	<i>Guidelines/30</i>
General Type/Conformation	/20	<b>Low</b> Performing Score 0-4 <b>Average</b> Performing Score 5-7 <b>High</b> Performing Score 8-10	<b>Low</b> Performing Score 0-10 <b>Average</b> Performing Score 10-15 <b>High</b> Performing Score 16-20	<b>Low</b> Performing Score 0-15 <b>Average</b> Performing Score 15-25 <b>High</b> Performing Score 25-30
Handling/Egg Laying Qualities	/20			
Condition and Feather Quality	/10			
General Health	/20			
Trio Similarity	/30			
Total	/100			

### GENERAL TYPE/CONFROMATION

Layers must be functional, structurally sound and representative of the purebred standard – according to the Australian Poultry Standards (2<sup>nd</sup> Edition). Judges will review the head, back and body, wings, tail, legs and feet to ensure layers can eat, drink and move freely and easily.

### HANDLING/EGG LAYING QUALITIES

Layers must reach maturity and have a sound reproductive system. Judges will look for flushed red skin around the head (comb and face - an indication of point-of-lay), softer flesh and greater fullness of the abdomen and malleability of the pubic bones.

### CONDITION AND FEATHER QUALITY

Layers must have adequate body condition to support their egg laying. Layers are assessed on appropriate muscle and fat cover over their body and must not be obviously over or under commercial weight range. Feathers are the protective covering for the layers so it is important that they are well formed, with good texture and strong shafts. Feathers should be moderately abundant (no evidence of pecking or bald spots), broad, long, fitting fairly close to the body and with moderate fluff.

### GENERAL HEALTH

The health of the layers is a very important aspect of poultry husbandry. Judges will assess the head, eyes, legs and area around the cloaca to look for signs of illness or ill-health. Judges will also note the weight of the layers, ensure eyes and nostrils are alert and free from weepiness or discharge.

### TRIO SIMILARITY

Layers are to be exhibited as a trio (3). The three layers should be matched as closely as possible using the criteria above, including: similar weight, conformation, feather quality and colour. Judges will review the layers as a trio to ensure purebred standards are met.

### DEFECTS AND DISQUALIFICATIONS

- Evidence of ill-health, illness or infestation of parasites.
- Crooked or bent breast bone; broken bones, wound's, abrasion's or bruises.
- Twisted or malformed feathers.
- Excessive grime or faecal matter.

## JUDGING CRITERIA - EGG COMPONENT

Eggs will be collected on an accumulative basis for the first ten (10) days of the Show. Eggs will be placed in a marked carton in the Egg Display Cabinet.

Eggs are judged on Friday 14 April 2023, using External and Internal Criteria, noted in the Australian Poultry Standards (2<sup>nd</sup> Edn).

<b><i>Egg Judging Criteria</i></b>		<b><i>Egg Judging Criteria</i></b>	
<b><i>External Egg Criteria</i></b>		<b><i>Internal Egg Criteria</i></b>	
Criteria	Score	Criteria	Score
Shape, Size and Uniformity	/40	Yolk	/30
Shell texture	/20	Albumen	/30
Colour	/20	Chalazae	/10
Freshness, bloom and appearance	/20	Freshness and Air Space	/30
Total	/100	Total	/100

### EGG EXTERNAL

Judges will review the eggs that have been laid over the 10 days of competition to the Australian Poultry standards. This includes the shape (ample breadth, good dome, greater length than width), size (approximately 50g), shell texture (smooth and free from indicators of stress, lines, cracks, bulges or roughness), even colour (brown), freshness, bloom and appearance. The eggs laid over the 10 days will be assessed comparing the uniformity of the listed criteria.

### EGG INTERNAL

The Top 10 schools judged according to EXTERNAL CRITERIA will then qualify to be judged (3 eggs selected at random from total eggs laid) based on INTERNAL CRITERIA. Judges will crack a sample of the eggs to assess the yolk (golden yellow (>10 on colour scale), free from bloodspots, well rounded and smooth), albumen (suitable height, dense, translucent in colour, free of blood spots), chalazae (thick cord of white albumen at each end of the yolk), air space (very small – indicating freshness) and freshness (indicated by small air space, high, smooth yolk that holds its shape).

