Design Course

Bio-inspired Packaging Design

Designs in Innovative Packaging

by
Mr. Susanth C. S.
NID, Bengaluru

Source:
https://www.dsource.in/course/bio-inspired-packaging-design

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Source:
https://www.dsource.in/course/bio-inspired-packaging-design/introduction

Introduction

Aim of the Course:
The course aims to understand and necessitate the various aspects of packaging to display pertaining to retail students.

The objective is to assimilate the following:

- To understanding basics of packaging.
- To study different types and methods of packing for different products.
- To understand the environment of retail store in terms of packaging and display.
- To study/understand consumer behaviour in retail store.
- To understand and analyse packaging in nature (fruits, vegetables, nuts, trees etc.) anything that inspires in terms of form, function and arrangement/construction.
- To apply the bio-inspired designs in developing innovative packaging studying the current trends.

Introduction:
Nature's packing techniques are the best way to understand the meaning of packaging. Packaging was restricted to hollowing out of a gourd or drying of an animal fur in early days, due to the demand of products to ship to other cities, technologists realised and started using different materials like paper, wood, glass, iron, aluminium and other metals for packing, which would increase the life of a product. Businessman found the potential of packed food that sealing food in tin would extend the life of a product if it had their name on it and material scientists innovated various materials based on the type of product. [1]

Today, thousands of materials and techniques available in packing the products to increase the life, however technologists and designers are working on innovative methods of packing, forms and labelling the pack. Package design must suggest the product it contains or the audience it is meant for. Design idea should make a connection with consumer on either a logical or an emotional level.

The packaging of any product starts by understanding the product i.e. its properties and behaviour towards packing material. Appropriate package materials always add value (decrease or increase cost) value appealing with tactile interest and decrease (or increase) environmental impact.

Glass, Metal (Tin, Aluminium and Stainless Steel), Plastic, Cardboard and Wrappers are the common materials, among all glass and metal are the oldest used in packaging.

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Source:
https://www.dsource.in/course/bio-inspired-packaging-design/glass

Glass

Glass is one of the oldest material used in packaging. Below are the reasons glass is chosen for packaging.

- Glass is a heavy packaging material, chosen for its strength and clean appearance.
- It is used for categories like pharmaceuticals, food and beauty products.
- Highly sustainable and impervious to market volatility of oil based products.
- 100% recyclable.
- Form can be customized according to budget, available in variety of colours and surface finish can alter by using different manufacturing process.
- Labelling can be done by different methods (paper label, etching, screen printing) and can explore textured glass surface on by frosting or sandblasting.

Glass bottle to store Beverages like Liquor
Image Source: *Design Secrets: Packaging*

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Metal

Like Glass, **Metal** is also one of the oldest material used in packaging. Below are the reasons for choosing Metal for packaging of the products.

- Metal, which is widely used in groceries for decades, can give a minimum shelf life of three years.
- It is renewable recyclable with same quality and robust to protect during transportation.
- Tin, Aluminium and Stainless Steel are used in packaging food against contaminants.
- Food grade steel is used for vacuum packing foods like vegetables, milk, fish, fruits and fish.
- Aluminium is used to pack beer, soda, carbonated beverages, deodorant, cooking utensils and spray paint.
- Labelling can be done on surface using paper, screen printing and punching.
- Form can be customised accordingly.

Aluminium can to store Perfume
Image Source: *Packaging Essentials*

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Source:
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Plastic

Plastic - A modern packaging material which is widely accepted in the industry. Below are the reasons plastic is chosen for packaging.

- It is recyclable, lightweight and can be easily moulded to any form.
- Polystyrene, clear plastic blister pack, Polyvinyl chloride (PVC) and clamshell-plastic are commonly used plastics for packaging.
- Also, labelling can be done by different methods (paper label, screen printing) and can explore textured surface by different manufacturing process.

Plastic bottle to store Beverages
Image Source: *Packaging Essentials*

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Cardboard

Cardboard can be chosen for packaging for following reasons:
• Cardboard is ideal for fine, upscale, coarse, outer, freezer and utility or highly designed packaging.
• Labelling can be done by different methods (paper label, screen printing) and can explore textured surface by different manufacturing process.
• Form exploration is limited to geometric shapes.

Cardboard Box to store Chocolates
Image Source: *Packaging Essentials*

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Source:
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Wrappers

Wrappers are extracted from plastic, aluminium foil and paper available in rolls and sheets. They allow buyers to get close to the product, can experience its weight and interact with its shape and size in hand. Also, they are visually versatile and supports printing with a multitude of textures.

Wrappers to store products like chocolate, creams etc.
Image Source: *Packaging Essentials*

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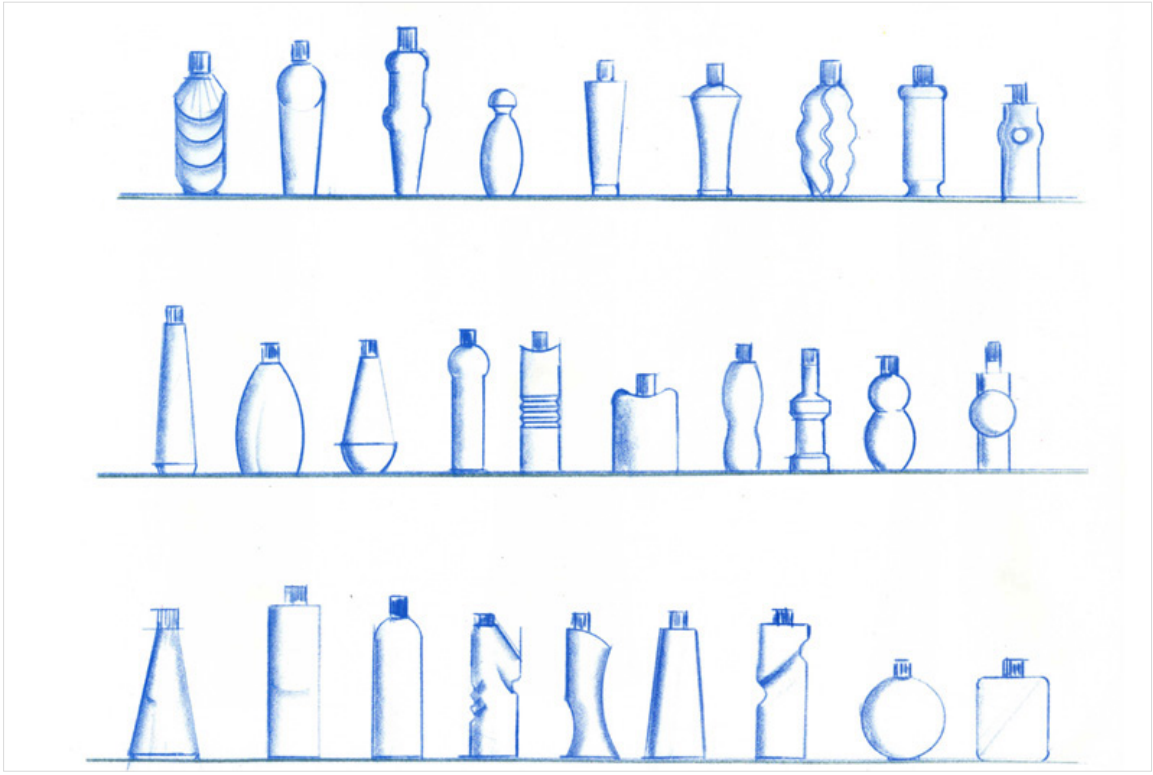

From exploration in Sheet/Rolls material to store products like Toothpaste, Facial cream, Shampoo.
Image Source: *Design Secrets: Packaging*

Packaging facility manifests the brand value of the product which mediates between the consumers' perception of the product and the internal essence of the product. In modern times, the consumer awareness level and his importance in the market is increasing regularly. Against this development 'Packaging' is considered the living embodiment of a brands value, personality and its market credibility. Packaging is always responsive to the consumers' life style, worldview and his motivation and attitude to life.

