SCHOOL TOURS

WORKING PORT TOUR
STEELWORKS TOUR

INSIDE INDUSTRY

insideindustry.org.au

Photo by | **Pelin Erciftci** Oak Flats High School

INSIDE INDUSTRY

For many years, BlueScope and the Port of Port Kembla have welcomed students to their facilities, proudly demonstrating the vast Port Kembla plant and the Port and sharing the important part they play in sustaining Australia.

For all students, this experience is one that will inform, educate and excite them and reinforce the part that this major manufacturing centre continues to play in our region.

The management of both the Visitor Centre facility and the Tour Program is licensed by BlueScope to Inside Industry - a 'Not for Profit' community organisation.

TOUR TYPES

Our signature tours are the Working Port Tour and Steelworks Tour, offering insight into the process, scale, history and career opportunities that exist in Port Kembla. Tours can be tailored to the age, interest, available time and curriculum focus required.

Working Port Tour - Suitable for all school students

The Working Port Tour takes approximately 2 hours and visits many areas of Port Kembla including the Port, Hill 60 and the township of Port Kembla. The students will learn about shipping and the role our Port Kembla Port plays in connecting the Illawarra to the rest of the world.

Steelworks Tour- Suitable for all students over 10 years of age

The Steelworks Tour takes approximately 3 hours and visits all areas of steel production, viewing many parts of the process. Students will not only learn how steel is made but will also see each working part of the process up close.

Photo by I **Tyler Thomas** Oak Flats High School

TOUR INFORMATION

- Tours can be arranged on any weekday and at any time.
- We can arrange school pick-up and drop off.
- Steel Tours require students to wear covered non-slip shoes, socks and long trousers (covering ankles). All other Personal Protective Equipment (PPE) - clothing and safety equipment - is provided for all ages of students.
- The Steel Tour includes about 300 steps and approximately 2.5km of walking. Port Tours do not have these limitations.
- Tours can be customised for all ages and abilities
- All tours commence from the Visitor Centre, at the Northgate Entrance to BlueScope, Springhill Road, Coniston, where the background of the Port and Steelworks is introduced, and safety briefings take place.

SCHOOLS ENGAGEMENT

Experience the tours for yourself first –

- We invite you to join us on one of our public tours at no charge.
- We can assist with organising presentations pre or post tour to tie into the curriculum area being studied
- Inside Industry is also an exceptional meeting or training venue. We invite local schools to utilise our facilities for meetings, training and professional development days.

NESA CURRICULUM AREAS

STEELWORKS TOURS

(Suitable for all school students)

NESA CURRICULUM AREA: **STAGES 3 – 5**		
	RELEVANT COURSE CONTENT	**INSIDE INDUSTRY TOUR CONTRIBUTION**
English	• Develop students' knowledge, understanding, appreciation and enjoyment of the English language and to develop their skills as effective communicators. • Writing imaginative, interpretive and critical texts with clarity and accuracy for a range of purposes and audiences.	• Report and present-on the tour experience, having witnessed spectacular manufacturing and learning about the steel making process. • Use language and communicate appropriately, effectively and accurately for a range of purposes and audiences, in a range of contexts, in ways that are imaginative, interpretive and critical. • Explain their experience at the Steelworks.
Maths	• Develop students' knowledge, understanding and skills in mathematics and working mathematically. • Students develop increasingly sophisticated and refined mathematical understanding, fluency, communication, reasoning, analytical thought and problem-solving skills. • These capabilities enable students to respond to familiar and unfamiliar situations by employing strategies to make informed decisions and solve problems relevant to their present and future needs.	• Consider the process, timing and ingredients that go into Steel Making, from the information learnt. • Include financial mathematics, algebraic techniques, equations, linear and non-linear relationships, surface area and volume, properties of geometrical figures, data collection and representation, data analysis, and probability.
Science	• Develop students' skills, knowledge and understanding in explaining and making sense of the biological, physical and technological world. • Through applying the processes of Working Scientifically students develop understanding of the importance of scientific evidence in enabling them as individuals and as part of the community to make informed, responsible decisions about the use and influence of science and technology on their lives.	• Gain increased understanding about the unique nature of creating steel from other elements and the sustainable closed-loop of production. • Consider how steel-making uses scientific knowledge, the use of science and the relationship between science and technology. • Use the processes of Working Scientifically to plan and conduct investigations, before and after the tour. • Gain experience in making evidence-based decisions and in communicating their understanding and viewpoints, regarding major manufacturing.
Technologies **Science & Technology**	• Through studying Science and Technology students explore scientific and technological concepts and gain knowledge and understanding of the world. • They develop skills in conducting scientific investigations and designing and producing solutions through learning about the Living World, Material World, Physical World, Earth and Space, and Digital Technologies.	• Use knowledge gained from the Tour in learning and apply in the following areas of assessment; ▪ OHS and risk management ▪ Properties and applications of materials ▪ Industrial Technology and society ▪ Designing, communicating and evaluating ▪ Producing quality projects • Demonstrate experience of these traditional and new technologies in their field of study, and evaluate the social, cultural and environmental impacts of the technology of Steel making.