### DEFECTS AND DISQUALIFICATIONS

- Polished or over-prepared shells
- Defective contents
- Staleness
- More than one yolk
- Addition of colouring to shells



**PROJECT JUDGING – MARKING RUBRIC**

Students are asked to create a PowerPoint presentation detailing how the layers were raised and prepared for the Show, whilst demonstrating the schools interest in poultry. *The project is to be submitted online* The Competition Sample Data Collection Tables (page 10) are provided as references for students to complete or create their own record of performance.

The Project Component is required (min.15 - max. 20 slides) detailing how students prepare for and raise the layers, referring to the Australian poultry industry and the school trial data.

Category	Project Criteria				Score
	Beginning	Developing	Proficient	Excellent	
Score	1-2	3-5	6-8	9-10	
Content – Project 30%	The content demonstrates little summary of the layer show preparation. This includes: <ul style="list-style-type: none"> <li>- Production</li> <li>- Husbandry</li> <li>- Housing</li> <li>- Economics</li> </ul>	The content demonstrates a basic summary of the layer show preparation. This includes: <ul style="list-style-type: none"> <li>- Production</li> <li>- Husbandry</li> <li>- Housing</li> <li>- Economics</li> </ul>	The content includes good summarisation of the layer show preparation. This includes: <ul style="list-style-type: none"> <li>- Production</li> <li>- Husbandry</li> <li>- Housing</li> <li>- Economics</li> </ul>	The content includes an excellent summary of the layer show preparation. This includes: <ul style="list-style-type: none"> <li>- Production</li> <li>- Husbandry</li> <li>- Housing</li> <li>- Economics</li> </ul>	
Content – Industry 20%	The content shows little inclusion of Australian Egg industry research and discussion. Including: <ul style="list-style-type: none"> <li>- Production Types</li> <li>- Production in Australia</li> </ul>	The content shows a basic attempt to include Australian Egg industry research and discussion. Including: <ul style="list-style-type: none"> <li>- Production Types</li> <li>- Production in Australia</li> </ul>	The content shows good inclusion of Australian Egg industry research and discussion. Including: <ul style="list-style-type: none"> <li>- Production Types</li> <li>- Production in Australia</li> </ul>	The content shows excellent inclusion of Australian Egg industry research and discussion. Including: <ul style="list-style-type: none"> <li>- Production Types</li> <li>- Production in Australia</li> </ul>	
Organisation of Growth Data 30%	Data is not included.	Data collection has been attempted and included in the project.	Good use of collected data, includes a table.	Excellent data collection and organisation such as tables, graphs and /or charts.	
Media 15%	Incorrect media (eg: Microsoft Word). No/little use of images and/or multimedia.	Basic use of media (eg: Microsoft Powerpoint, Keynote). No/little use of images and/or multimedia.	Good use of appropriate media (eg: Microsoft Powerpoint, Keynote). Includes some images and/or multimedia.	Advanced use of appropriate media (eg: Microsoft Powerpoint, Keynote). Includes supporting images and/or multimedia.	
Formatting 5%	The overall project has limited structure and is poorly formatted.	The overall project has basic structure, with some formatting mistakes.	The overall project is mostly structured, with minimal formatting mistakes.	The overall project is well structured, with appropriate formatting.	
<b>Total</b>					

## COMPETITION SAMPLE DATA COLLECTION

<i>Arrival Data and Details</i>	
Date of Arrival:	
Age when Received:	
No. of layers Received:	
Average Weight of layers:	

<i>Trial Data and Details</i>						
Week 1 Age: 7 wks	Losses	Chickens Alive	Temperature Min/Max	KG of feed used	Average Weight	Eggs Collected
Record Date: / /202						
Totals						
Week 2 Age:	Losses	Chickens Alive	Temperature Min/Max	KG of feed used	Average Weight	Eggs Collected
Record Date: / /202						
Totals						
Continued...						
Week 24 Age:	Losses	Chickens Alive	Temperature Min/Max	KG of feed used	Average Weight	Eggs Collected
Record Date: / /202						
Totals						