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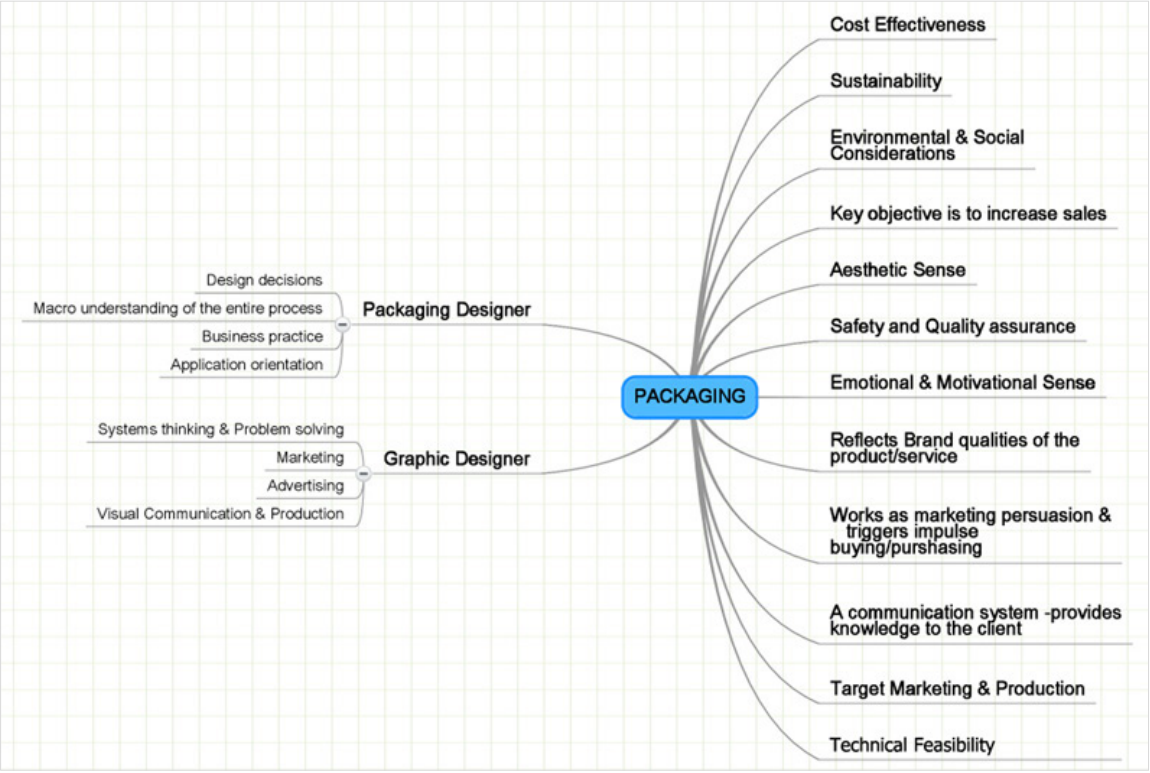

Overview of Packaging

The package needs to engage with the evidence. Every package to behave differently-it should make on a unique statement to the viewer. Packaging creates experience for the consumer. If the experience is good the brand value of the product increases. Colour, pattern, and photos are important for package design. Typography helps in creating tone and personality of the product. Packing provides a packaging also reflects the client's imagination and vision packaging is a powerful communication system which communicates information at various level-symbolic, iconic, indexical and pragmatic levels. The package design is complex and goes through an evolutionary process of various stages.

Through use of text, colour, and typography, package design offers creativity in immense varieties of ways. Good packaging provides right information in appropriate ways to the consumer. Good packaging design offered consumer education in appropriate ways.

Packaging design is a very important element in the marketing process. One of the key intentions of good

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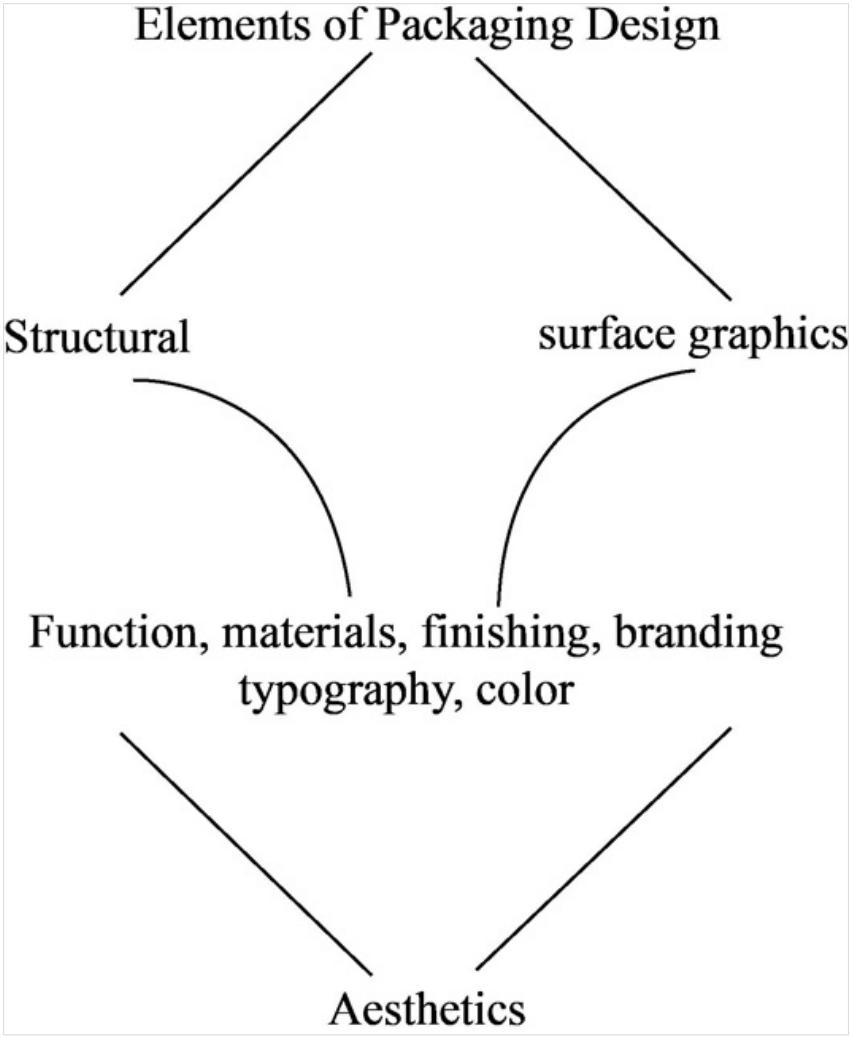
packaging is to enhance 'consumer experience' it acts as a persuasive mechanism trying to convince the consumers about the rational, emotional and practical reasons for which we should buy the product/service. Packaging gains its importance because of the rapid innovations in the modern relating practices. "Packaging dynamics" reflect consumer needs, requirements and preferences and acts as product differentiator.