STEELWORKS TOURS

curriculum.nsw.edu.au

NESA CURRICULUM AREA: STAGE 4		
	RELEVANT COURSE CONTENT	**INSIDE INDUSTRY TOUR CONTRIBUTION**
Technology (Mandatory)	• Technology Mandatory engages students in design and production activities as they develop solutions to identified needs and opportunities. • Through the practical application of knowledge and understanding they learn about Agriculture and Food Technologies, Digital Technologies, Engineered Systems and Material Technologies.	• Learn how force, motion and energy can be used in systems, machines and structures. • Understand how forces and the properties of materials affect the behaviour and performance of engineered systems, machines and structures at the Steelworks. • Use knowledge of these principles and systems at the Steelworks to enable the design and production of sustainable, engineered solutions.
Human Society and its Environment **Commerce**	• Commerce enables young people to develop the knowledge, understanding, skills and values that form the foundation on which they can make sound decisions about consumer, financial, legal, business and employment issues. • It develops in students the ability to research information, apply problem-solving strategies and evaluate options in order to make informed and responsible decisions as individuals and as part of the community.	• From the tour understand how in this major manufacturing plant - the historical and current employment and human resources have and continue to affect the steelworks. • Consider how Law and Society and Employment Issues, affect the Steelworks and develop an understanding of how laws affect the Steelwork individuals and regulate the Works. • Learn about commercial and legal aspects relating to employment issues, and workers' rights and responsibilities at the Steelworks.
History	• History develops in young people an interest in and enjoyment of exploring the past. A study of Elective History provides opportunities for developing a knowledge and understanding of past societies and historical periods.	• Learn how the Steelworks was established, expanded and more recently refined - and how it has affected Wollongong. • Apply an understanding of the history, heritage and industry development at the Steelworks to the methods of historical inquiry and examine the ways in which historical meanings can be constructed through a range of media. • Apply the skills of investigating history including understanding and analysing sources and evidence and sequencing major historical events to show an understanding of continuity, change and causation. • Construct a logical historical argument for the ongoing existence of the Steelworks, supported by relevant evidence and to communicate effectively about the past, for different audiences.

NESA CURRICULUM AREA: STAGES 5 - 6		
	RELEVANT COURSE CONTENT	**INSIDE INDUSTRY TOUR CONTRIBUTION**
Work Education Years 9-10	• Work Education provides students with opportunities to develop knowledge, understanding and skills regarding the world of work including an awareness of work readiness and employer expectations, the roles and purpose of a range of sectors including education, training and employment organisations and an appreciation of the role of lifelong learning in planning and managing pathways.	• From the knowledge gained on the Tour of the Steelworks understand more regarding a range of work-related issues. • For example, employment trends and participation rates, employability skills, which include communication skills, teamwork, ICTs, and problem solving. • Consider enterprise skills including taking the initiative in the Steelworks workplace contexts and assist in students learning to plan and manage their own pathways including the range of life transitions.
Creative Arts **Photographic and Digital Media Years 9-10**	• Photographic and Digital Media provides opportunities for students to enjoy making and studying a range of photographic and digital media works. • It enables students to represent their ideas and interests about the world, to engage in contemporary forms of communication and understand and write about their contemporary world.	• Special arrangements can be made to undertake photo-shoots whilst on the tour - of the spectacular steel-making process. • This will assist in contributing to their Photographic and Digital Media portfolio. • Students could develop their research skills, approaches to experimentation and how to make informed personal choices and judgements - prior to the tour. • Students could be encouraged to record procedures and activities in a timeline about the steel making practice in their Photographic and Digital Media journal.
Visual Arts Years 9-10	• Visual Arts provides opportunities for students to enjoy the making and studying of art. • It builds an understanding of the role of art in all forms of media, both in the contemporary and historical world, and enables students to represent their ideas and interests in artworks. • Visual Arts enables students to become informed about, understand and write about their contemporary world.	• Special arrangements can be made to undertake photo-shoots or drawing whilst on the tour. This may provide ideas to create their personal artworks. • They could be encouraged to use their research skills, approaches to experimentation and how to make informed personal choices and judgements – prior to the tour and use the tour to inspire in the making of artworks. • They should be encouraged to record procedures and activities about their artmaking practice in their Visual Arts diary.
VET Board Endorsed Courses (2019) **Manufacturing Pathways Years 11-12**	• MSM10216 Certificate I in Manufacturing (Pathways)	• Be introduced and begin to understand Manufacturing, at the Steelworks, including what experience, skills are required and the opportunities for employment. • Learn particularly about traineeships, graduate programs and other ways to enter the manufacturing workforce.

