

PRODUCT DEVELOPMENT EXERCISE DEVELOPMENT DESIGN SHEET 2

V.Ryan © 2000 - 2012

On behalf of The World Association of Technology Teachers

W.A.T.T.



World Association of Technology Teachers

This exercise can be printed and used by teachers and students. It is recommended that you view the website (www.technologystudent.com) before attempting the design sheet .

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PRODUCT DEVELOPMENT EXERCISE

PAGE TWO

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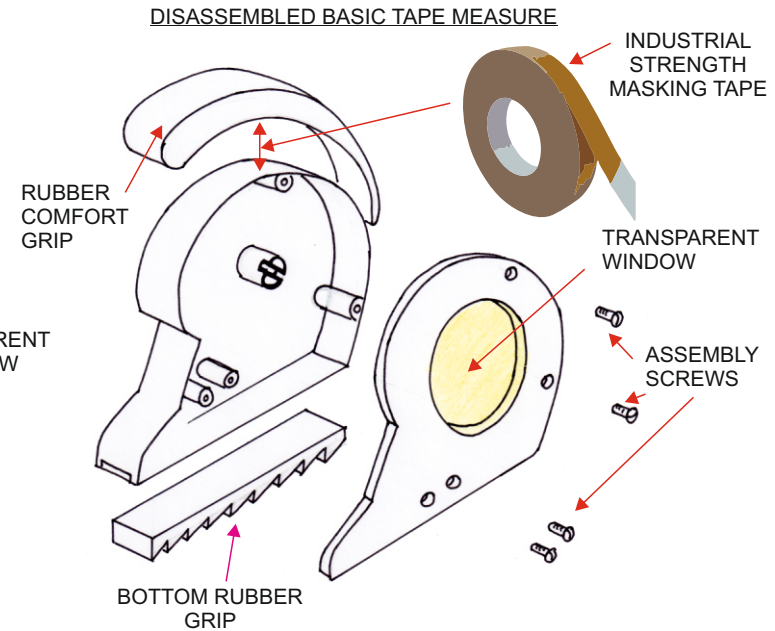
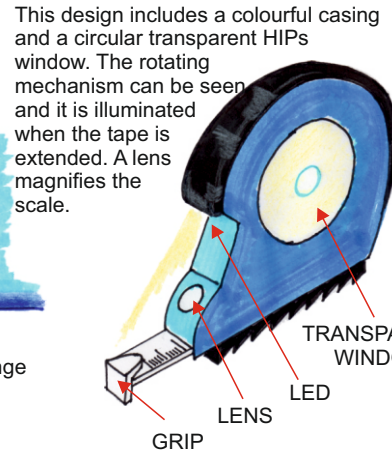
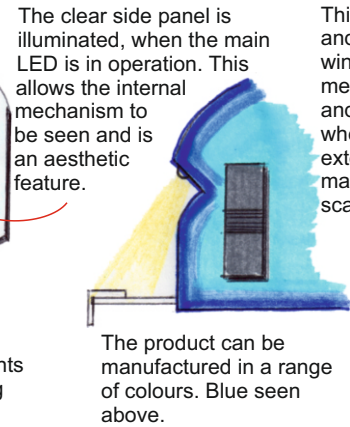
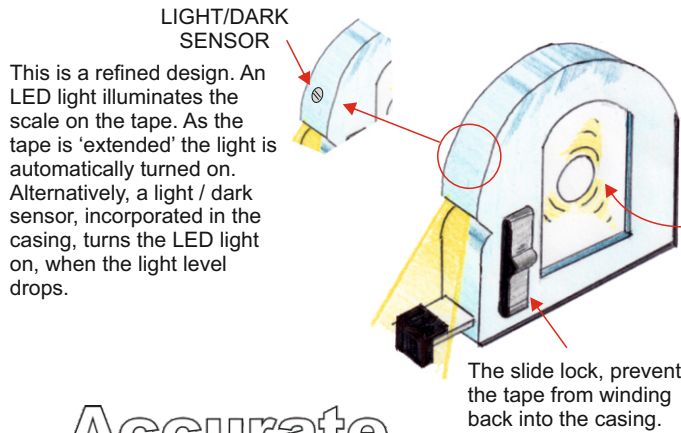
THE TAPE MEASURE

Study the sample development page (page 2).

How many of the key areas (page 3) have been mentioned on this sheet? Place a tick against the areas included.
(See slide three for key areas)

What grade would you give this development sheet?

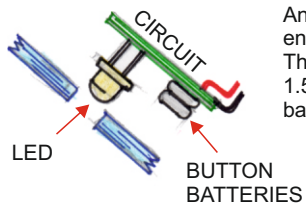
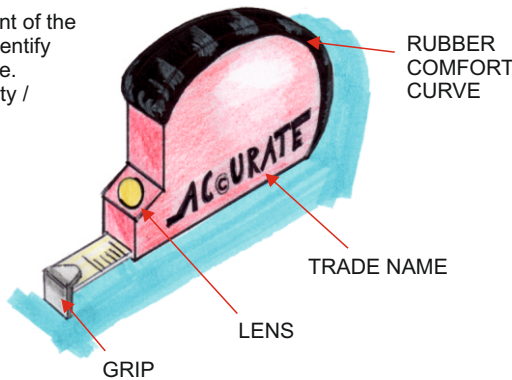
WHAT AREAS / TECHNIQUES NEED TO BE INCLUDED ON THE FOLLOWING DEVELOPMENT SHEETS?



