Packaging Unit

Course: Engineer Design

Unit: Container Design and Construction

Topic: Packaging

Set Induction: Every day we see different types and styles of packages, but has anyone in this class ever wondered why the package is a certain color, shape, or texture, well the time has come to figure it out. You are going to make a package that is durable and appealing to the public eyes.

Objective: Students will be able to analyze various packaging techniques. They will be able to design a package to describe its contents and decorate the package with an original design. They will use pattern development techniques to design a package for a specified product and they will become aware of design techniques industry uses to draw people to their product. The students will be able to do this with 80% accuracy.

I. Introduction of the project

1.1. Work in groups of two

1.2. Nothing to do with sex, drugs, alcohol

1.3. Speaker from packaging field

II. Items that need to turned in

2.1. Company logo and name

2.2. At least five thumbnail sketches

2.3. Rough thumbnail sketch

2.4. At least four products laid out on a 18 X 24 sheet of paper

2.5. Diagram showing cut out and folded lines

2.6. Product ready to be assembled

2.7. Prototype (finished product)

III. Definitions and measurements

3.1. Define words for better understanding of project

3.2. Different calculations to measure packages

3.3. Putting measurements with correct type of package

IV. Presentation

4.1. Length of presentation

4.2. Format of presentation

4.3. Order groups will be presenting

Procedure:

1. Explain to the students that they will be working in groups of two. Tell them that the packages that they create will have nothing to do with sex, drugs, or alcohol. If the package has anything to do with these items listed, they will automatically fail. Tell the students that there will be a speaker from the packaging field here to talk to them and that they are going to try and help them get some ideas for a package

2. Explain to the students what they will have to turn in when the project is all completed. Tell them that they will have to come up with a company name and logo and they cannot use a name already being used. Tell them that they will have to turn in at least five thumbnail sketches and a rough sketch of their best thumbnail. Explain to the students that they will have to layout the package and dimension it so at four packages will fit on a 18 X 24 piece of paper. Tell them that they will have to have a diagram showing all lines that need to be cut out and folded. They will also need to show how the project is to be folded and a finish product.

3. Explain to the students a few of the key words that will help them when creating their package. Show the students a list of different calculations for measuring different shape packages and show them how to calculate them. Make sure that the students know what measurement goes with what type of package.

4. Explain to the students that they will have to give a presentation at the end of the project. Tell them that it has to be between three and five minutes in length and give them pointers on how to go about presenting their work to the class. Explain to the students that the order they will be presenting their package will have to do with what number they draw out of a hat.

Learning Activities:

Outside speaker

Analyze packages

Design a package for a product

Computer drafting

Layout techniques

Assessment:

Divide the students into groups of two and have the materials needed laying out on a desk in the front of the room for them to use. Have the students get every step of the project checked off by the teacher before moving on to the next step, do this to make sure they have everything needed for their presentation. Make sure all items are placed back in their proper spots at the end of the class

Resources:

Outside speaker

Various A.V. equipment

Assignment sheets

Examples of product container

Unit: Container Design and Construction

2-3 weeks

I. Objectives

The student should be able to:

A. Analyze various packaging techniques.
B. Identify fraudulent or deceptive packaging.
C. Design a package to describe its contents.
D. Decorate a package with an original design.
E. Use pattern development techniques to design a package for a specified product.
F. Become aware of design techniques industry uses to draw people to their product.

II. Activities

A. Outside speaker.
B. Instructor will provide various packages as examples of package construction.
   1. Analyze packages of the following;
      a. color
      b. shape and form
      c. texture
      d. function and durability
C. Each student will research packages that they feel are deceptive. If the students discover a fraudulent packaging procedure (false weight, misrepresenting the contents, etc.) they can write to the Federal Trade Commission, 633 Indiana Avenue, N.W., Washington, D.C. 20580.
D. Each student will prepare sketches to transfer to a standard container so as to please a potential buyer.
E. Each student will use layout techniques and message analysis to create a suitable package design.
   1. Design a package for a product. The package and art work must be original.
   2. Prepare at least five thumbnail sketches to decide which is best for your package.
   3. Prepare a rough layout from your best thumbnail. Green drafting paper, size cannot exceed 18 X 24. Instructor and student will determine which thumbnail should be used.
   4. Using good layout techniques, prepare a comprehensive layout of your package. This should include all typestyles, colors and paper choices you feel will look best on your package. This is a hand-rendered layout with a cover sheet to indicate specifications.

5. Prepare a prototype of your package. Use type, colors and paper as indicated on your comprehensive.

Helpful Hints:

1. Identify your consumer.
2. Choose colors and typestyles that will appeal to your consumer.
3. Browse through the aisles of a grocery store to gather ideas . . . look through cabinets . . . look in catalogs . . . brainstorm ideas.
4. Above all, be CREATIVE!!!!

III. Material and Equipment

A. Paper and railroad board (white)
B. Contact Cement
C. Permanent felt tip markers
D. Color pencils
E. Assorted drafting equipment
F. X-acto knives
G. Scissors
H. Assorted construction paper
I. Masking tape
J. Preprinted containers (1/4 and full size)
K. Illustration board

IV. Definition of Terms

A. Art/advertisement:	A notice or graphic design to attract public attention.
B. Catchwords:	A word or phrase that attracts the attention, eg, super, new.
C. Communications:	The means by which messages, thoughts, and/or ideas are transmitted.
D. Image:	The graphic message to grasp and hold attention.
E. Package:	A container to hold, protect, and advertise a product.
F. Pattern Development:	The design of a 3 dimensional object that is made from a flat material like paper, cardboard, or sheetmetal.
G. Prototype:	An original form or model.
H. Trademark:	Words or symbols associated with a product or service.