<i>Trial Feeding and Husbandry Details</i>					
Feed Details:					
Husbandry and Housing:					
Date of First Egg:					
Week	Survivability %	Total Feed Consumed (kgs)	Total Body Weight (kgs)	Average Body Weight (kgs)	Feed Conversion Ratio
1					
2					
3					
4					
...					
Final Week					
Final Assess Date: _/_/20	Survivability % from arrival to completion of trial	Total feed consumed during trial	Final total body weight of all layers	Average body weight of layers at completion of trial	Final feed conversion ratio
Totals					

**CALCULATIONS**

$$\text{Survivability \%} = \frac{\text{ttttttttt bbbbbbbbbb tttbbaaaa}}{\text{ttttttttt bbbbbbbbbb bbaarrmbbaaabb}} \times 100$$

Total Body Weight (kgs) = *sum of all layers body weights*

$$\text{Average Body Weight (kgs)} = \frac{\text{ttttttttt btttbbb wwaabwwhzt (kkwwbb)}}{\text{nnnnmbbaabb ttto rrttbrkkbb}}$$

$$\text{Feed Conversion Ratio} = \frac{\text{ttttttttt oaaaaabb rrttnbnnnaabb (kkwwbb)}}{\text{ttttttttt btttbbb wwaabwwhzt (kkwwbb)}}$$

**RESOURCES**

Sydney Royal Poultry Show

[www.rasnsw.com.au/poultry](http://www.rasnsw.com.au/poultry)

Royal Agricultural Society of NSW - Education Department

<http://www.rasnsw.com.au/education/>

NSW Department of Education Animals in Schools

[www.nswschoolanimals.com/poultry-fowls/](http://www.nswschoolanimals.com/poultry-fowls/)

Australian Eggs

<https://www.australianeggs.org.au/education/>

Exhibition Bird Biosecurity prepared by Australian Government Rural Industries Research and Development Corporation

<https://www.youtube.com/watch?v=dTKr72FMN84>

## POULTRY HUSBANDRY ASSISTANCE

### PREPARING FOR POULTRY ARRIVAL

	<b>Check List</b>	<b>Ready?</b>
1. Poultry Coop	A safe, spacious, solid construction with enclosed areas for chickens to roost at night, lay eggs and scratch during the day. Please ensure that if you are letting the chickens out to roam during the day that you have a fenced area to prevent attack from predators.  <b>Prior to layer arrival</b> – we advise that you clean and disinfect all areas of the coop.	
2. Bedding	Ensure that nest boxes have appropriate bedding for laying eggs: such as fine wood shavings, shredded paper, rice hulls or other absorbent materials. When cleaning the nest box, these materials can then be recycled into gardens.	
3. Food	Chickens will need a stable diet to promote with growth and development. While the chickens will LOVE your food scraps, please ensure you have a poultry ration suitable for layers ready for their arrival. Ask your local stockfeed store for advice.	
4. Water	Chickens MUST have access to clean water at all times. Ensure your drinkers/watering system is clean, topped up and ready for your layer arrival.	

### ON ARRIVAL AT SCHOOL

- We recommend that your new layers are kept isolated from any other chickens as a biosecurity measure to reduce the risk of disease.
- Record the first round of trial data collection (sample on page 10 in the booklet)
- Ensure layers are placed near feeders and waterers to ensure they learn their new surroundings.

### ANIMAL IN SCHOOLS

Keeping poultry at your school is an enjoyable and rewarding experience for students. Appropriate care is paramount. Schools are required to be familiar with and satisfy the requirements of the *Animal Research Act 1985 (NSW)* and the *Australian code for the care and use of animals for scientific purposes*. More information about how to ensure you are meeting the guidelines can be found at the NSW Department of Education's Animals in Schools website: <http://nswschoolanimals.com/>

### WATER CONSUMPTION

Water is the most important nutrient, and good-quality water must be available to the layers at all times. Generally, chicken will consume twice as much water as they do feed.

Please note: these consumption rates are guides for nipple drinker systems. Please ensure ample clean drinking water is available at all times.

<b>Weeks of Age</b>	<b>mL per bird per day</b>
7	68
10	102
15	136
20	167

## NUTRITIONAL RECOMMENDATIONS

Layers require a well-structured nutritional program to ensure they achieve development and growth targets and reach 'egg-laying' maturity at the appropriate age. There are a large number of poultry nutrition companies that provide balanced mash/crumble/pellet/scratch rations to be fed to all stages of your layers development.