NESA CURRICULUM AREAS

WORKING PORT TOURS

(Suitable for all students over 10 years of age)

NESA CURRICULUM AREA: STAGES 3 - 5		
	RELEVANT COURSE CONTENT	**INSIDE INDUSTRY TOUR CONTRIBUTION**
English Years 5-10	• Develop students' knowledge, understanding, appreciation and enjoyment of the English language and to develop their skills as effective communicators. • Writing imaginative, interpretive and critical texts with clarity and accuracy for a range of purposes and audiences.	• Report and Present-on the Tour experience, having witnessed shipping, manufacturing, stockpiles and maritime and indigenous sites. • Use language and communicate appropriately, effectively and accurately for a range of purposes and audiences, in a range of contexts, in ways that are imaginative, interpretive and critical. • Express themselves effectively, in regard to their experience at the Port.
Maths Years 5-10	• Develop students' knowledge, understanding and skills in mathematics and working mathematically. • Students develop increasingly sophisticated and refined mathematical understanding, fluency, communication, reasoning, analytical thought and problem-solving skills. • These capabilities enable students to respond to familiar and unfamiliar situations by employing strategies to make informed decisions and solve problems relevant to their present and future needs.	• Consider shape, dimensions, goods handling and distances at the Port, from the information learnt. • Include financial mathematics, algebraic techniques, equations, linear and non-linear relationships, surface area and volume, properties of geometrical figures, trigonometry, data collection and representation, data analysis, and probability.
Science Years 5-10	• Develop students' skills, knowledge and understanding in explaining and making sense of the biological, physical and technological world. • Through applying the processes of Working Scientifically students develop understanding of the importance of scientific evidence in enabling them as individuals and as part of the community to make informed, responsible decisions about the use and influence of science and technology on their lives.	• Gain increased understanding about the unique nature of creating Steel from other elements and stockpiles and the movement of goods and peoples around the World, through shipping • Consider how steel-making uses scientific knowledge, the use of science and the relationship between science and technology. • Use the processes of Working Scientifically to plan and conduct investigations before and after the tour. • Gain experience in making evidence-based decisions and in communicating their understanding and viewpoints, regarding major manufacturing and trade handling. • Science could approach the tour from a 'chemistry' perspective, with an investigation that begins prior to the excursion, uses the excursion as field work, and then simulates or reproduces some of the chemistry of steel back at the school lab.
Technologies Years 5-10 Science & Technology	• Through studying Science and Technology students explore scientific and technological concepts and gain knowledge and understanding of the world. • They develop skills in conducting scientific investigations and designing and producing solutions through learning about the Living World, Material World, Physical World, Earth and Space, and Digital Technologies.	• Use knowledge gained from the Port Tour in learning and apply in the following areas of assessment; ▪ OHS and risk management ▪ Properties and applications of materials ▪ Industrial Technology and society ▪ Designing, communicating and evaluating ▪ Producing quality projects • Demonstrate knowledge of the traditional and new technologies evidenced at the Port, and evaluate the social, cultural and environmental impacts of the Port on the Region.