V. Simple Math and Science Principles

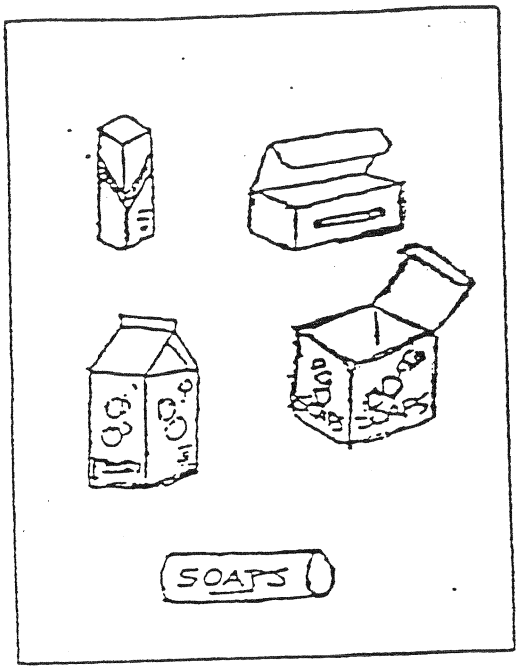
A. Measurement (linear and volume)
B. Area = πR^2
C. Volume cylinder = area x height
D. Volume of square or rectangle = width x height x depth
E. Cubic Inches = Gallons x 231.0
F. Cubic Inches = Quarts x 67.2
G. Cubic Inches - Liquid pints x 28.875

VI. Resources

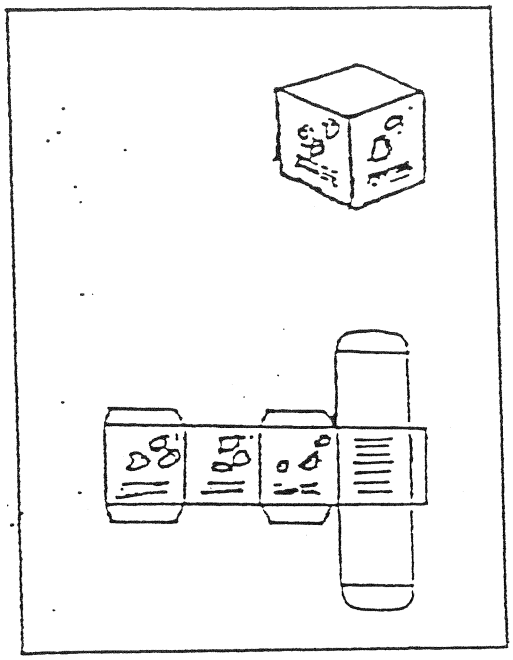
A. Outside speaker
B. Various A.V. supplement
C. Assignment sheets
D. Periodicals
E. Examples of product container
F. Field trips

VII. Evaluation - student work will be evaluated on:

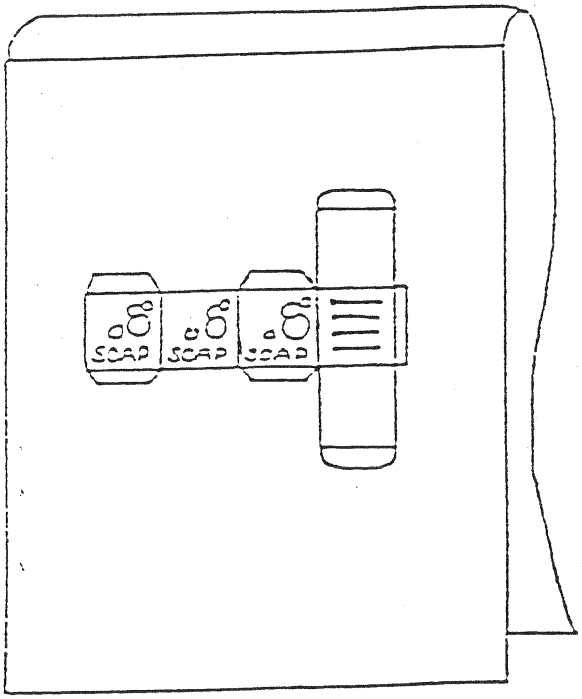
A. Craftsmanship
B. Originality
C. Function
D. Composition
E. Simple color theory
F. Objectives of the unit met
G. Presentation