"Packaging design' is a field of creative practice values environmental and sustainability issue.



Elements of Packaging

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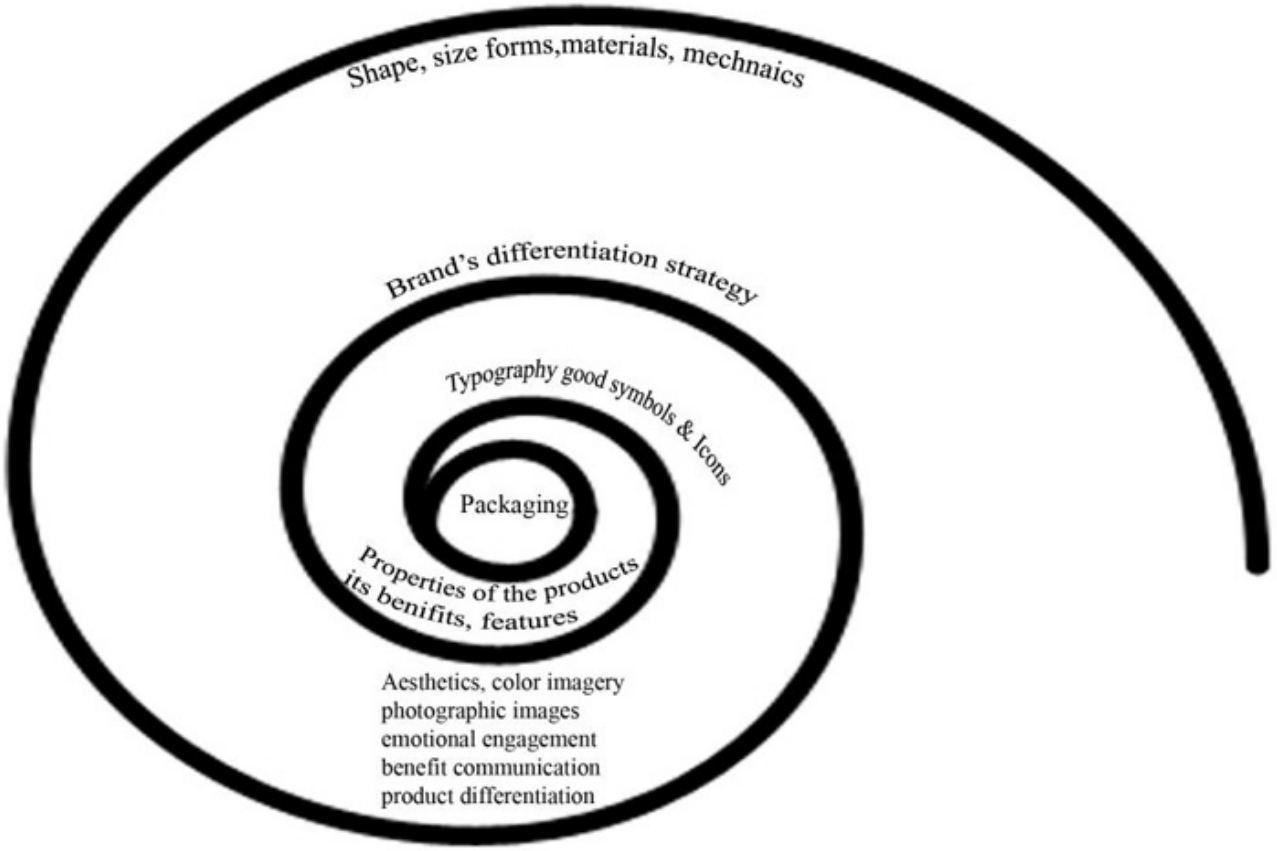
Type of Packaging

Primary, Secondary and Tertiary are the three types of packaging for a product. Taking toothpaste as example, the tube which envelops paste is primary(paste in direct contact and can be use directly), the box covers primary packaging is secondary (together) and the bulk handling box which holds both primary and secondary in a large numbers for shipping to warehouse is tertiary packaging.



Process of Packaging

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Source:
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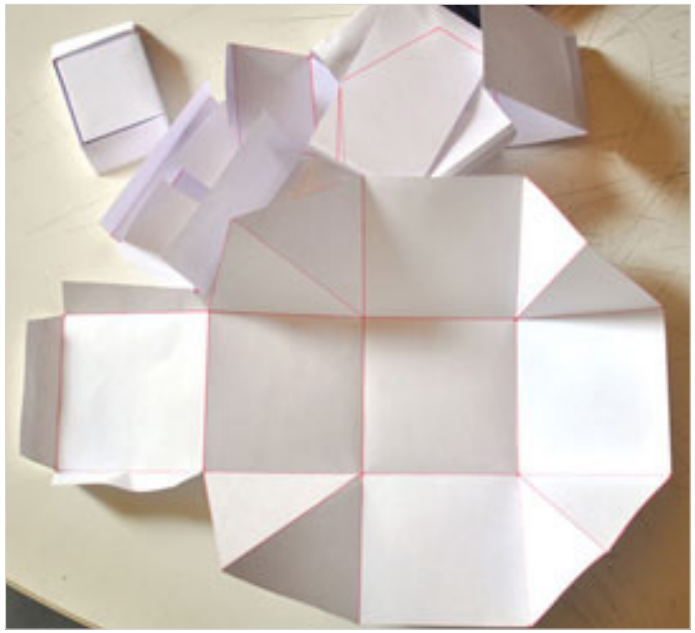
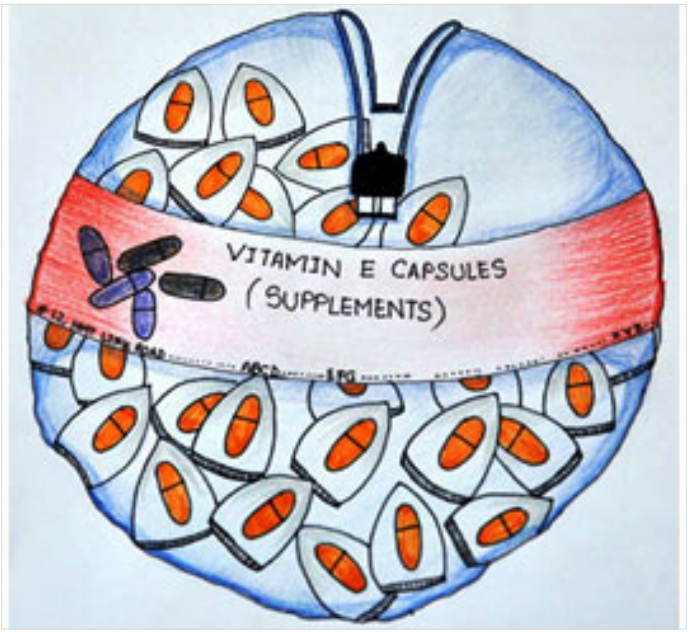
Assignment

Course Duration and Assignment:
The course duration is 2-3 weeks which has 2 assignments and the assignment is an individual work.