NESA CURRICULUM AREA: STAGES 4 - 5		
	RELEVANT COURSE CONTENT	**INSIDE INDUSTRY TOUR CONTRIBUTION**
Technology (Mandatory) Years 7-8	• Technology Mandatory engages students in design and production activities as they develop solutions to identified needs and opportunities. • Through the practical application of knowledge and understanding they learn about Agriculture and Food Technologies, Digital Technologies, Engineered Systems and Material Technologies. • In specific regard to: Engineered Systems.	• Learn how force, motion and energy can be used in systems, machines and structures. • Understand how forces and the properties of materials affect the behaviour and performance of engineered systems, machines and structures at the Port. • Use knowledge of these principles and systems at the Port to enable the design and production of sustainable, engineered solutions. • Technology syllabus has a focus on sustainability. Students could compile a list of strategies / technologies used to reduce environmental impact.
Human Society and its Environment Years 5-10 Aboriginal Studies	• Aboriginal Studies enables students to develop knowledge and understanding of Aboriginal Peoples of Australia, their cultures and lifestyles. • It is designed for all students and is of value to both Aboriginal and non-Aboriginal students.	• Included in the Port Tour are visits to the Heritage Park area of the Port and Hill 60, both with significant Aboriginal history and significance. • Consider the original owners of the land, Wollongong First Peoples and how they existed and lived. • Understand how development of the Port and the steelworks has affected them.
Human Society and its Environment Years 5-10 Commerce	• Commerce enables young people to develop the knowledge, understanding, skills and values that form the foundation on which they can make sound decisions about consumer, financial, legal, business and employment issues. • It develops in students the ability to research information, apply problem-solving strategies and evaluate options in order to make informed and responsible decisions as individuals and as part of the community.	• From the Port Tour, understand how in this major manufacturing plant - the historical and current employment and human resource background of the steelworks, continues to affect Wollongong. • Consider how Law and Society and Employment Issues, affect the workplace and assist Students in them developing an understanding how laws affect individuals and regulate society. • Learn about commercial and legal aspects relating to employment issues, and workers' rights and responsibilities at the Port.
History	• History develops in young people an interest in and enjoyment of exploring the past. A study of Elective History provides opportunities for developing a knowledge and understanding of past societies and historical periods.	• Learn how the Port was established, expanded and continues to be refined - and how it affects Wollongong. • Tour includes visits to the Port's Heritage Park and Hill 60, all with a rich element of maritime history. • Apply an understanding of history, heritage and industry development to the methods of historical inquiry. • Apply the skills of investigating the history of Port Kembla, including understanding and analysing sources and evidence and sequencing major historical events to show an understanding of continuity, change and causation.

WORKING PORT TOURS

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NESA CURRICULUM AREA: STAGE 4		
	RELEVANT COURSE CONTENT	**INSIDE INDUSTRY TOUR CONTRIBUTION**
Work Education	• Work Education provides students with opportunities to develop knowledge, understanding and skills regarding the world of work including an awareness of work readiness and employer expectations, the roles and purpose of a range of sectors including education, training and employment organisations and an appreciation of the role of lifelong learning in planning and managing pathways.	• From the knowledge gained on the Tour of the Port, understand more regarding a range of work-related issues. • For example, employment trends and participation rates, employability skills, which include teamwork, communication skills, ICTs, and problem solving. • Consider enterprise skills including taking the initiative in workplace contexts and assist in students learning to plan and manage their own pathways including the range of life transitions. • List the many occupations/trades and roles engaged at the steelworks/port. It would be useful to profile less obvious roles and the roles of women in the workplaces. • Illustrating the many educational pathways that lead to employment and promote cadetships/scholarships
Creative Arts **Photographic and Digital Media**	• Photographic and Digital Media provides opportunities for students to enjoy making and studying a range of photographic and digital media works. • It enables students to represent their ideas and interests about the world, to engage in contemporary forms of communication and understand and write about their contemporary world.	• Special arrangements can be made to undertake photo-shoots whilst on the tour of the Port and the spectacular views. • This will assist in contributing to Students' Photographic and Digital Media portfolio. • Students could develop their research skills, approaches to experimentation and how to make informed personal choices and judgements - prior to the Tour. • Students should be encouraged to record procedures and activities about their making practice in their Photographic and Digital Media journal.
Visual Arts	• Visual Arts provides opportunities for students to enjoy the making and studying of art. • It builds an understanding of the role of art in all forms of media, both in the contemporary and historical world, and enables students to represent their ideas and interests in artworks. • Visual Arts enables students to become informed about, understand and write about their contemporary world.	• Special arrangements can be made to undertake photo-shoots whilst on the tour of the Port and the spectacular views, to use in creating personal artworks. • Students could be encouraged to use their research skills, approaches to experimentation and how to make informed personal choices and judgements - prior to the tour. • Students should be encouraged to record procedures and activities about their artmaking practice in their Visual Arts diary.

