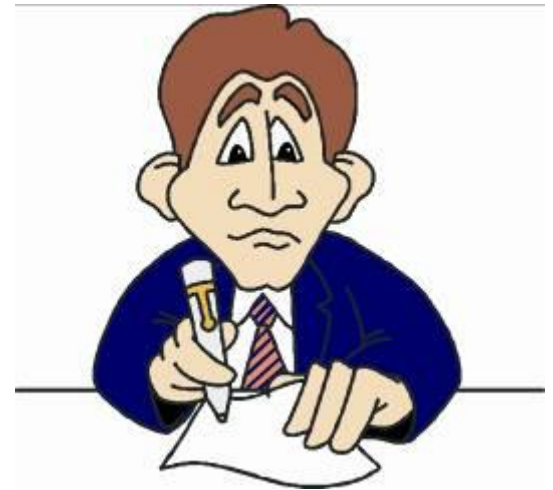


# Die-cutting

# Exam expectations

Die-cutting is a regular topic in the examination paper. Although the question only attracts a small numbers of marks it is an area which few candidates score.



# Die Cutting an Introduction

In industry companies need to manufacture packaging in large quantities. In order to create the packaging, nets or cutter guides have to be designed accurately so that the final product can be cut out after it had been printed.

**What everyday items can you think of that have been die cut?**

# Everyday items

Many of the products you use everyday have been die cut:  
tissue boxes,  
stickers,  
cereal boxes,  
birthday cards  
and file dividers.



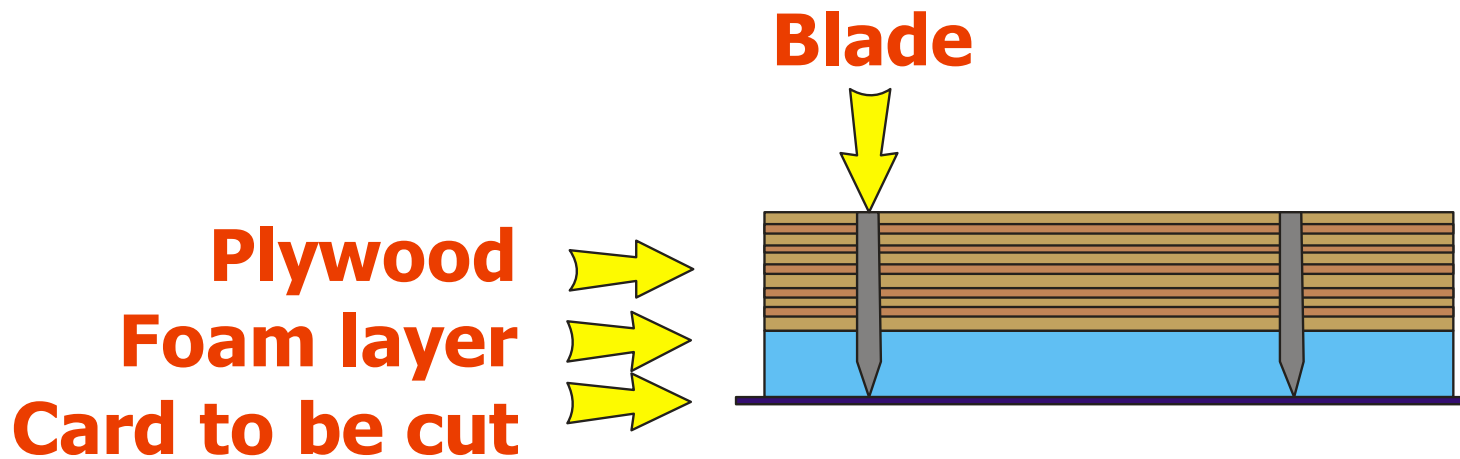
# Uses

Die cutting is an extremely useful tool when designing promotional materials, point of sale and packaging particularly when larger quantities are required