Egg Packaging

Packaging in Nature





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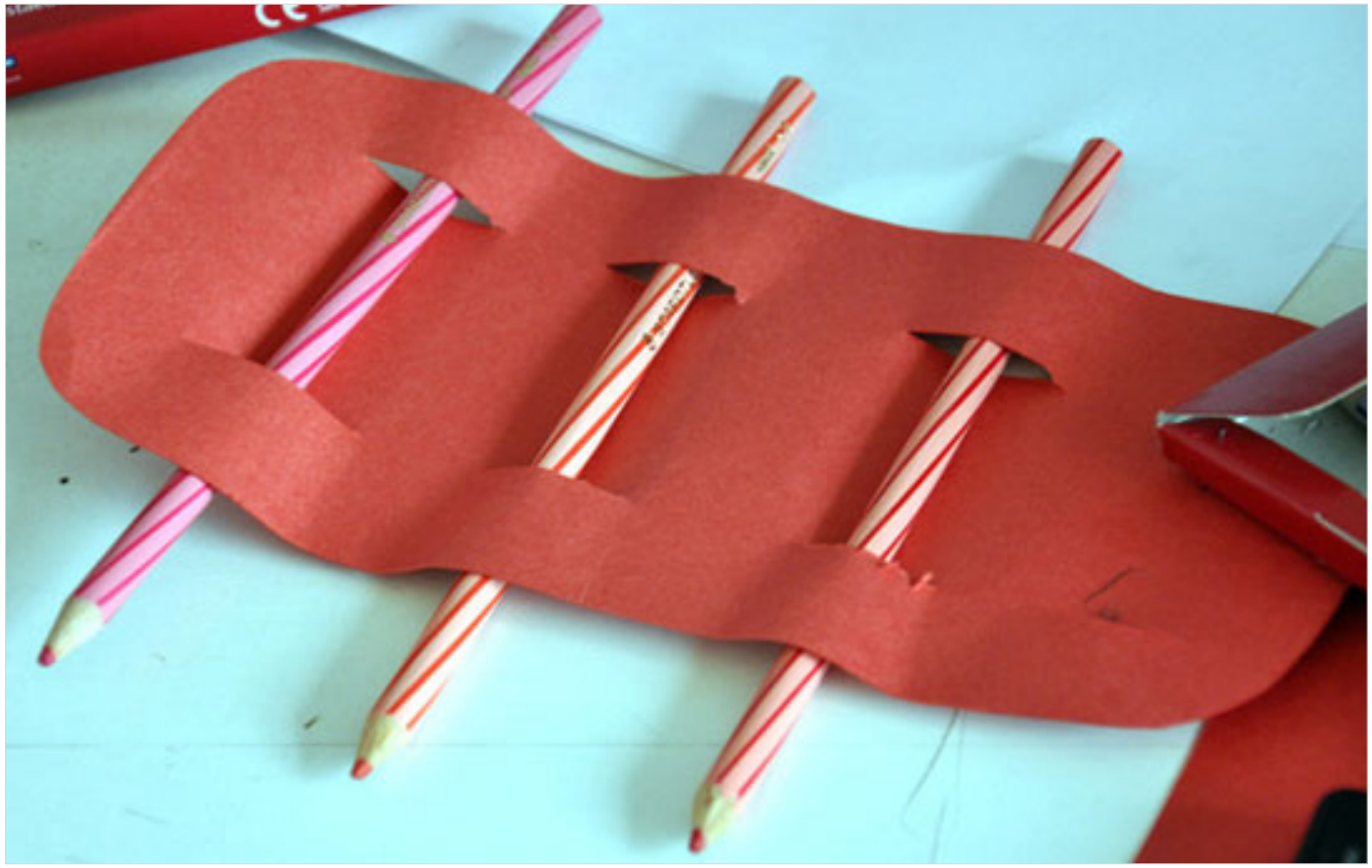

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Egg Packaging

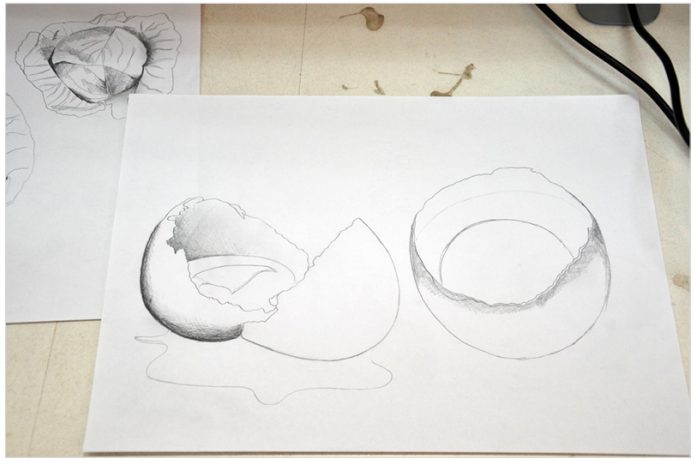
Assignment-1: Egg Packaging:

• A class room exercise for 1-2 days; an eye opener shows the importance of packaging and its techniques.

• The task is to design packaging for single egg and should not break when dropped from certain height (10-12 feet).

• Students individually work on packaging for egg by understanding and analyzing the form, surface and construction of outer shell.

• Placement (vertical or horizontal) of the product (egg) is important in the process of packaging, cardboard and thick papers are the materials used.