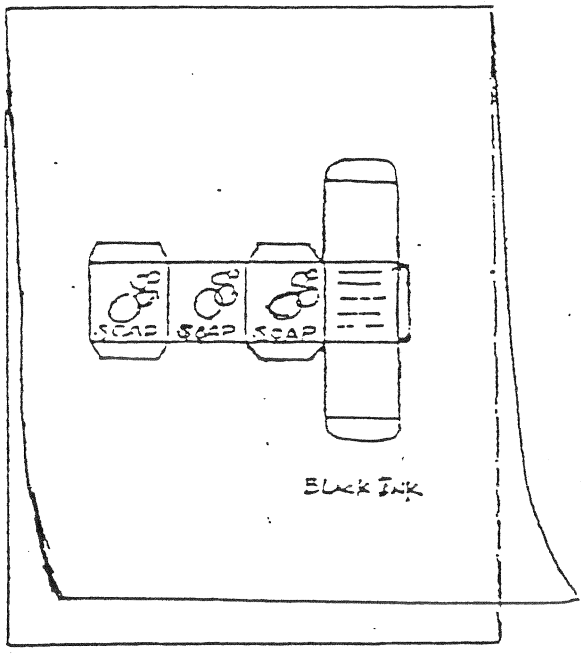


THUMBNAIL



ROUGH

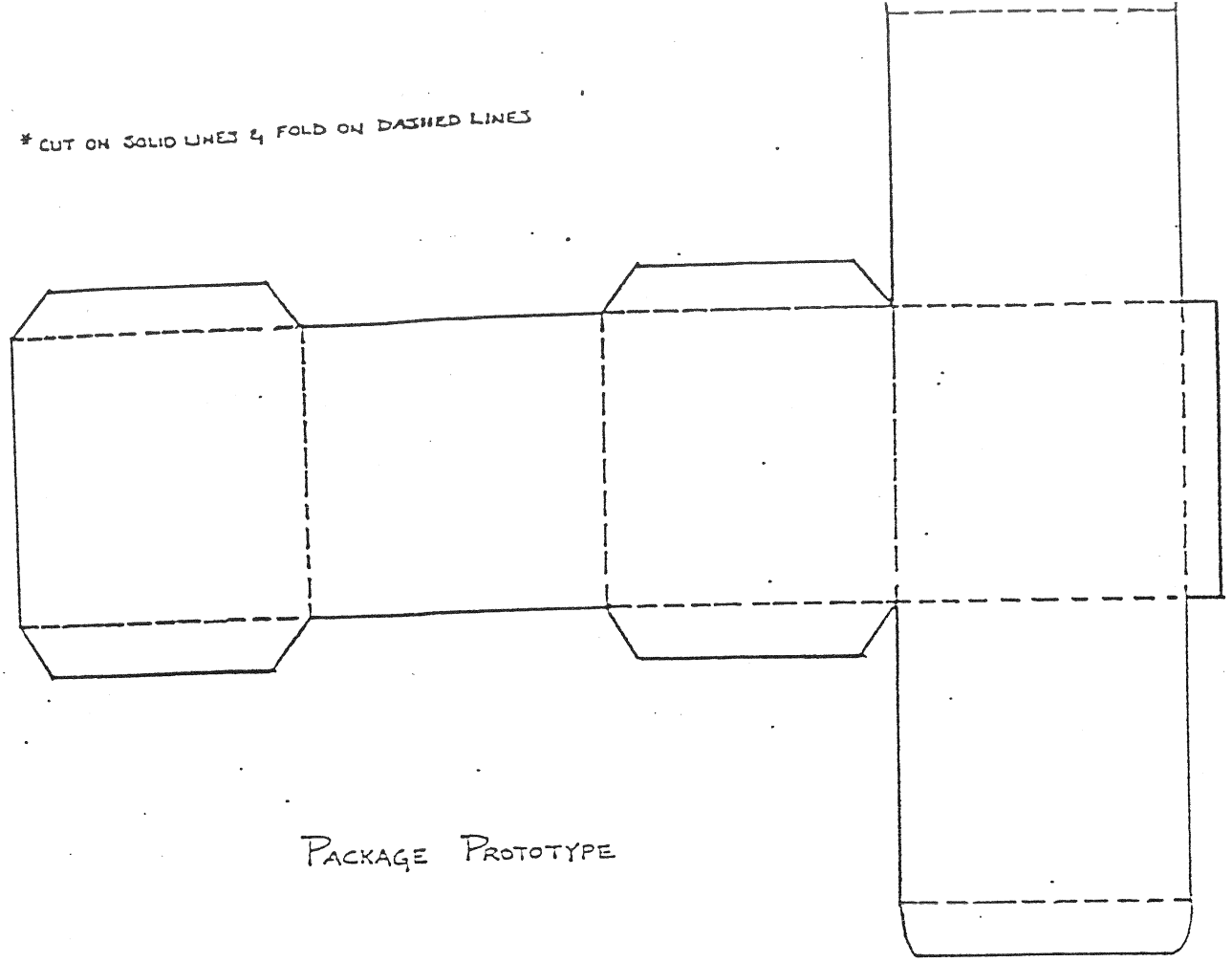




COMPREHENSIVE

SAMPLE

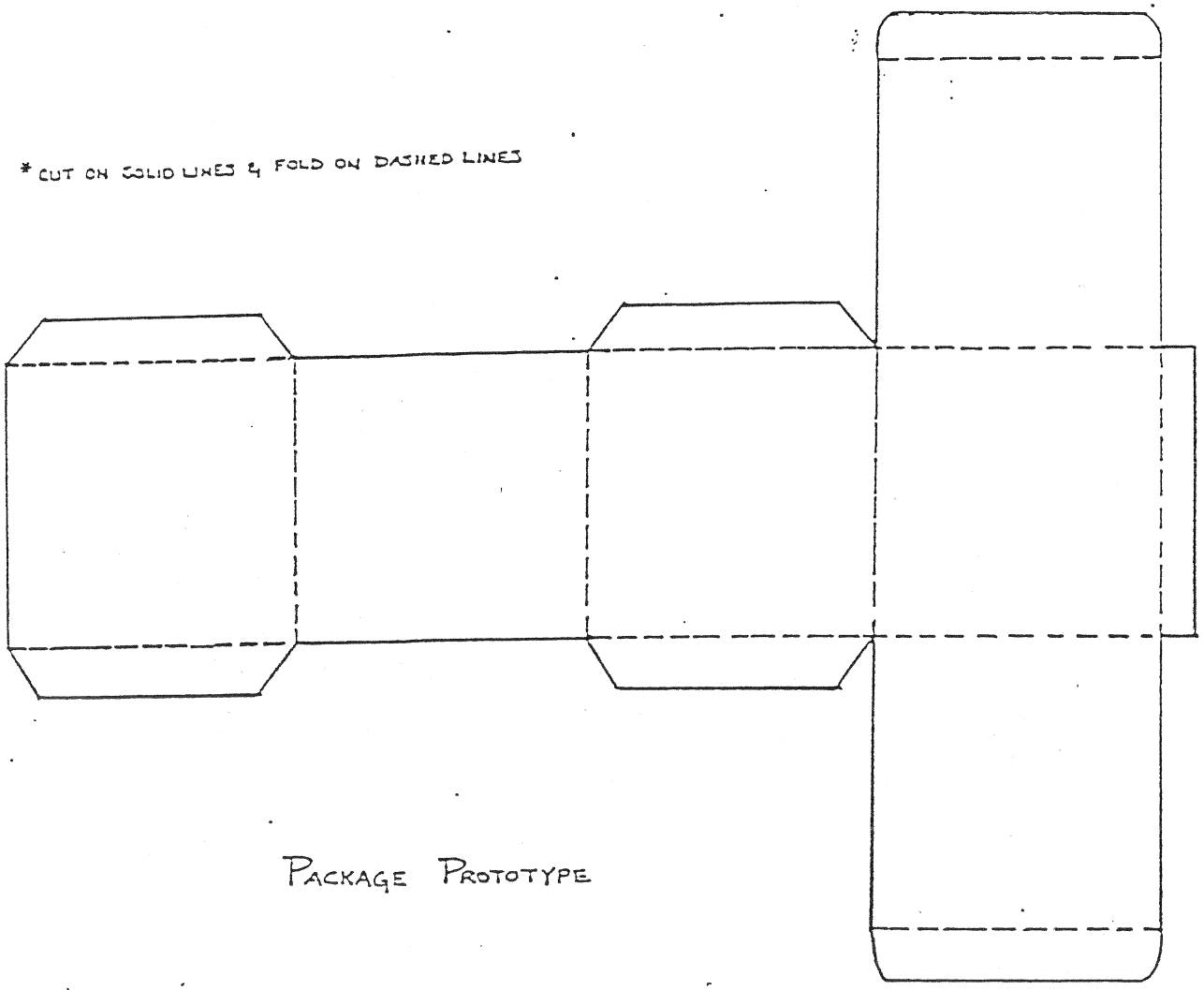
* CUT ON SOLID LINES & FOLD ON DASHED LINES