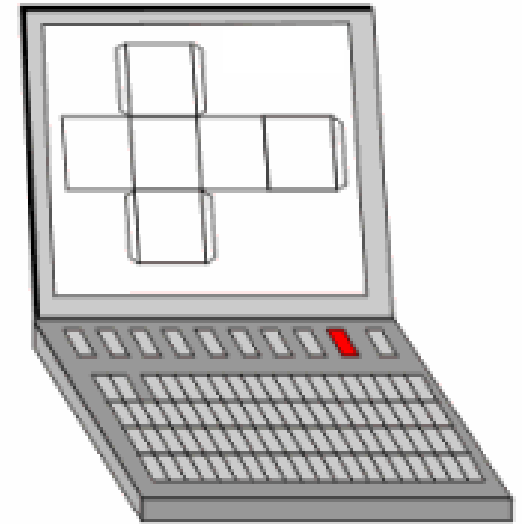
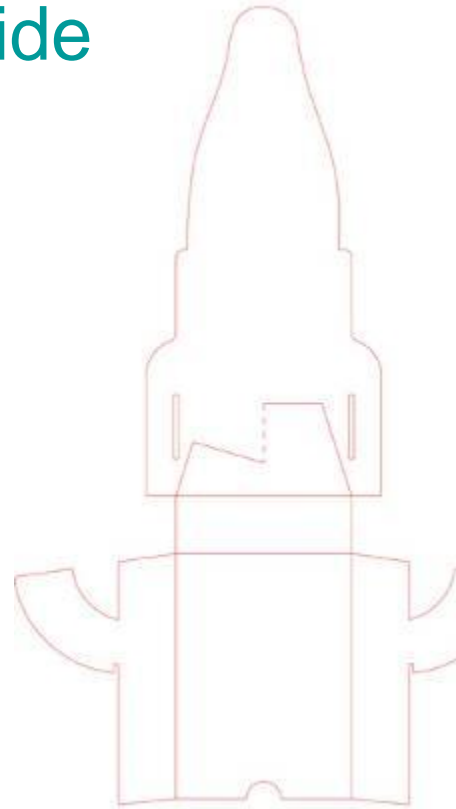
# Die cutting an overview

- Uses steel cutting rules to slice, perforate or crease paper, card or plastic and it is used for when you have an irregular shaped net (anything that isn't standard printing sizes e.g. A4, A3).



# The Die Cutting Process – Stage 1

The first stage is creating a cutter guide or net for your packaging on Corel Draw or any other CAD programme.



# The Die Cutting Process – Stage 2

The electronic file is then put into a computerised laser cutter which burns the design directly on to a plywood board, it is accurate to 100<sup>th</sup> of a millimetre.





# The Die Cutting Process – Stage 3

The operator uses the design to see where the die board (the lasered plywood) should use a cutting metal rule (for cutting lines) or a blunt metal rule (for fold lines).



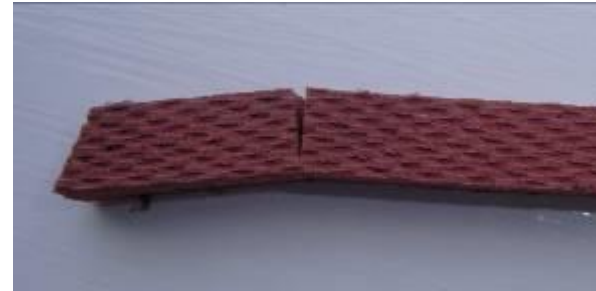
# The Die Cutting Process – Stage 3

Metal rules are bent and fitted into the plywood board where the laser cuts were made. You can see gaps at the back of the blade. These are notches in the back of the blade and keep the plywood board together. Where these gaps are the laser only cuts partway through the plywood.



# The Die Cutting Process – Stage 3

The operator then uses rubber to cover the blades. The main purpose of this is to press the cut material away from the blade. On smaller boards a single sheet is often used rather than strips.



# The Die Cutting Process – Stage 3

The completed die cutting tool is called a **cutting forme** in the packaging industry. In some industries they are called press knives.