The drawing above, shows the disassembled casing. The two sides are held together by small M4 countersunk screws. This allows for repairs to be carried out and for the coin batteries to be replaced. Industrial strength double sided tape, permanently holds the rubber bottom grip and the rubber comfort curve, to the casing.

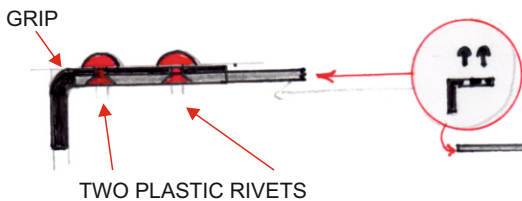
Accurate
Accurate
ACCURATE
 ACCURATE

These are an early development of the writing style. This will clearly identify the manufacturer or trade name. The style must reflect the quality / high standard of manufacture.

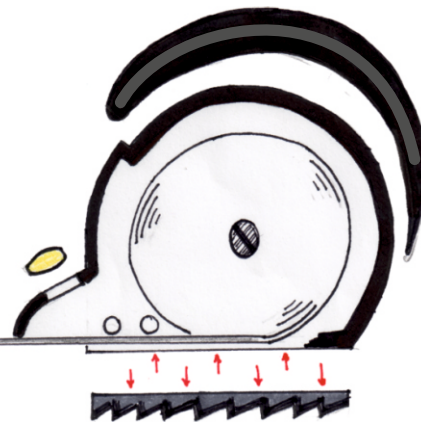


An ultra bright LED will provide enough light to illuminate the scale. The circuit will be powered by two 1.5v button / coin batteries. The batteries will be replaceable.

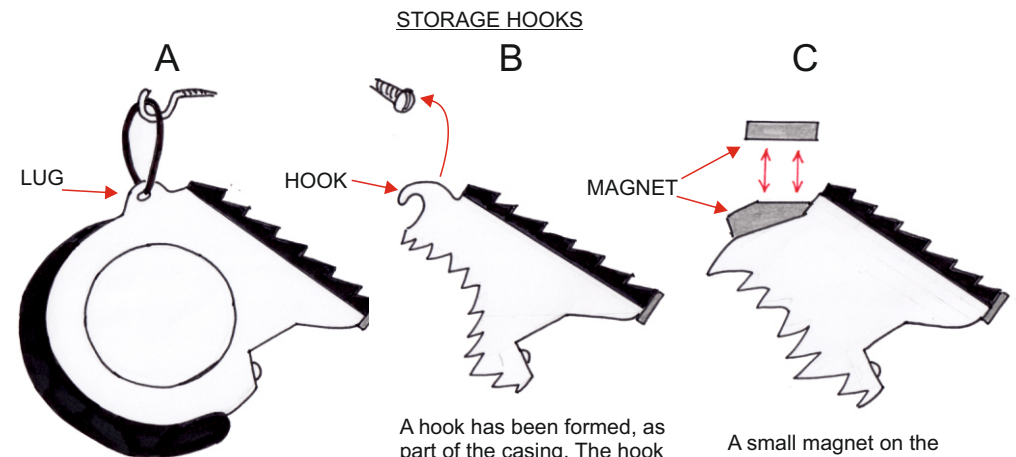
The grip at the end of the tape, could be attached permanently to the tape by colourful plastic rivets. these will be an attractive feature. Even luminous rivets could be used, making the grip more visible.



Steel, aluminium and even copper rivets could be used to secure the grip to the tape.



The rubber grip is attached to the base of the tape measure, with either glue or industrial standard, double sided tape. It prevents the casing slipping, when the measure is in use.



The casing has an additional 'lug', which has been drilled. A small loop of leather / textile material can be used to hold the tape measure, from a standard hook.

A hook has been formed, as part of the casing. The hook has been positioned so that the tape measures centre of gravity, allows it to hang securely.

A small magnet on the casing, allows the tape measure to be held securely underneath any steel workshop shelf.

ANTHROPOMETRICS AND
ERGONOMICS

HEALTH AND SAFETY ISSUES
DISCOVERED AND RESOLVED?

METHOD OF
CONSTRUCTION
MODEL AND REAL PRODUCT

MANUFACTURING
PROCESSES
INJECTION MOULDING ETC...

MATERIALS
PROPERTIES OF MATERIALS

DISASSEMBLY
OF PRODUCTS/
MODELS

CUSTOMER /
CLIENT VIEWS

STYLE / AESTHETICS

DIFFERENT IDEAS
VALID IDEA ?
DEAD END?

EVALUATE IDEAS

FOUND ANY PROBLEMS?
WHILE SKETCHING / MODELLING

PRODUCT DEVELOPMENT SHEETS

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SOLVED ANY PROBLEMS?
WHILE SKETCHING / MODELLING

EVIDENCE
PHOTOGRAPHS IN REAL TIME
AS YOU WORK
VIDEO CLIPS

VIEWS OF OTHERS

MODELS AND PROTOTYPES
2D AND 3D

ONGOING TESTING
EXPERIMENTATION

ENVIRONMENT
LIFE CYCLE
SUSTAINABILITY

COSTS
TO MANUFACTURE
PRICE TO CUSTOMER

REFER
TO SPECIFICATION
REGULARLY
CHECK YOU ARE KEEPING TO
THE SPECIFICATION

SKETCHES
EXPLODED VIEWS
COLOUR RENDERED ILLUSTRATIONS
SECTIONAL VIEWS
ORTHOGRAPHIC
CAD COMPUTER AIDED DESIGN

SIZES
LENGTH, HEIGHT AND DEPTH