PACKAGE PROTOTYPE

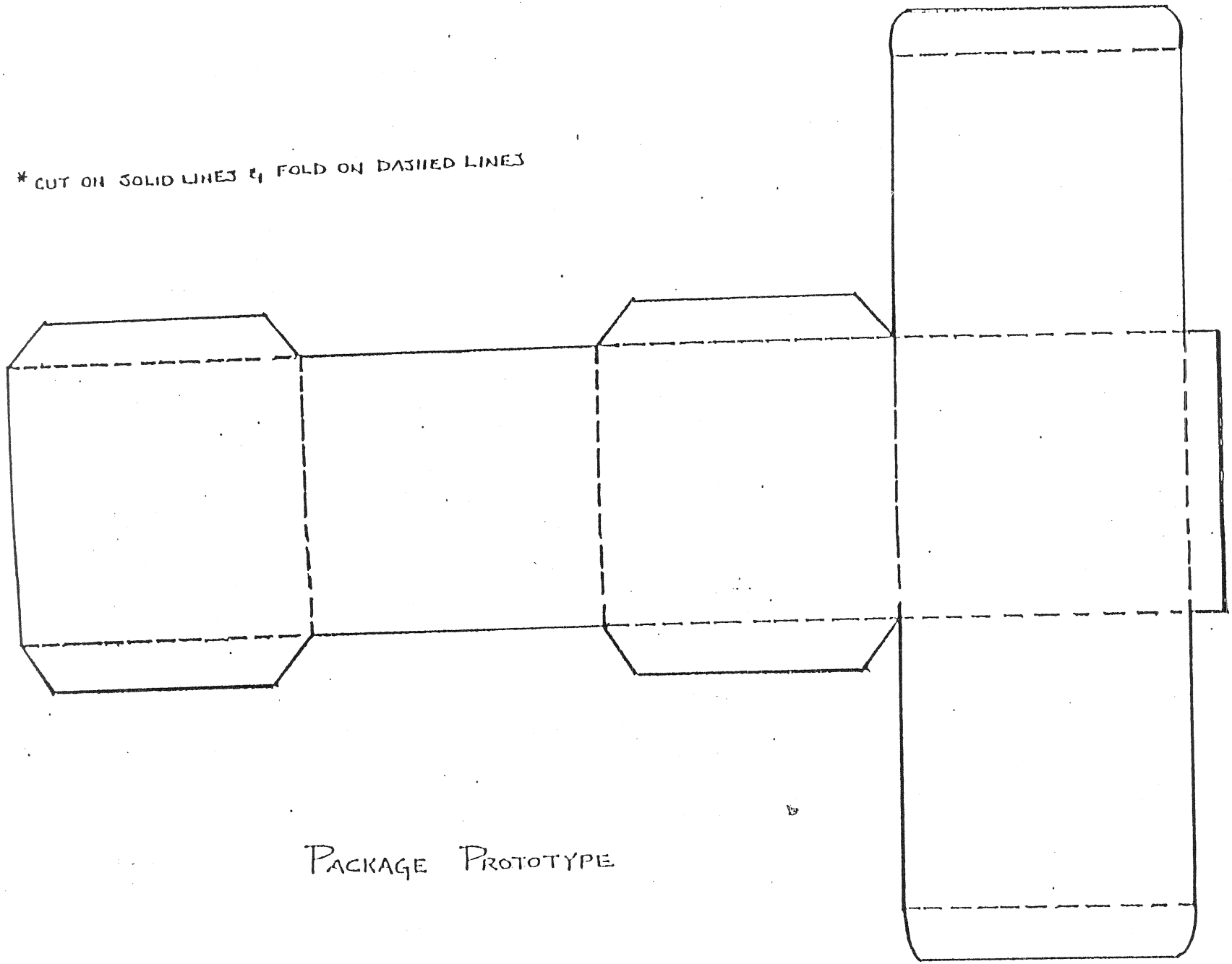
SAMPLE

* CUT ON SOLID LINES & FOLD ON DASHED LINES



PACKAGE PROTOTYPE

* CUT ON SOLID LINES & FOLD ON DASHED LINES



PACKAGE PROTOTYPE

Student Activity Package

Each student will use layout techniques and message analysis to create a suitable package design.