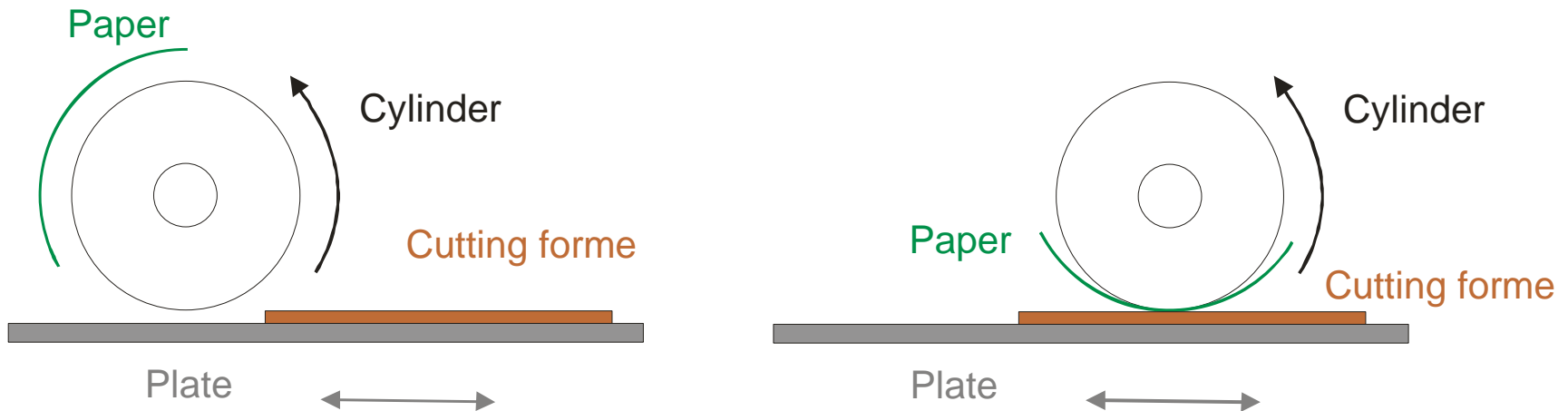
# The Die Cutting Process– Stage 4

The cutting forme is inserted into a machine such as a Heidelberg Cylinder.



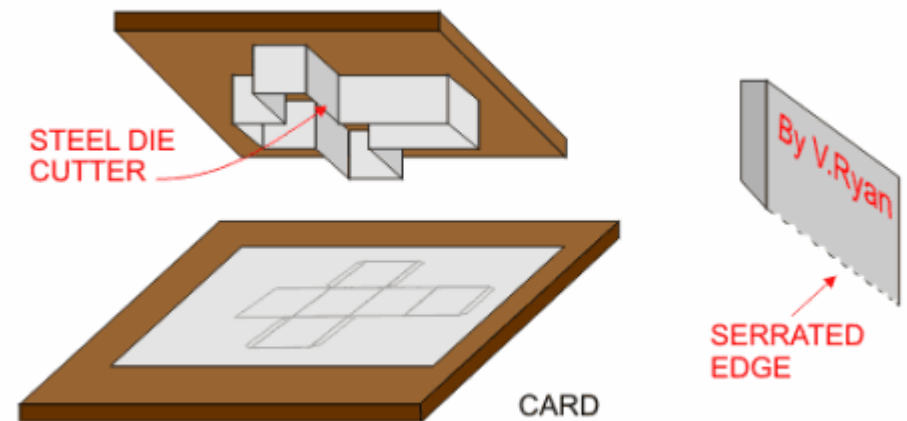
# The Die Cutting Process – Stage 4

The paper or card is fed into the machine, the cylinder makes one rotation and the cutting forme makes its cut. In this system the sharp edge of the blade is facing upwards.



# The Die Cutting Process – Stage 4

These automated machines can even separate the waste and stack the cut outs, saving time and money in the finishing process of making packaging.



# Die cutting in school

- Die cutting is a process which can easily be replicated in school. These presses are typical of the type found in schools.

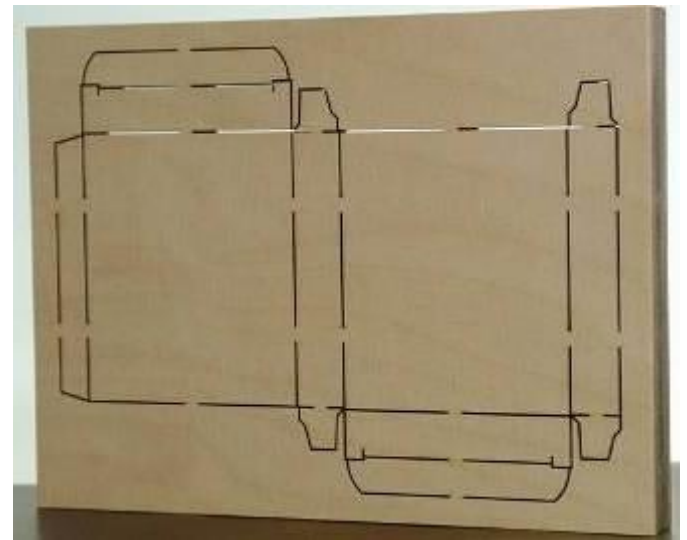


[www.ellisoneducation.com](http://www.ellisoneducation.com)