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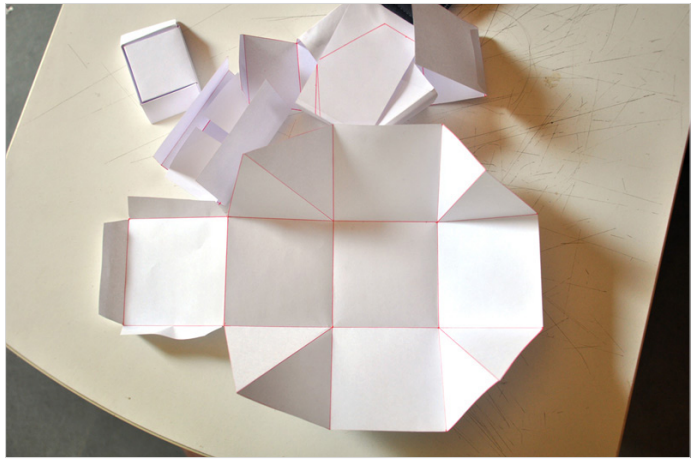

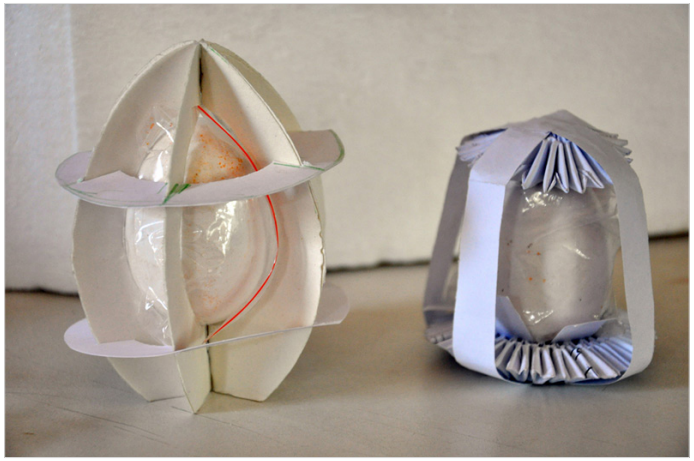

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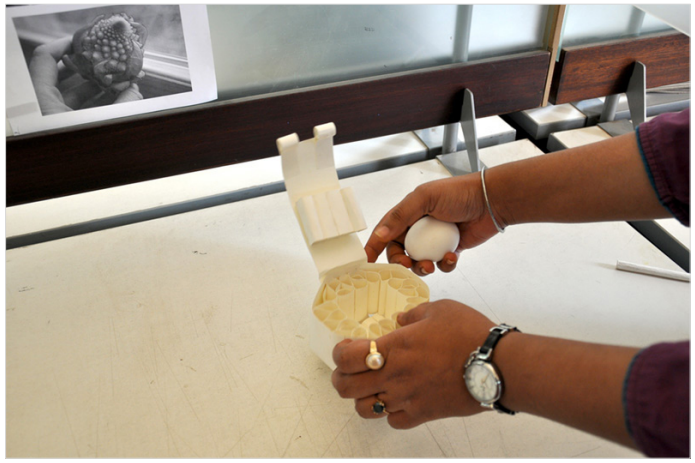

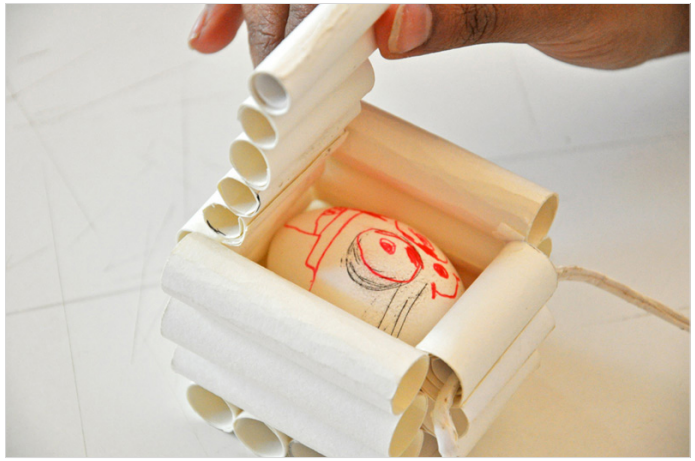

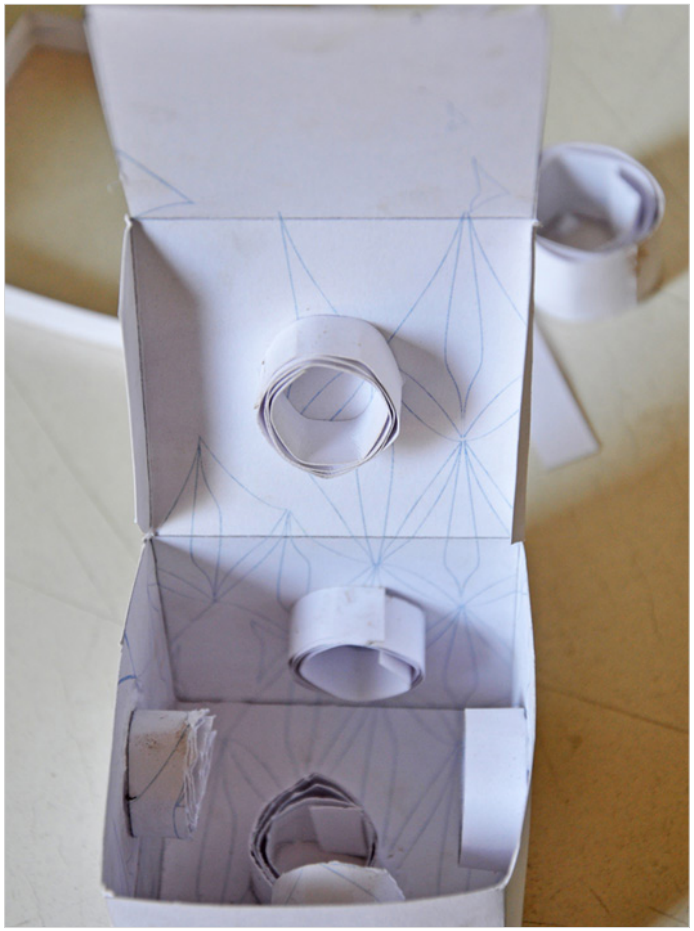

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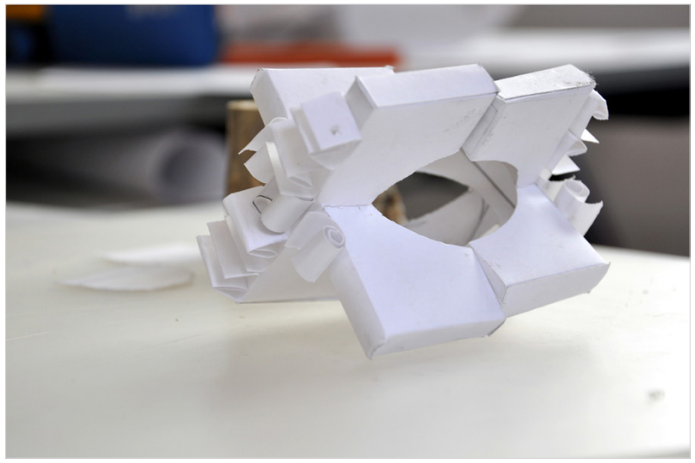

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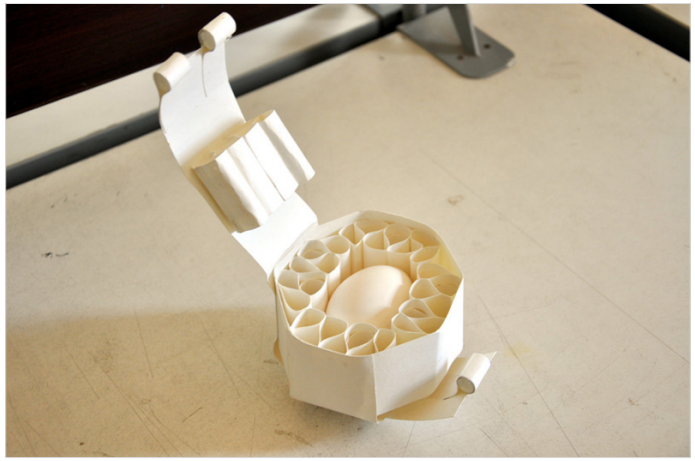