1. Design a package for a product. The package and artwork must be original.
2. Prepare at least five thumbnail sketches to decide which is best for your package.
3. Prepare a rough layout from your best thumbnail. Green drafting paper, size cannot exceed 18 x 24.
4. Using good layout techniques, prepare a comprehensive layout of your package. This should include all typestyles, colors and paper choices you feel will look best on your package. This is a hand-rendered layout with a cover sheet to indicate specifications.
5. Prepare a prototype of your package. Use type, colors and paper as indicated on your comprehensive.

Helpful Hints:

1. Identify your consumer.
2. Choose colors and typestyles that will appeal to your consumer.
3. Browse through the aisles of a grocery store to gather ideas . . . look through cabinets . . . look in catalogs . . . brainstorm ideas.
4. Above all, be CREATIVE!!!!

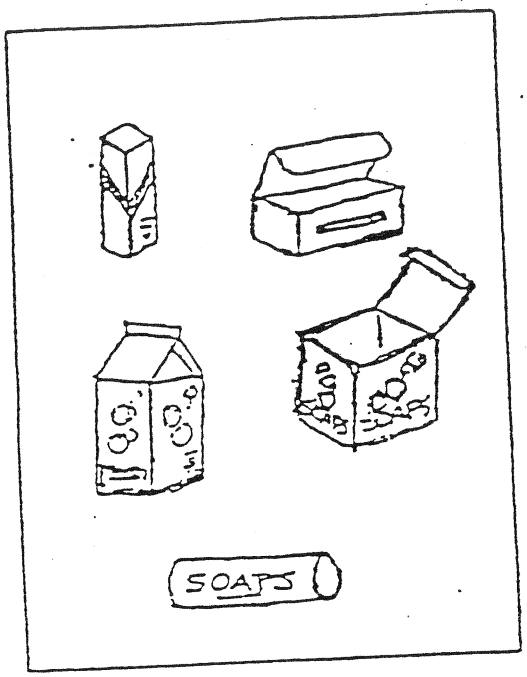
Definition of Terms

A.	Art/advertisement:	A notice or graphic design to attract public attention.
B.	Catchwords:	A word or phrase that attracts the attention, eg, super, new
C.	Communications:	The means by which messages, thoughts, and/or ideas are transmitted.
D.	Image:	The graphic message to grasp and hold attention.
E.	Package:	A container to hold, protect, and advertise a product.
F.	Pattern Development:	The design of a 3 dimensional object that is made from a flat material like paper, cardboard, or sheetmetal.
G.	Prototype:	An original form or model.
H.	Trademark:	Words or symbols associated with a product or service.

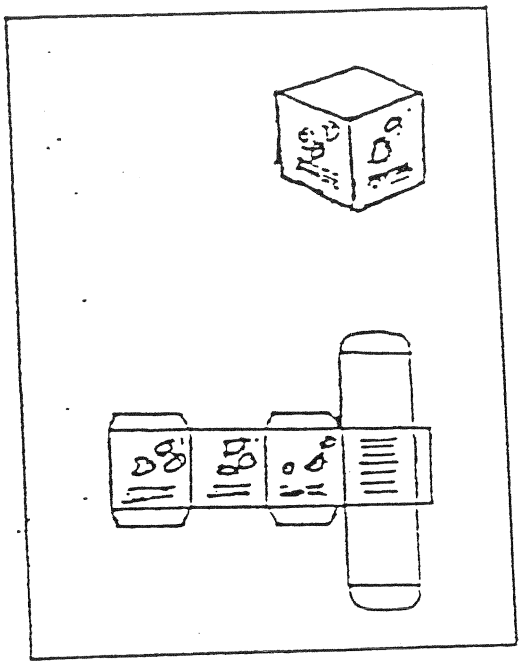
Simple Math and Science Principles

A. Measurement (linear and volume)
B. Area = πR^2
C. Volume cylinder = area x height
D. Volume of square or rectangle = width x height x depth
E. Cubic Inches = Gallons x 231.0
F. Cubic Inches = Quarts x 67.2
G. Cubic Inches - Liquid pints x 28.875

