TOPICS

- The birth of Australia’s automotive industry
- The impact of the Great Depression on farming families
- The invention of the first ute, the Ford V8 Coupe Utility
- Incorporating aesthetics and durability into design
- The first appreciation of automotive design in Australia
- The impact of automotive design on Australian society

BACKGROUND

Vast distances and isolated towns created a high demand for cars in Australia at the turn of the 20th century. The car industry though, was based in Europe and very few Australians could afford imported vehicles. In 1901, the Australian automotive industry was born when Harley Tarrant produced the first petrol-driven car on the continent. The industry began to accelerate in 1925 after Ford set up a factory in Geelong to assemble their famous Model-Ts. These pickup trucks quickly became essential farm machinery.

In 1931, The Great Depression severely affected rural Australia. With unemployment higher than ever, most farmers could only secure bank loans limited to work vehicles and equipment. Many families had no choice but to use their uncomfortable pickup trucks for everything. So, Ford’s chief designer at the time was requested to make a vehicle that was suitable for taking the wife to church on Sunday, and the pigs to market on Monday. The chief designer’s name was Lewis Bandt.

Lewis Bandt had become the very first designer at Ford’s Geelong factory two years earlier at just nineteen years old. He had already completed an apprenticeship in car-body modification before that; was very passionate about cars; and was a gifted draftsman. He pioneered automotive design as an individually recognised discipline.
By combining a farm truck and a family car in 1934, Bandt created a compromise that suited everyone: the Ford Coupe Utility. He conjoined a comfortable cabin (for protecting passengers from weather) to a robust tray (for farm work). Due to being a one-piece stamping, he needed to reinforce the inside of the tray as well as incorporate various panels so it wouldn’t snap under a load.

The ute was such an immediate success that demand exceeded supply. Now considered an Australian icon, the ute has been popular nationwide for over 80 years.

**CURRICULUM POINTERS**

**ACTDEK040** Critically analyse factors, including social, ethical and sustainability considerations, that impact on designed solutions for global preferred futures and the complex design and production processes involved

**ACTDEK041** Explain how products, services and environments evolve with consideration of preferred futures and the impact of emerging technologies on design decisions

**ACTDEK046** Investigate and make judgments on how the characteristics and properties of materials, systems, components, tools and equipment can be combined to create designed solutions

**ACTDEP051** Evaluate design ideas, processes and solutions against comprehensive criteria for success recognising the need for sustainability

**DURATION**

60 minutes

**MATERIALS**

The Ute segment from Episode 4: Farm Smart [video]

[Go to Episode 4 segment timecode 16:20–26:09. Please note that this time code is only relevant when viewing the episode on demand.]

The Ute Recap Quiz (one A4 copy per student)
The Ute Recap Quiz Answer Sheet (one A4 copy for teacher)

**ACTIVITIES**

**Warm-up** (5 minutes)

1. Begin the lesson by asking students if they have a favourite car.
   (The answers don’t need to be extremely specific models.)
2. Ask the students to give one or more reasons for admiring that car.
3. Write these reasons on the board.

**Video** (15 minutes)

Hand out a copy of the Recap Quiz to each student.

View the Ute segment from Episode 4: Farm Smart.

Give students five minutes to complete the quiz before going through the answers as a class.
Class discussion (10 minutes)
Follow on from the video with a class discussion that you draw on the board as a mind map. Ask students to suggest factors that can create consumer desire or demand for a product. Aim to fill the mind map with some of the following factors:

1. Practicality (how useful the product is)
   - functionality (what it can be used for)
   - effectiveness (how well it does the job)
   - efficiency (how quickly it does the job)
   - convenience (how easy it is to use)

2. Affordability (how financially viable the product is)
   - consumer buying power
   - cost of production
   - cost of promotion
   - need for investment
   - potential cost of faulty manufacturing for seller
   - expected cost of maintenance for buyers

3. Marketing (how the product is promoted)
   - advertising campaign
   - branding of the product
   - public perception of seller
   - special offers
   - updates and improvements of the product

4. Durability (how well the product ages)
   - reliability (how consistently it performs)
   - longevity (its lifespan)
   - quality (how easily it can be broken)
   - reparability (how easily it can be fixed)

5. Aesthetics (how appealing the product is)
   - overall style
   - visual beauty
   - physical textures
   - aromas
   - sounds
   - comfort.

Finish the discussion by pointing out that the ute owes much of its early success to how well Bandt managed to address both practicality and aesthetics in the product design.
**Product review task** (30 minutes)
Ask students to recall, and/or research online, another product that owes its success to both practicality and aesthetics.

Ask students to compile a review of the product that includes:
- a diagram that shows practicality OR an illustration that shows beauty
- a paragraph that reviews the practicality of the product
- a paragraph that reviews the aesthetics of the product.

Display student reviews on classroom walls.

**HOMEWORK ASSIGNMENT**
Please see the complementary Extra Activities for this lesson to assign homework based on other segments from Episode 4: *Farm Smart*.

**LEARNING OUTCOMES**

**ACTDEK040**
Students will have critically analysed social considerations that impacted on the designed solution that led to the invention of the ute.

**ACTDEK041**
Students will have explained how a product of their choosing has evolved with consideration of preferred futures.

**ACTDEK046**
Students will have investigated and made judgements on the combination of two different types of vehicles that created the ute.

**ACTDEP051**
Students will have evaluated design solutions against comprehensive criteria based on practicality and aesthetics.
EPISODE 4: FARM SMART
STUMP JUMP PLOUGH

EXTRA ACTIVITIES

Design and Technologies
Years 9–10

INVENTION: STUMP JUMP PLOUGH
INVENTORS: RICHARD AND CLARENCE BOWYER SMITH
YEAR: 1876

TASK
Make and explain a decision in the form of an essay.

MATERIALS
• Internet access
• Pen and paper OR word processing program/application (e.g. Microsoft Word)

INSTRUCTIONS
Watch the Stump Jump Plough segment from Episode 4: Farm Smart.
[Go to Episode 4 segment timecode 26:11 – 36:46. Please note that this time code is only relevant when viewing the episode on demand.]

Imagine that you were in charge of deciding who invented the stump jump plough. Who would you choose?

Your options are:
• Richard Smith
• Clarence Smith
• Richard and Clarence Smith
• Someone else?

Explain your decision in a short essay of no more than one page.
1. Why was Ford asked in 1932 to make a vehicle suitable for both a wife and pigs?

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2. Who invented the Ford V8 Coupe Utility in 1934?

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3. What was/were the requirement/s that the design needed to meet?

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4. Why did the inventor reinforce the inside of the tray and incorporate extra panels?

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5. How did people react to the ute when it was invented?

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6. What legacy has this invention left us?

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1. In 1932, why was Ford asked to make a vehicle suitable for both a wife and pigs?
The Great Depression forced families to survive with one car.

2. Who invented the Ford V8 Coupe Utility in 1934?
Lew Bandt

3. What was/were the requirement/s that the design needed to meet?
Protection from weather for passengers.
A one-piece stamping from doors to rear tailgate.
A durable tray for farm work.

4. Why did the inventor reinforce the inside of the tray and incorporate extra panels?
One-piece stampings can suffer stress fractures and snap under a heavy load.

5. How did people react to the ute when it was invented?
Demand soon exceeded supply.

6. What legacy has this invention left us?
An Australian national icon that influenced the USA’s re-design of pick-up trucks, and a pride in the Australian automotive industry.