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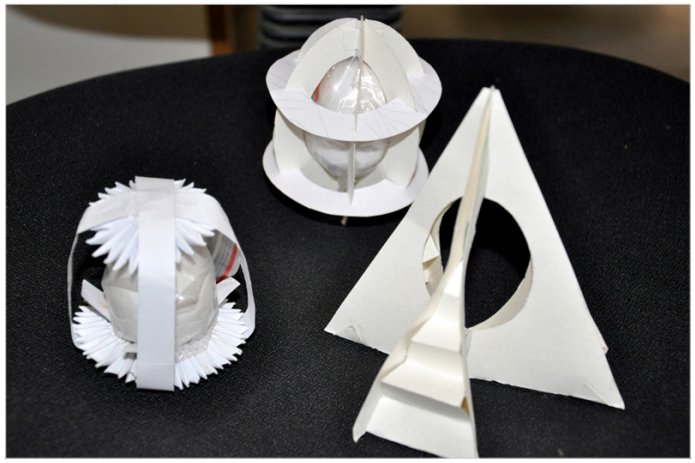

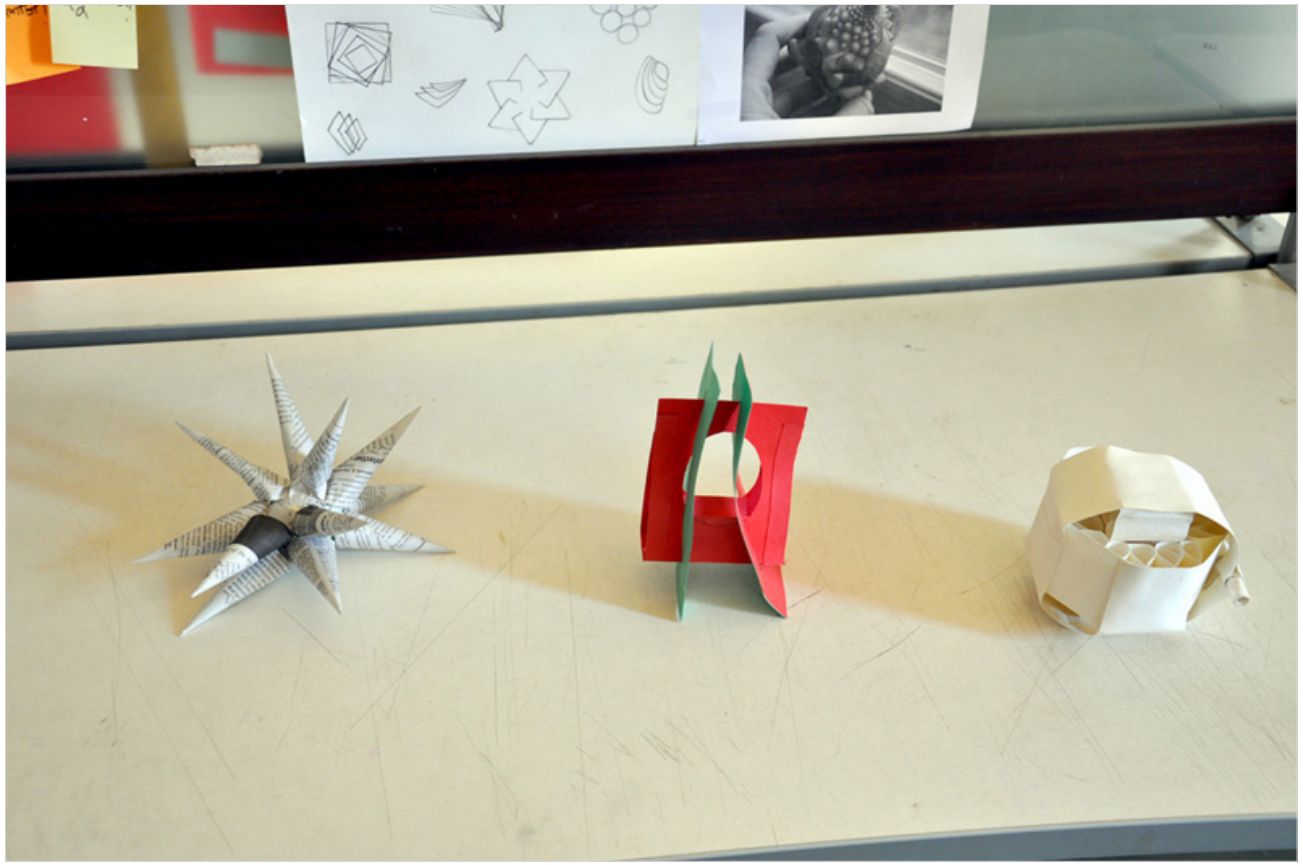

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Packaging in Nature

Assignment-2: Packaging in Nature:

• Students individually select anything from nature which inspires, understand and analyze the method of packaging in terms of form, function and arrangement/construction.

• By selecting any small product (handy) in the market (example: wrist watch) one has to apply the packaging technique studied from nature to the selected product in the market.

• During the exercise students also has to study/understand scenario in retail store and carefully observe the behaviour of consumer while buying a product.

It is one of the tough tasks to understand the decision-making processes of buyers, both individually and in groups. It studies characteristics of individual consumers such as demographics and behavioural variables in an attempt to understand people's wants. It also tries to assess influences on the consumer from groups such as family, friends, reference groups, and society in general.

Customer behaviour study is based on consumer buying behaviour, with the customer playing the three distinct roles of user, payer and buyer. Research has shown that consumer behaviour is difficult to predict.

• Based on the study each student has to work on innovative ideas of packaging for the selected product. The idea should emphasise on product – form/colour/display/information to attract the buyer among other products on the shelf. Branding is also part of packaging.

• The assignment is for 1-2 weeks.