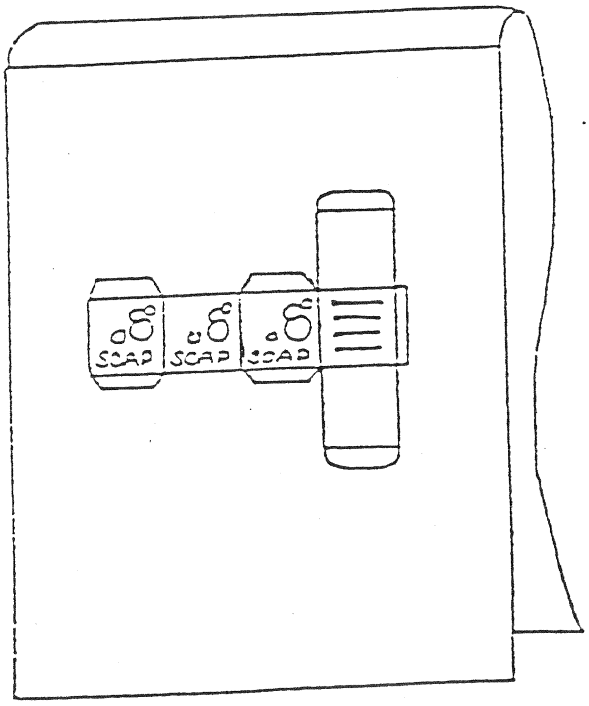
SAMPLE

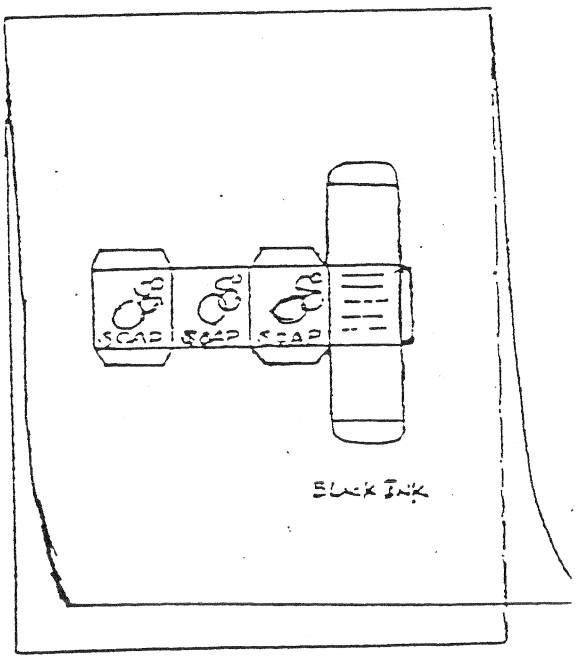


THUMBNAIL



ROUGH

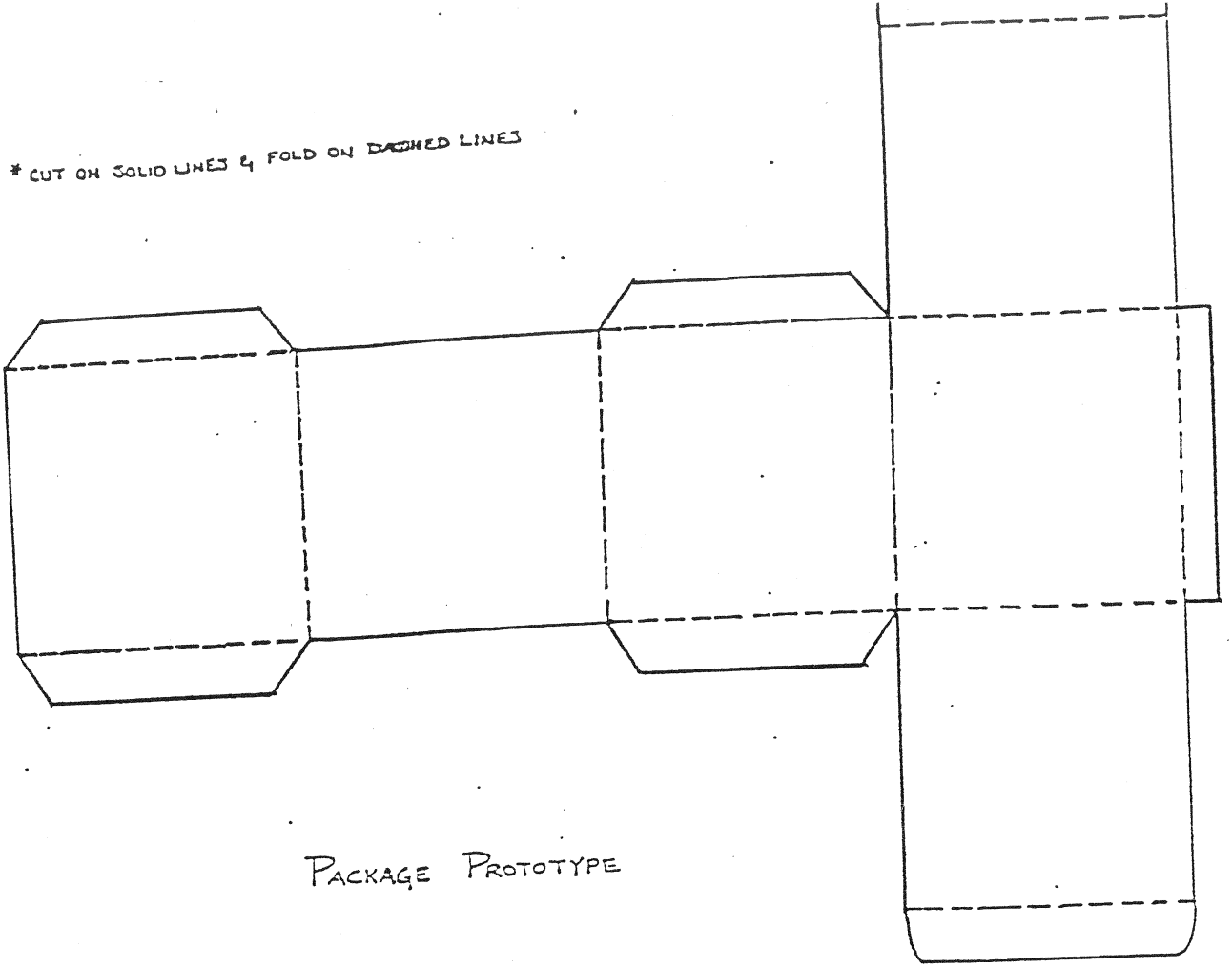




COMPREHENSIVE

SAMPLE