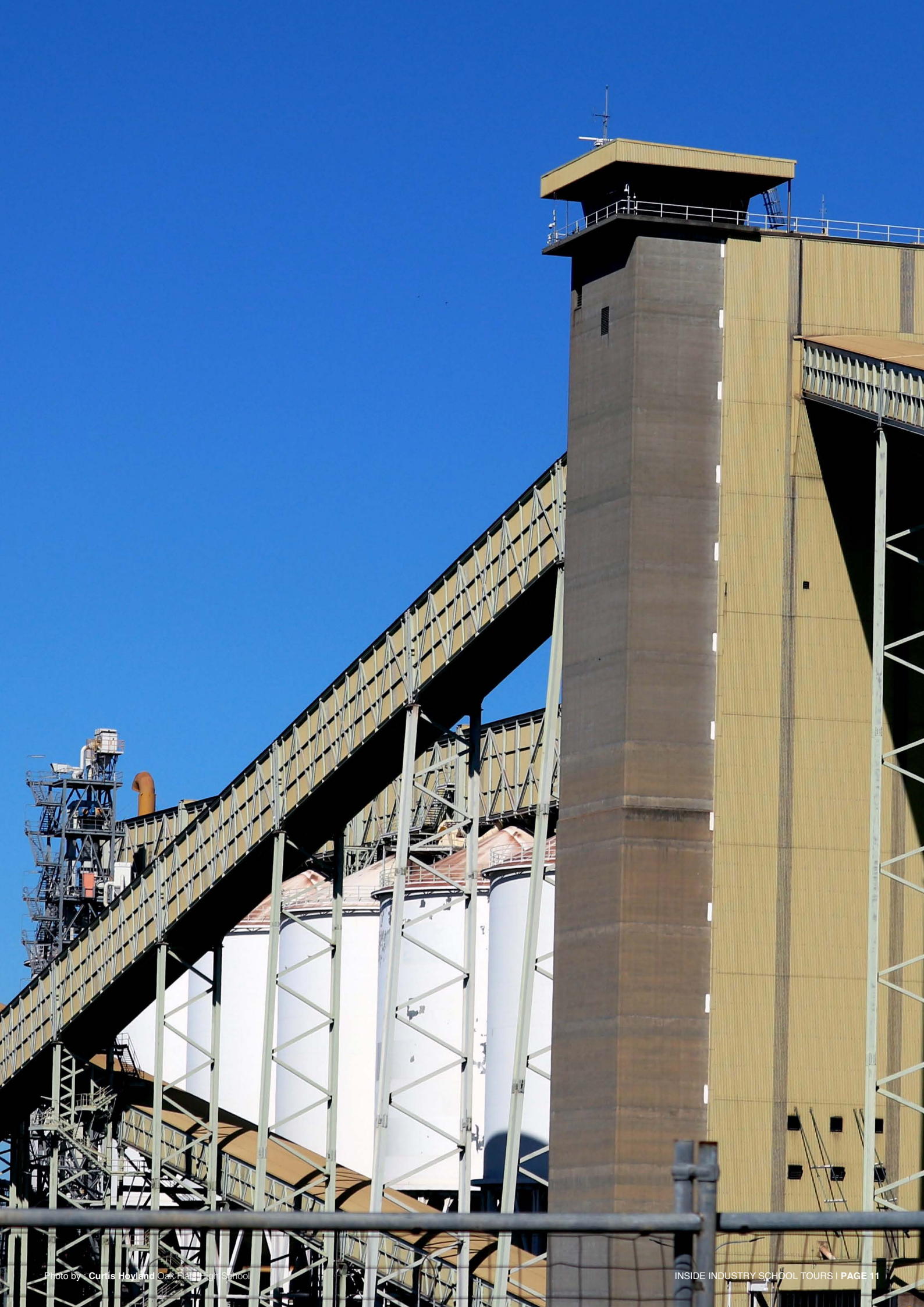

Photo by : **Curtis Hovland** Oak Park High School

BOOKINGS

insideindustry.org.au

A: Visitor Centre - Northgate Entrance,
Springhill Road, Coniston NSW 2521

P: (02) 4275 7023

E: admin@insideindustry.org.au

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Note: Australia's Industry World is a working industrial precinct. Tours may be altered to meet safety and process requirements.

The photography used throughout this brochure was proudly provided by the Students of Oak Flats High School.