MATHS

SSEP EXAMPLE // TRANSPORT & LOGISTICS
DEVELOPED BY // MATAMATA COLLEGE AND J SWAP

ACTIVITY EXAMPLE

KEY WORDS

Number | decimals | valuations | calculations | measurement | volume | mass | density | time | width | length | depth | area | perimeter | logistics

ALSO USEFUL FOR

Business studies | Economics | Agriculture | Agribusiness | Science

PROGRAMME OUTLINE

3 POINTS OF CONTACT

- J Swap staff come into classroom (x2)
- Workplace visit (x1)

EXAMPLE

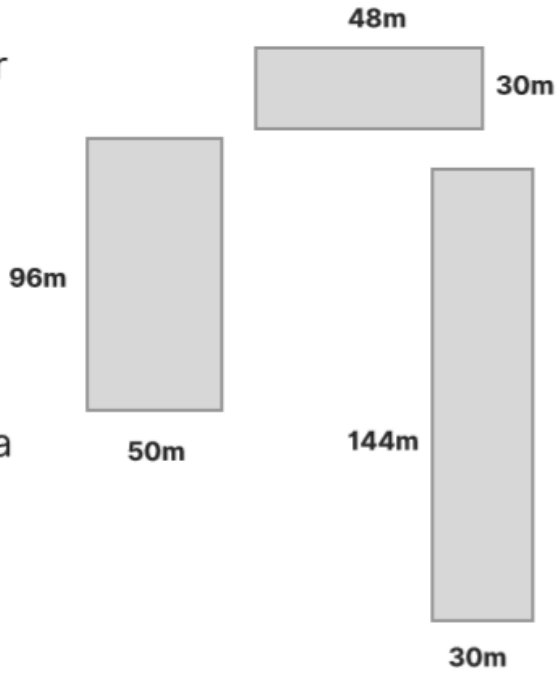
1. J Swap come into classroom, introduce themselves, background to stock food and logistics, their careers and how maths is used in the industry.
2. Workplace visit includes tour of the business, meeting staff and hearing about different careers. Seeing the organisation 'behind the scenes'.
3. Back in the classroom. Student Activity: Bulk Store activities



For more on SSEP see:
www.smartnz.nz

Matamata Bulk Stores

1. What is the combined perimeter of all the bulk stores?



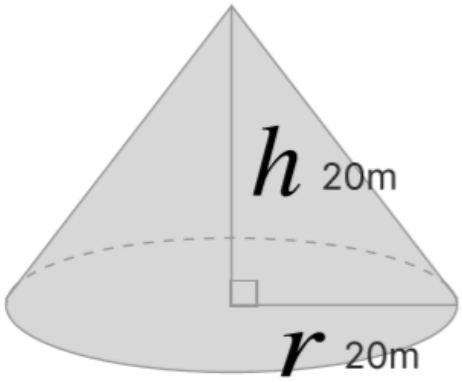
2. What is the combined floor area of all the bulk stores in m^2?

3. What is the combined floor area of all the bulk stores in hectares?

4. If all the buildings are 6m high what is the combined volume of all the bulk stores in m^3?

Palm Kernel Pile

$$V=\pi r^2 \frac{h}{3}$$



1. What is the volume of palm kernel in m^3?

2. What is the volume of palm kernel in litres?

$$m=pV$$

3. What is the mass (weight) of the cone of Palm Kernel in tonnes?

p Density

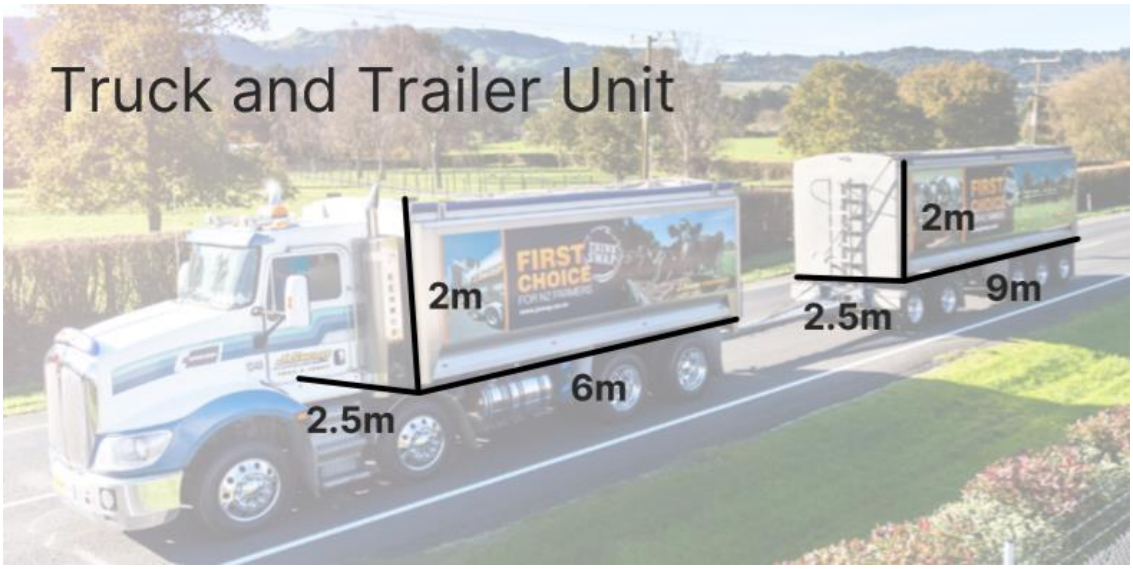
Palm Kernel = 0.75
Water = 1.00
GAP40 = 1.60

$$d=\frac{m}{r}$$

r Production rate

900 tonnes per day

4. How long did it take to produce this pile of Palm Kernel?



1. What is the volume this unit can transport?

$$m=pV$$

p Density

Palm Kernel = 0.75
Water = 1.00
GAP40 = 1.60

2. How many tonnes of Palm Kernel can this unit transport?

3. How many tonnes of GAP40 can this unit transport?

4. The maximum we can carry is 30 tonnes, how full a load of GAP 40 can we carry as a percentage?

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