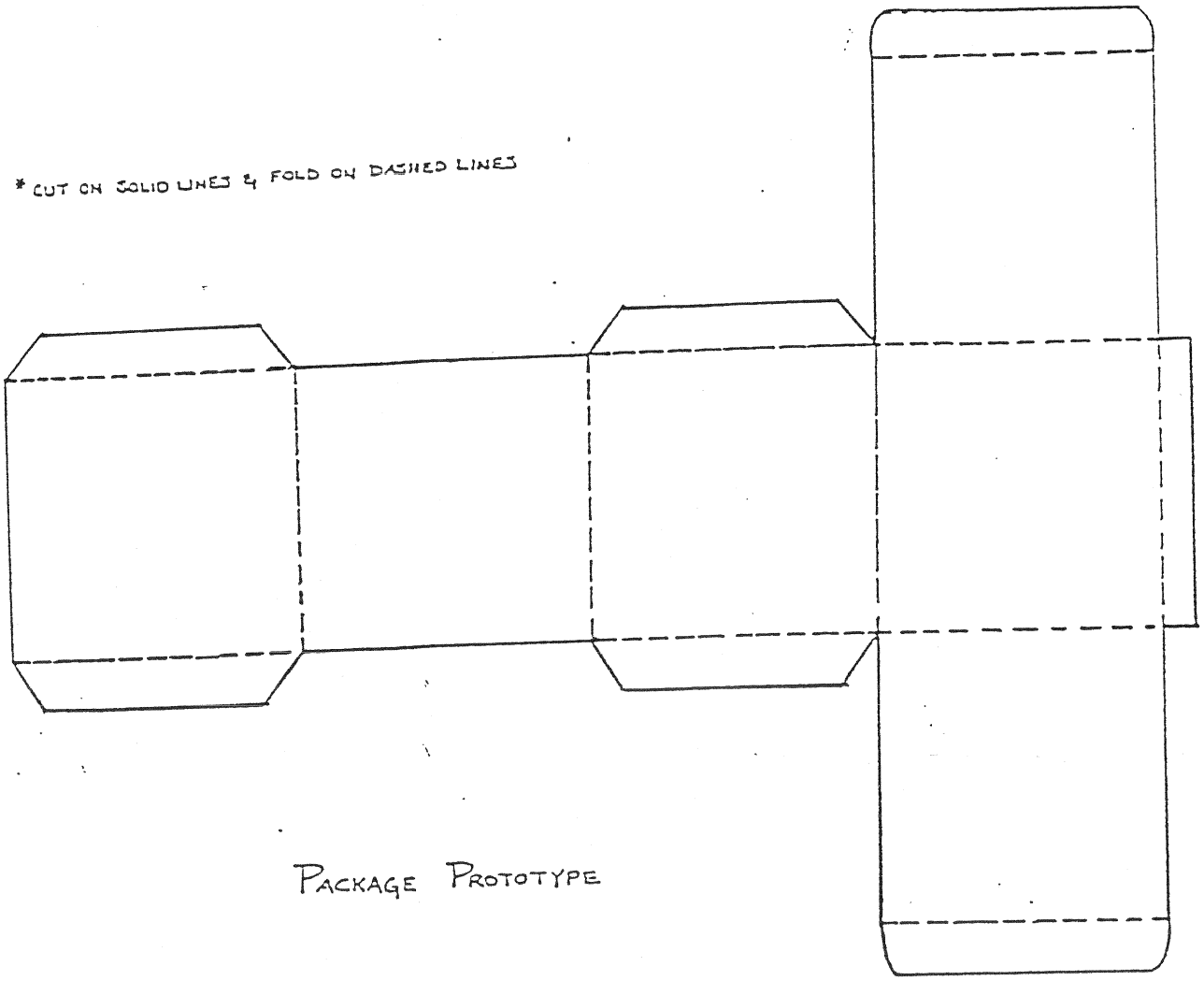
* CUT ON SOLID LINES & FOLD ON DASHED LINES



PACKAGE PROTOTYPE

SAMPLE

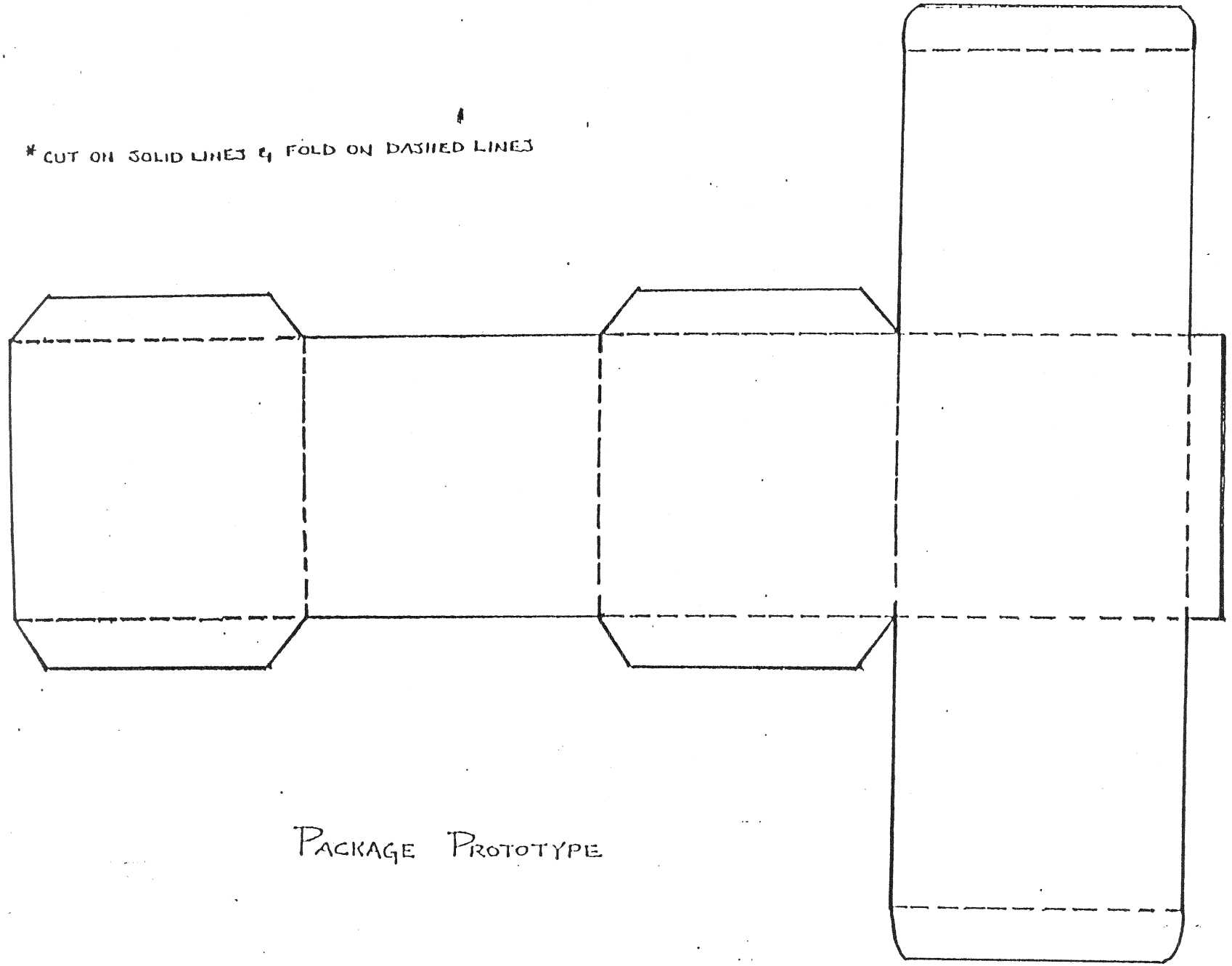
* CUT ON SOLID LINES & FOLD ON DASHED LINES