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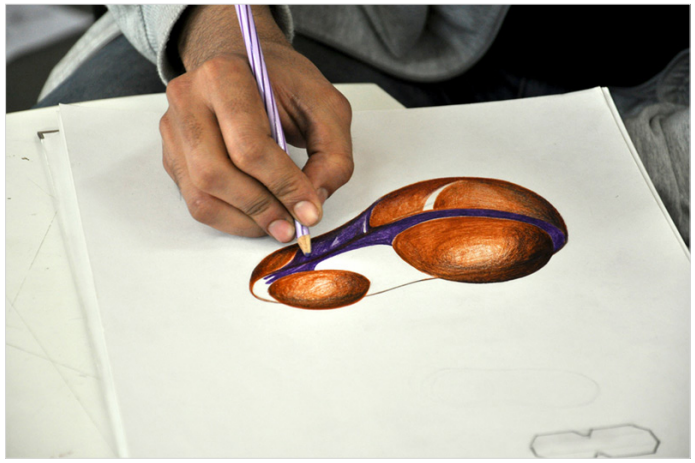

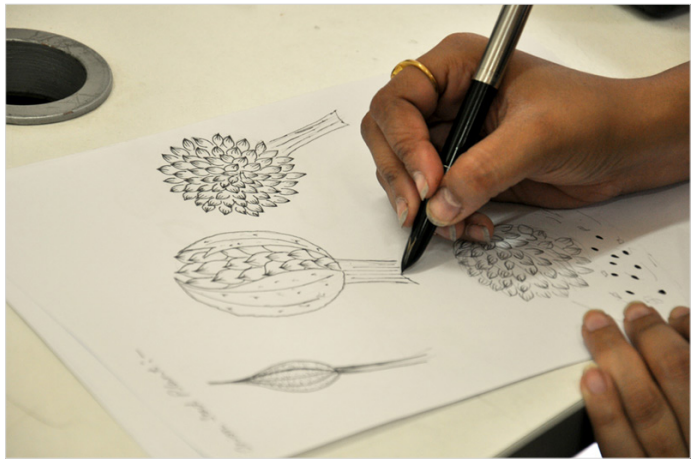

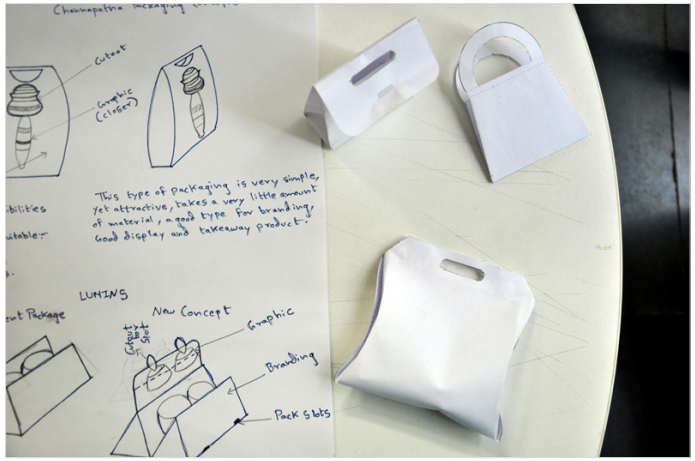

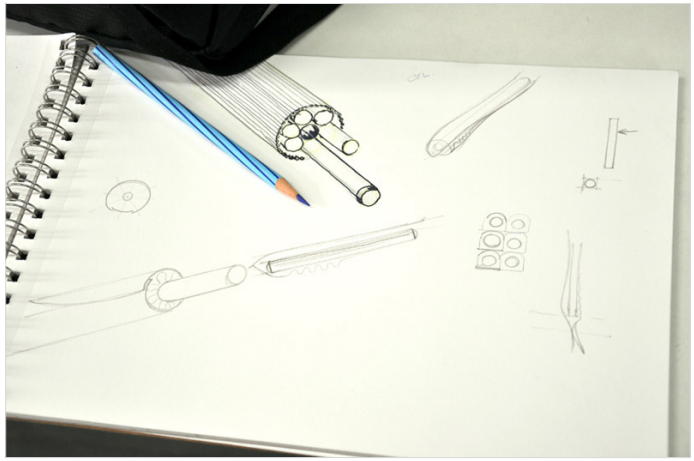

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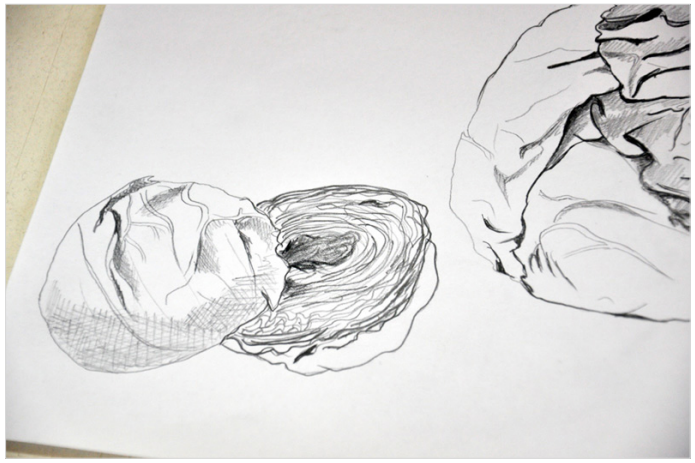

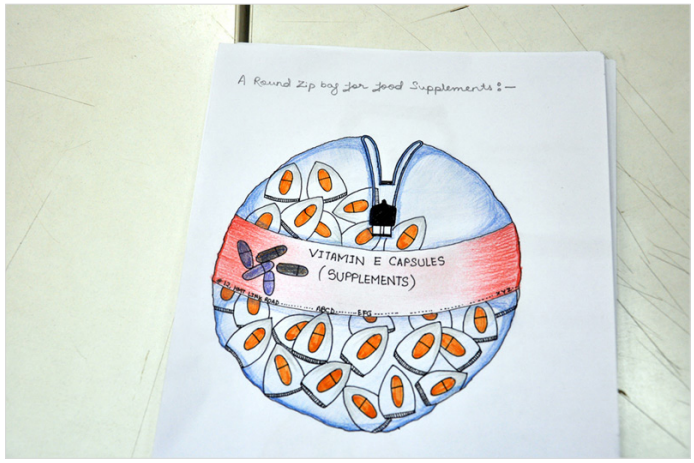

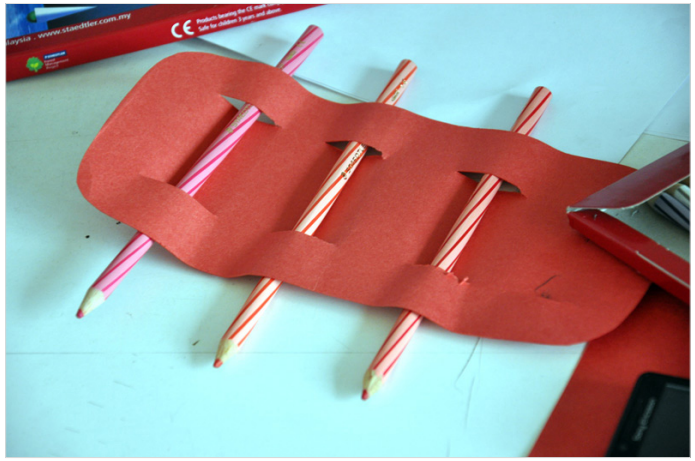

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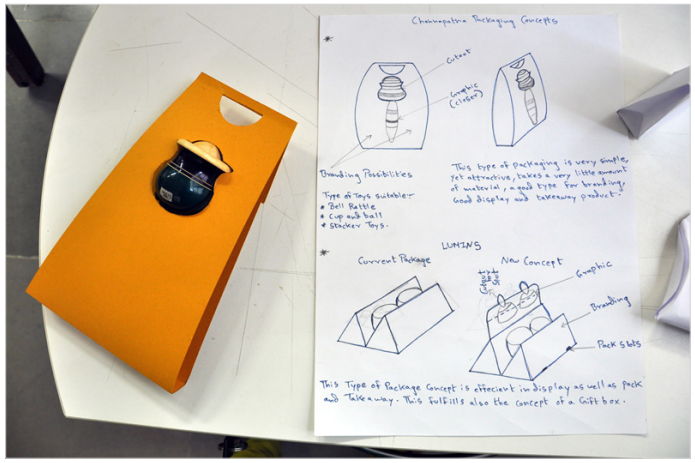