# Die cutting in school

- These are typical of the cutting formes available for use in school and can be used to cut out small nets



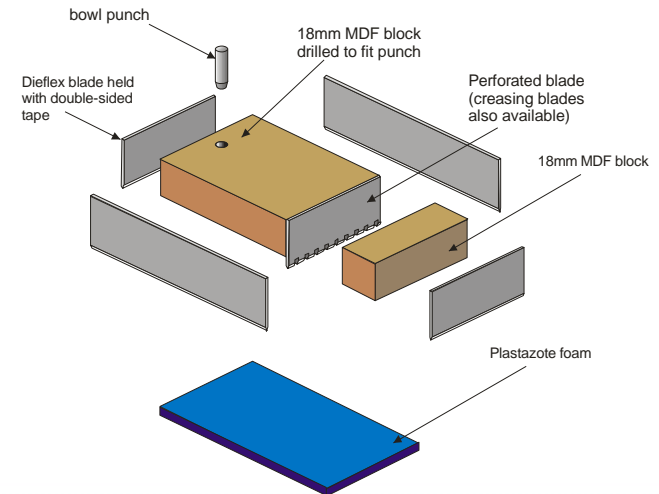
# Die cutting in school

- Slide the die and paper into the machine, rubber side down on cutting pad
- Lower the handle
- Remove perfectly cut card shapes



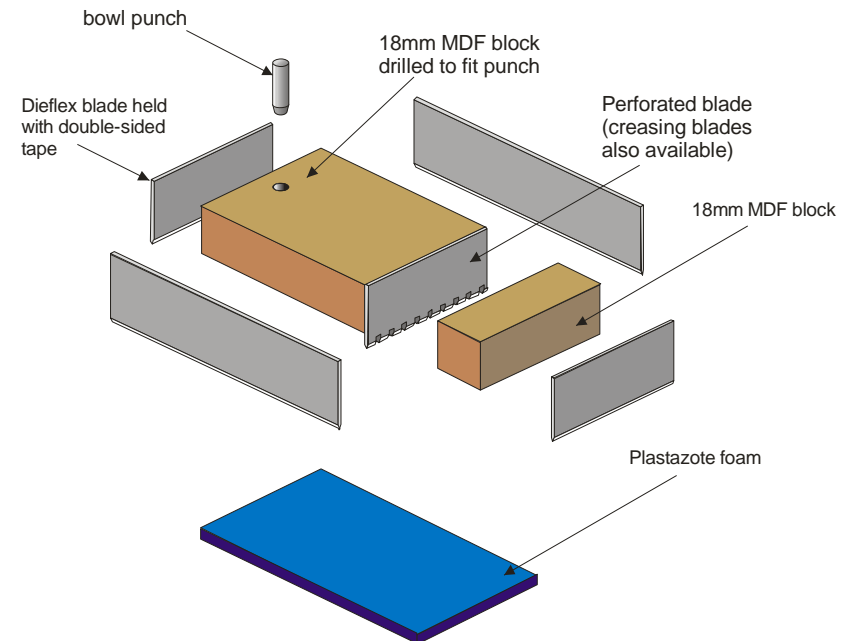
# Making your own cutting formes

- This die-cutting tool can be assembled using double sided adhesive tape.
- Push the bowl punch into the drilled hole.
- Stick the perforated blade to both pieces of MDF
- Attach the Dieflex blade around the block, overlapping each side to ensure a neat corner.