PACKAGE PROTOTYPE

SAMPLE

* CUT ON SOLID LINES & FOLD ON DASHED LINES



PACKAGE PROTOTYPE

Packaging

Day 1.

-Tell the students that they will be working on designing a package for a product of their choice for the next few weeks.
-Tell the students that they will be working in groups of two or if desired by their selves.
-Tell the students that these products will not have any thing to do with sex, drugs, or alcohol, and if they do the package will not be accepted.
-Show the students some of the materials that they can use.(Soda case)
Tell the students what they need to have at the end of the project
-Have the students pull out a piece of paper and write this down.
-5 thumbnail sketches. (show examples)
-Rough layout of their best thumbnail sketch. (Show examples)
-At least 4 packages have to fit on a 18 X 24 sheet of paper. (Show examples)
-Prepare a comprehensive layout which consists of- cover page\
Identifying specifications
Color
Paper choice(how durable is it)
-Prepare a prototype. (Show examples of some old ones)(color, shape & form, texture, & function and durability)
-Company name and logo
-3 To 5 minute presentation
-Tell students to show everything they did even if they did not use that design to show how much effort and thought they put into the project.
-Have the students look around for ideas and tell them to be original because they will be graded on originality.

Day 2.

-Review what was covered the day before.
-Look over terms.
-Look over helpful hints.
-Show them where to go to figure out the formulas.
-Show video of presentations of the past.

Day 3.

-Tell them how they will be graded - Sketches/Drawings, Presentation, and Final Package
-Go to work
-Help students with questions

Day 4/

-Work day
-Help students with questions

Day 5/

-Review
-see how they are doing
-go to work
-Help students with questions
-Shorten period 33 minutes

Day 6/

-Work day
-Help students with questions
-Shorten period 33 minutes

Day 7/

-Work day
-Help students with questions
-Shorten period 39 minutes

Day 8/

-Work day
-Shorten period 39 minutes

Day 9/

-No School

Day 10/

-Ask the students how their doing
-Start rapping project up

Day 11/

-Finish project and get ready for presentations

Day 12/

-Presentations

Day 13/

Presentations

At least 5 thumbnail sketches

Rough sketch layout of best thumbnail sketch

At least 4 packages have to fit on a 18 x 24 sheet of paper

Prepare a comprehensive layout

- -Cover page
- -Identifying specifications
- -Color
- -Paper choice (how durable)
- -Make a company logo and name

Prepare a prototype

- -Color
- -Shape and form
- -texture
- -function and durability

3 To 5 minute presentation

(Show all work, even if you do not use it)

Items needed to be covered in presentation

-Company logo
-Company name
-At least **5** thumbnail sketches
-Rough layout of best thumbnail
-At least **4** packages laid out on a 18 X 24 sheet of paper
-Diagram showing lines where package will be cut out and folded
-Package already cut out and ready to be constructed in the presentation
-Showing of the prototype (finish product)

Items that need to be handed in

-All items that were used in the presentation
-Cover page (group member names)
-Specifications (dimensions, color, material used, etc.)

Suggestions for preparing for the presentation

-Organize (what will be said first, middle, and last)
-Decide which parts each person will present
-Practice prior to the demonstration
-Use note cards
-Try to avoid vocalized pauses (ah's and um's)

During the presentation

-Layout materials as needed
-Make sure class is ready
-Make demonstration visible to everyone
-Speak loud enough so everyone can hear you clearly
-Start off with an introduction(ex. Tell a story that leads into the reasoning for the design package)
-Perform the demonstration slowly
-Talk to the class, not the video recorder
-Explain the process step by step (everything you did, if you revised it say it)
-Closure

Grading categories

1. Sketches/drawings
2. Presentation
3. Final package (Prototype)

HAVE FUN!

Grading

0 to 3=A 4 to 6 =B 7 to 9=C 10 to 12=D 13 & UP=F

Sketches/Drawings	**Points**
Company logo	_____
Company name	_____
At least five thumbnail sketches	_____
Rough layout of best thumbnail	_____
4 packages on 18 X24 sheet of paper	_____
Diagram showing lines where package will be cut out and folded	_____
Package already cut out and ready to be constructed	_____
Cover page	_____
Specifications(dimensions, color, material used, etc.)	_____

Presentation

All items shown	_____
Organized	_____
Class ready before starting	_____
Speak loud enough for everyone to hear	_____
Introduction	_____
Eye contact	_____
3 to 5 minutes in length	_____

Final package

Creativity	_____
Durability	_____
Construction	_____
Design or layout	_____

Each category is worth one-third of final grade