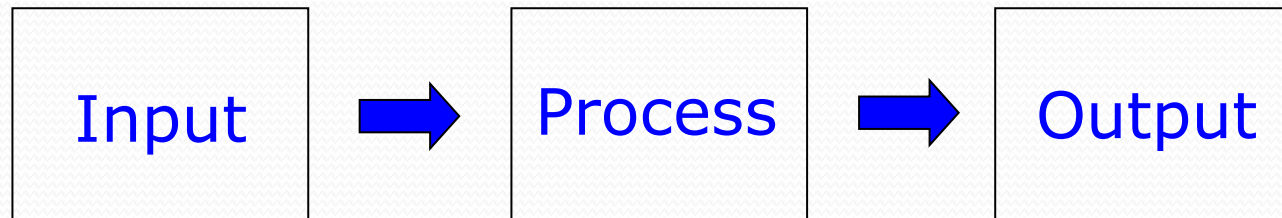


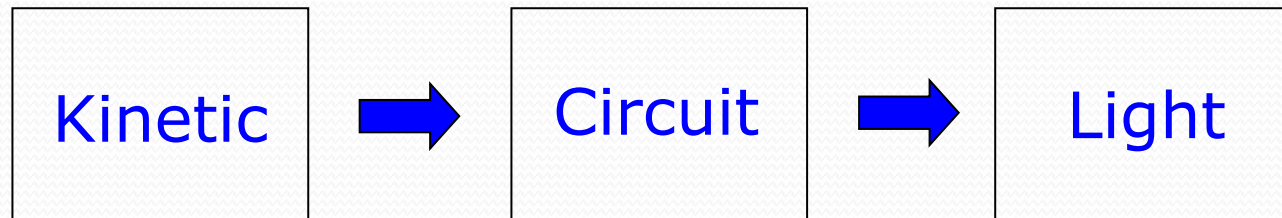
# Systems

- A system uses parts that work together



# Electronics

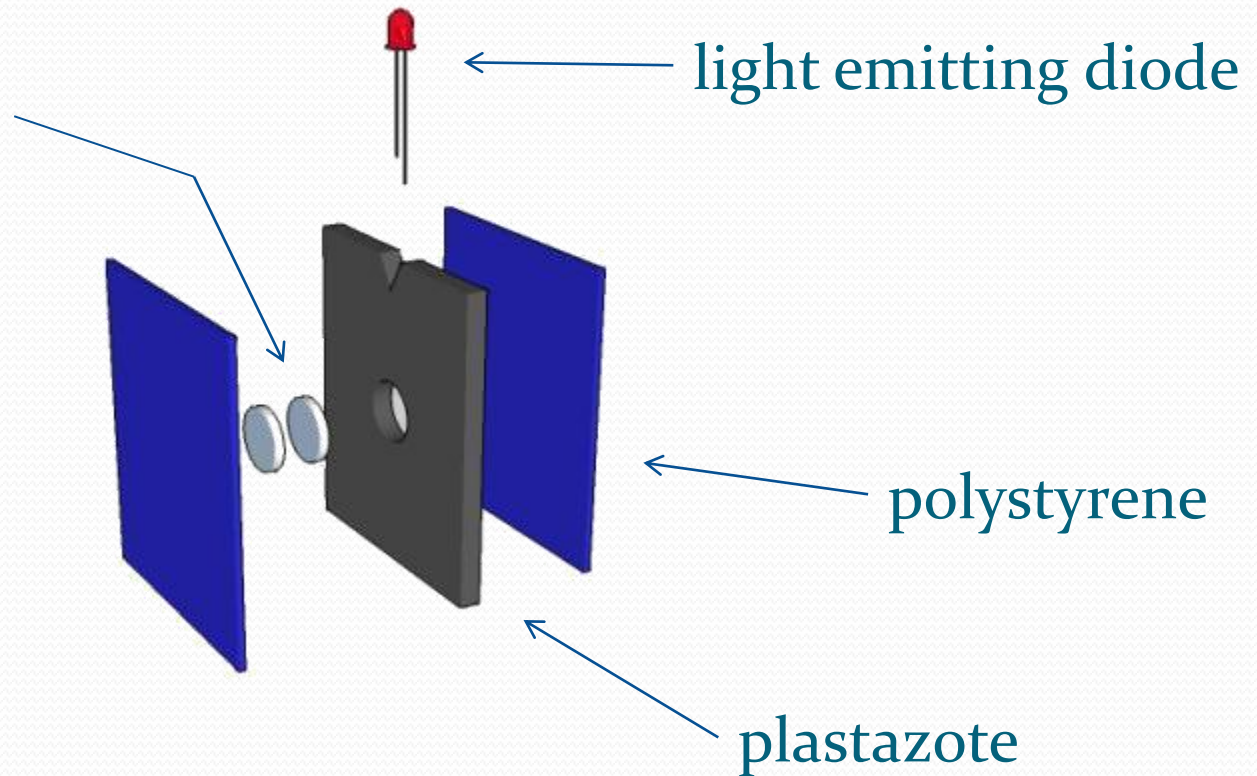
- An electronic system changes energy



# Minilight

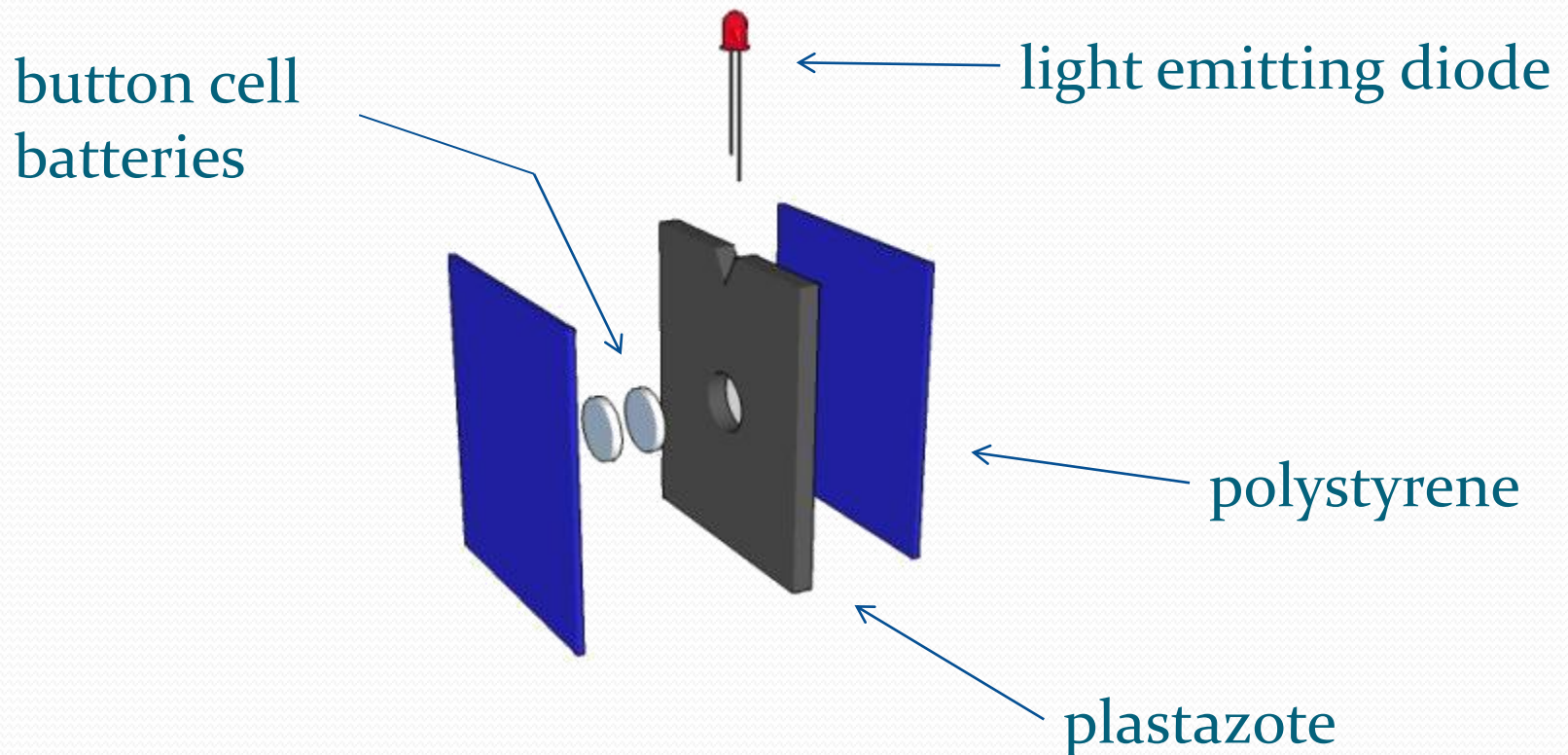
- Make a 'minilight' using components

button cell  
batteries



# Analysing Products

- Draw a picture of your 'minilight', colour and label



# Homework

- Present a product analysis to include:

