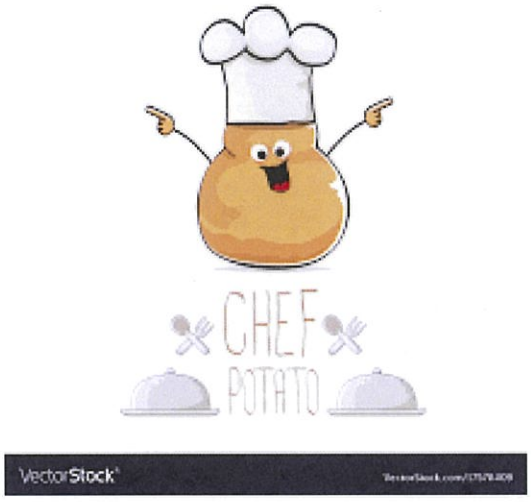
9/10 FOOD TECH
STAY AT HOME WORK
Term 3 Week 8



Google classroom code: i3vodgz

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INSTRUCTIONS

Packaging

- ☐ Read through the information on Packaging types – Paper and cardboard, Plastic, Glass and Metal.
- ☐ For each type, come up with examples of foods that are packaged in that material.
- ☐ Complete the *Apply your learning* activity.
- ☐ Have a go at the *Research activity – Milk packaging*. I have also put this on the Google Classroom in case you want to access the links.

As you've probably heard, your assessments have been placed on hold. If you want to continue working on our task you are welcome to, hopefully we'll get to cook the desserts at some point. But there is no longer a requirement to complete this task from home.

Please contact me if you need any help at all!

Paper and Cardboard

Paper is an inexpensive form of packaging. It is easy to make and store, and it is lightweight. Depending on the contents, paper is fully recyclable and biodegradable. Paper packages may have grease-proofing added because it offers a barrier to odour and moisture. Wax paper is odourless, tasteless, non-toxic and inert.
Many other products are also packaged in boxes.
Cardboard boxes are used for breakfast cereals.
Paper is used for sugar.

Can you think of three (3) others for each?

Plastic

Plastic is a popular form of packaging, with many different types available for use. Natural gas, oil, salt and coal are the main raw products used to make plastic packaging.
Plastic has many advantages. It is lightweight, not as easily broken, and a variety of shapes may be made from plastic as it can be moulded.
Environmentally, plastics are considered to be the least favourable packaging and are non-biodegradable. Improved technology has resulted in a few plastics now being made that are biodegradable. Plastics may be recycled but only small percentages are recycled at present.

Can you think of three (3) types of plastic packaging?

Glass

Glass is a traditional form of packaging. It is an excellent form of packaging as it does not react with foods or beverages, unlike some other forms of packaging. Glass often has resealable lids, and remaining contents can be stored in the same container. One concern is that it is extremely breakable.
Glass is also not biodegradable, but it is fully recyclable.

GLASS is

Chemically inert	Non-porous
Odourless, hygienic	Strong
Easy to open and reseal	Allows long-term storage
Recyclable	Variety of shapes, sizes and colours
Contains liquid and solid foods	Usually transparent for inspection

Glass is delivered to factories in bulk on pallets which is cost effective.
Cleaning is done by blowing or washing. Care has to be taken in conveying glass in factory to reduce damage or breakage when filling. Sealing is to either:

a) retain internal pressure, e.g. carbonated drinks
b) maintain a vacuum, e.g. baby food
c) secure contents, e.g. vegemite.

After sealing, products may be heated, pasteurised or sterilised, and then a label is stuck or glued on.

Metal

Aluminium, steel and tin are the three main metals used for packaging. Aluminium is used for soft drinks. Steel cans are stronger and more expensive. Most metal packaging is recyclable.
Metal is one of the cheapest and most widely used forms of packaging.

Cans provide:

- good protection
- moisture retention
- high speed production
- long storage time
- use for liquids and solids
- an airtight seal
- easy handling
- easy stacking
- unbreakable

Tin plate and steel cans are used more for solids and semi-solids.

Steel cans are coated with tin plate to stop the steel reacting with food. The thickness of the tin plate depends on the acidity of the food. The more acidic, the thicker the tin plate. Dented cans may have a broken tin plate layer and can cause food to go bad. Dented cans should be avoided.

Apply your learning

Which form(s) of packaging would be the most appropriate for the following food products?

- Bread
- Baby food
- Choc-chip biscuits
- Soft drink
- Shredded cheese
- Diced tomatoes

Research Activity - Milk Packaging

Investigate the way milk has been packaged over the last 100 years.

Prepare a visual timeline presentation outlining:

- Description of packaging
- Picture/diagram of packaging
- Factors influencing changes in packaging
- Your opinion on whether these developments where improvements

You can use PowerPoint or Google slides to display your presentation

Some Useful sites

http://www.dairyfarmers.com.au/

https://australianfoodtimeline.com.au/milk-cartons/

About tetra paks

http://www.tetrapak.com/about_tetra_pak/the_company/history/Pages/default.aspx