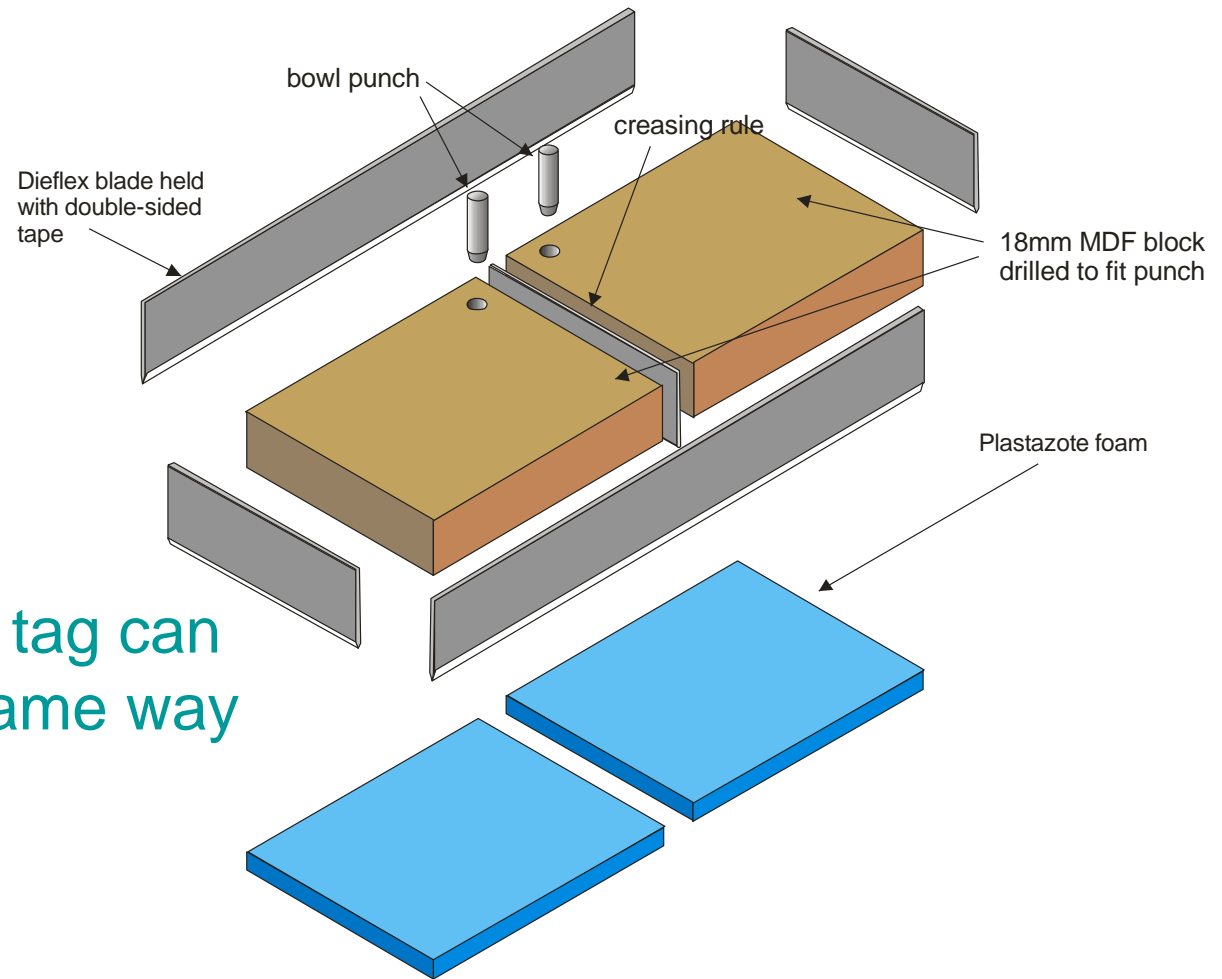


# Making your own cutting formes

- Wrap the entire block with a couple of layers of masking tape ensuring that the Dieflex blade is only covered for about two thirds of its width and the cutting edge is clear.
- Trim any excess tape from the back of the die-cutting tool to ensure that the pressure is applied to the edge of the blade and is not cushioned by masking tape.
- Finally, attach the Plastazote pad as a method of releasing the cut card.
- The Plastazote will be cut by the perforated blade the first time it is used so there is no need to cut into two pieces.



# Making your own cutting formes



- This folded gift tag can be made the same way

# Making your own cutting formes

- This students made two die cutting tools to cut out the felt bodies and the printed faces
- The larger tool was made by punching and screwing the blade onto the edges of the MDF