A title “Analysing Products”

with a page about what’s there and why

and a page about how the product works

# Assessment

- Layout your work in rank order, best on the right and rest on the left, level and grade your work, suggest one improvement

L4 = pictures, coloured and labelled

L5 = with a page about what's there and why

L6 = and a page about how it works



# Mechanisms

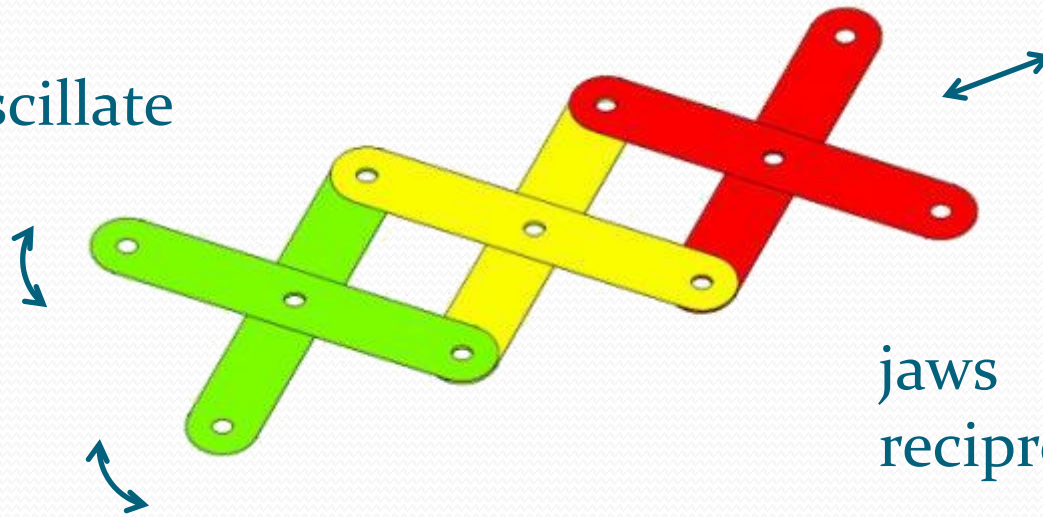
- A mechanical system changes motion and force



# Lazy Tong

- Make 'lazy tongs' using 6 lollipop sticks and 7 paper fasteners

handles oscillate



jaws  
reciprocate

# Developing Ideas

- Draw a Rube Goldberg machine, colour and label

# Homework

- Present your idea development to include:

A title “Developing Ideas”  
with a page about good/bad points  
and a page about improvements

# Assessment

- Layout your work in rank order, best on the right and rest on the left, level and grade your work, suggest one improvement