	<b>Starter</b>	<b>Grower</b>	<b>Developer</b>	<b>Pre-Layer</b>	<b>Early Lay</b>
<b>Age/Weeks</b>	0-6 wks	6-12wks	12-15 wks	15wks - POL	POL– 50 wks
Feed to a body weight of (g) – cage reared	500	1170	1370	1490	
Feed to a body weight of (g) – floor reared	480	1050	1290	1430	
Metabolisable energy kcal/kg	2900	2850	2750	2775	2800
Metabolisable energy mj/kg	12.14	11.93	11.51	11.61	11.72
Crude protein (nitrogen x 6.25), %	19.5	17.5	16	16.5	17.9
Calcium %	1	1	1.4	2.5	4.2
Phosphorus (available) %	0.45	0.43	0.45	0.48	0.46

## PREPARING FOR POULTRY SHOW CHECKLIST

Once you have selected the three (3) layers for Show – it is now time to prepare! Poultry are judged on their physical appearance so it is important that your layers are looking their best!

	<b>Checklist</b>	<b>Ready?</b>
1.Handling & Training	The layers will be picked-up, moved and handled multiple times while preparing for and at the show. Students should handle the layers correctly and give layers time in a training pen if possible.	
2.Washing & Cleaning	While the layers will be cleaning themselves regularly, it is important you give them a wash to ensure they look their best.  Using warm soapy water, ensure you clean the layers' body feathers, tail, wings and cloaca area. Take care to scrub the legs, feet and under the nails!  Ensure you rinse all soap and grime off the feathers and body after washing.	
3.Drying	Take care when towelling-down or hair-drying the feathers of the layer. Do not push feathers back against their growth direction, taking care not to split feathers.	
4.Feeding & Watering	After washing and drying, ensure your layers have immediate access to feed and water.	

## PREPARING FOR TRANSPORT CHECKLIST

	<b>Checklist</b>	<b>Ready?</b>
1.Health	Your layers should be in good health, of an adequate weight and of the correct age prior to transport.	
2.Boxes	Before transporting, please ensure you have a safe, adequate unit of transport for all three layers. Consider: <ul style="list-style-type: none"> <li>- Size: layers must be able to stand, sit and turn safely within the space.</li> <li>- Ventilation: each unit of transport must have adequate sources of ventilation such as air holes.</li> </ul>	
3.Transport	A plan of transport that includes a safe and efficient vessel (vehicle, trailer) and route should be prepared well before departure. Trips over 3 hours should be allow for stoppages.	

## **OTHER POULTRY COMPETITIONS FOR SCHOOLS & SCHOOL AGED CHILDREN**

### ***YOUTH POULTRY SHOWMANSHIP COMPETITION***

The Youth Poultry Showmanship Competition supports young people in the handling, preparation and interest in the poultry sector, with competitors demonstrating their presentation and showmanship skills and their knowledge of the poultry industry. During the judging process, competitors are asked to describe the preparation required to show their exhibits (birds), the specific features of their chosen exhibit (bird), and judges look for correct technique and confidence in handling the exhibit (bird) during the judging process.

The Competition is open to both 'Schools' competitors and 'Open' competitors aged between the 13-18 years and will take place on the Stage in the Poultry Pavilion.

### ***POULTRY YOUNG JUDGES COMPETITION***

The Sydney Royal Poultry Show also hosts the RAS Poultry Young Judges State Finals during the Sydney Royal Easter Show.

The Judging Competition is open to young people between the ages of 15-24 years old. Competitors can compete in Hard Feather, Soft Feather and Waterfowl Judging Competitions and competitors entered in all three (3) competitions will be eligible to be judged in the Champion Poultry Judging Competition. Please refer to: [www.rasns.com.au/young-judges-competitions/](http://www.rasns.com.au/young-judges-competitions/)

For more information on any of the School Poultry Competitions please visit our website: [www.rasns.com.au/poultry](http://www.rasns.com.au/poultry) or contact [poultry@rasns.com.au](mailto:poultry@rasns.com.au)