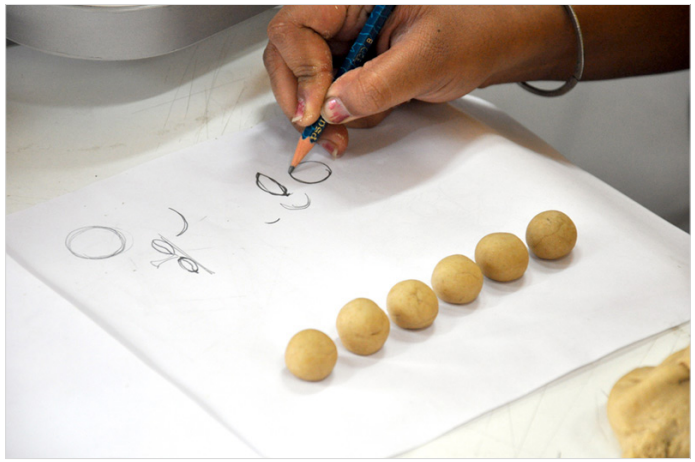

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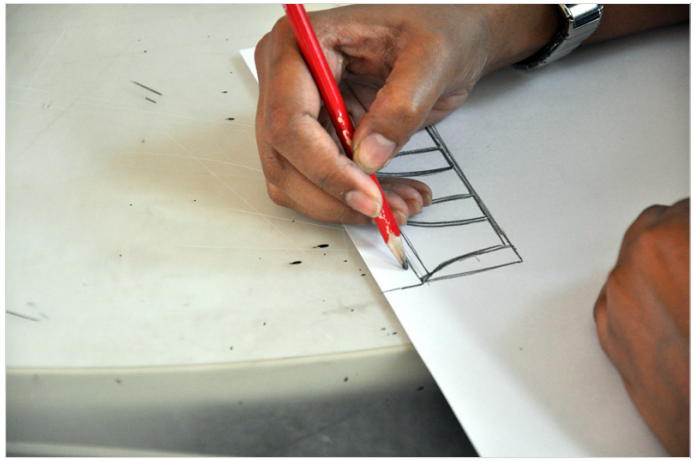

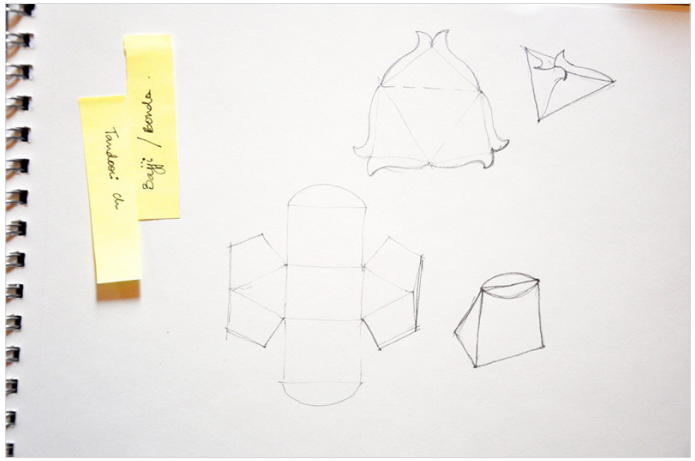

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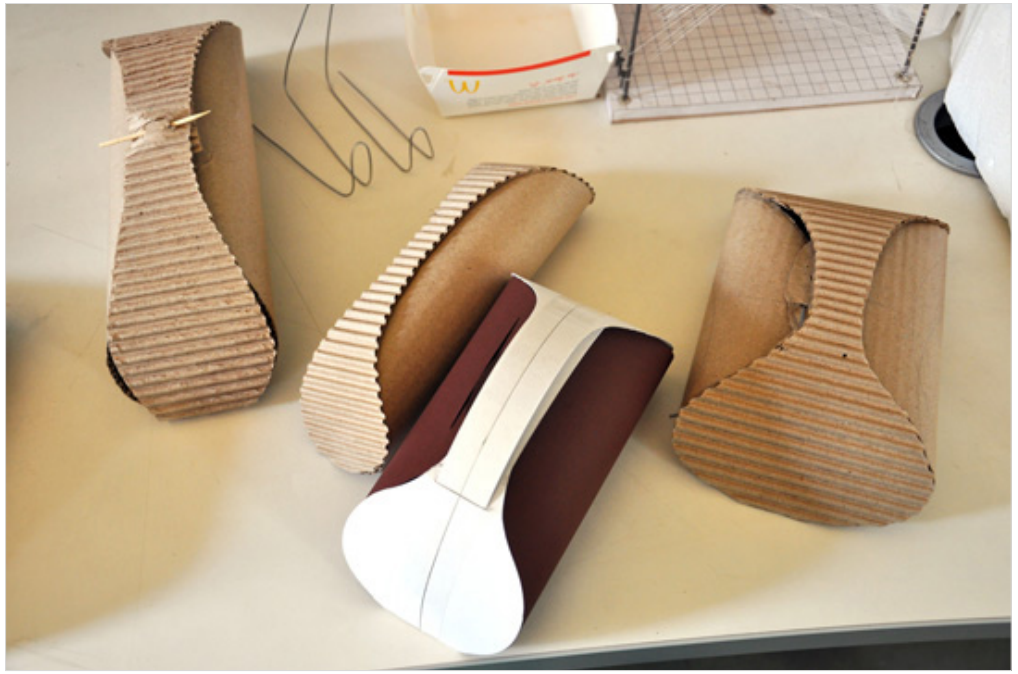

Design Course

Bio-inspired Packaging Design

Designs in Innovative Packaging
by
Mr. Susanth C. S.
NID, Bengaluru

Source:
https://www.dsource.in/course/bio-inspired-packaging-design/contact-details

Contact Details

This documentation for the course was done by Prof. Bibhudutta Baral and Mr. Susanth C. S. at NID, Bengaluru.

You can get in touch with
• Prof. Bibhudutta Baral at bibhudutta[at]nid.edu
• Mr. Susanth C. S. at cssusanth[at]nid.edu

You can write to the following address regarding suggestions and clarifications:

Helpdesk Details:
Co-ordinator
Project e-kalpa
R & D Campus
National Institute of Design
#12 HMT Link Road, Off Tumkur Road
Bengaluru 560 022
India

Phone: +91 80 2357 9054
Fax: +91 80 23373086
Email: dsource.in[at]gmail.com