L4 = pictures, coloured and labelled

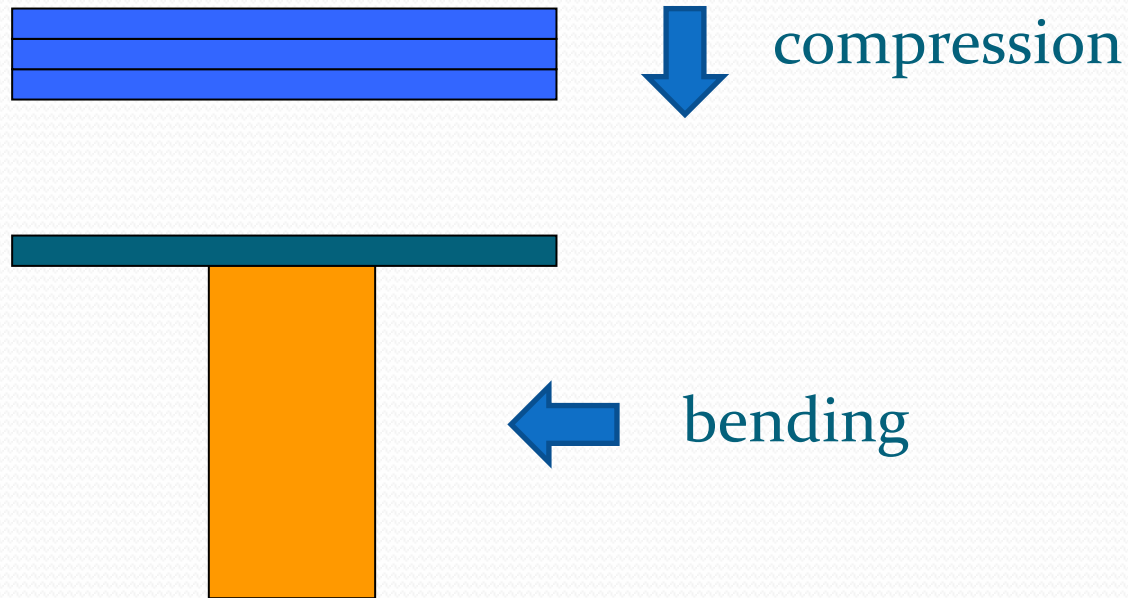
L5 = with a page about good/bad points

L6 = and a page about improvements



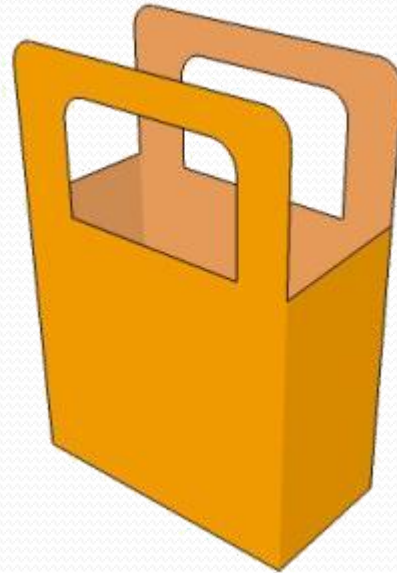
# Structures

- Structural systems resist forces, test a shell structure



# Card Bag

- Use a Die Cutter to make surface development (net) for a card bag

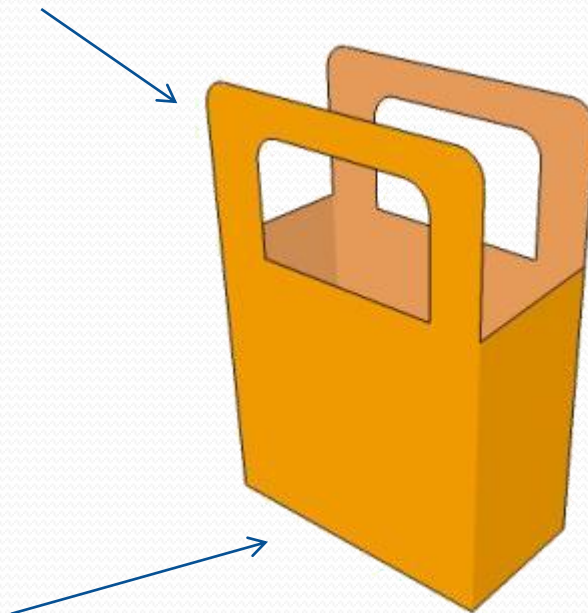


# Evaluating Products

- Draw your card bag, colour and label

Handle resists  
tension

\* Glue tab resists shear



Base resists  
torsion

Sides resist  
bending

# Homework

- Present your product evaluation to include:

A title “Evaluating Products”  
with a page about good/bad points  
and a page about improvements

# Assessment

- Layout your work in rank order, best on the right and rest on the left, level and grade your work, suggest one improvement

L4 = pictures, coloured and labelled

L5 = with a page about good/bad points

L6 = and a page about improvements

# Extension

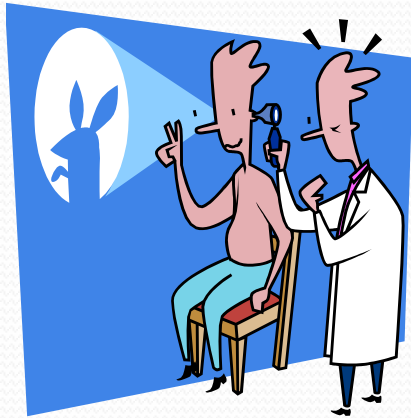
- Write an article about your experiences in Systems/Graphics include photographs and add your name and form
- Visit [draw3d.com](http://draw3d.com) and learn how to draw space hamsters, a treasure chest and stacked cylinders

# Design Brief

- You will be presenting a shadow puppet show based on the story of Hansel and Gretel
- You can adapt the script but you must keep to the storyline
- Organise in groups of 4 or 5 and elect a Chairperson to run meetings and a secretary to record decisions made

# Homework

- Find out about shadow puppets



What are they?

How are they made?

Are there any specialist tools?

Are there any specialist techniques?

Are there any successful designs?

# Analysing Products

- Draw a picture of a shadow puppet, colour and label the linkage, the moving rod and the holding rod

# Homework

- Present a product analysis to include:

A title “Analysing Products”

with a page about what’s there and why

and a page about how the product works

# Assessment

- Layout your work in rank order, best on the right and rest on the left, level and grade your work, suggest one improvement

L4 = pictures, coloured and labelled

L5 = with a page about what's there and why

L6 = and a page about how it works

# Developing ideas

- Draw ideas for puppet show characters, scenery and props based on your script
- Use quick sketches and add colour and notes to remind you of your decisions

# Homework

- Present your idea development to include:

A title “Developing Ideas”  
with a page about good/bad points  
and a page about improvements

# Assessment

- Layout your work in rank order, best on the right and rest on the left, level and grade your work, suggest one improvement

L4 = pictures, coloured and labelled

L5 = with a page about good/bad points

L6 = and a page about improvements

# Modelling

- Model your ideas for puppet show characters, scenery and props using recycled card

# Making Products

1

- Disassemble your model
- Use as a template

2

- Draw *lightly* round your template
- Cut out carefully

3

- Use a needle and thread to join components and attach control rods

# Assessment

- Layout your work in rank order, best on the right and rest on the left, level and grade your work, suggest one improvement

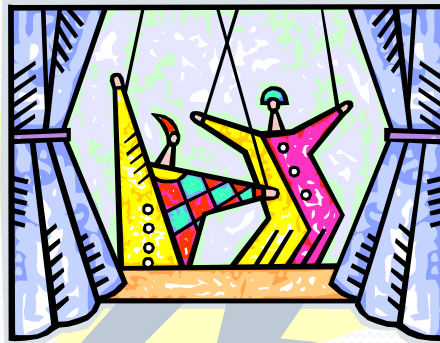
L4 = a complete product

L5 = a well assembled product

L6 = a quality product

# Evaluating Products

- Draw a picture of your show, colour and label the puppets and the scenery



# Homework

- Present your product evaluation to include:

A title “Evaluating Products”  
with a page about good/bad points  
and a page about improvements

# Assessment

- Layout your work in rank order, best on the right and rest on the left, level and grade your work, suggest one improvement

L4 = pictures, coloured and labelled

L5 = with a page about good/bad points

L6 = and a page about improvements

# Semi Finals

- Present your work to the rest of the group and decide which group will go in to the final



# Finals

- Each winning team will give a performance of their presentation to the half-year group
- Staff will assess each group based on the quality of the content and the presentation
- The winning teams will receive certificates
- The overall winners will receive merit badges

# Extension

- Write an article about your experiences in Systems/Graphics include photographs and add your name and form
- Design an appropriate back drop for the Technology Foyer puppet show display