

Design and Technology

Sweet Dispenser Project



Resistant Materials

Key Assessment Area:

Identify the areas you will be assessed on during this project

Investigation

Designing

Planning

Making

Evaluation

Understanding

Start Level

Target Level

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Level Achieved: To be completed by teacher

		1 st Chance Date		2 nd Chance Date
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Learning Objective: Demonstrate a basic understanding of facts and ideas.

Starter Activity:

Problem

Wonka Sweets would like a novel sweet dispenser that could be given away to increase sales of their everlasting gob stoppers,

How can small sweets be dispensed?

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Design Brief

Design a make a suitable product to store and dispense small sweets in a novel and interesting way using new skills and knowledge that you acquire in resistant materials.

Analysis of the task

Before you design and make your product what information and skills do you think you need? Use the space to plan how you are going to solve the problem and make a suitable product. What skills will you use or need?

Think Pair Share

Swap your plan with your learning partner and share your ideas.

Learning partners suggestions

Double check your work

Spelling

Punctuation

Grammar

Key Words

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Further Questioning

What else would you like to know about this topic?

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Key Points and Facts

Something you have learned

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What Went Well

Something you enjoyed

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Even Better If

What could be better?

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Feedback

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Learning Objective: Examine information to identify motives or causes.

There are many types of products that can be used to dispense sweets. Use a research method to find examples of different products that dispense sweets.

Evaluate the effectiveness of 2 of the products you identified.

Use ACCESS FM to evaluate each products effectiveness against your problem:

AESTHETICS
CLIENT
COST
ENVIRONMENT
SAFETY
SIZE
FUNCTION
MATERIAL

Also state what you like/dislike about each one and how it could be improved or modified.

Learning Objective: Find evidence to support generalisations.

Your product needs to look and function the way that you intend it to.

You will design and make your product using information to help you solve the initial problem.

Use this sheet to gather information that will support your design ideas.

**SCAFFOLDING
QUESTIONS**

What effect will the size of the sweets have on your design?

What mechanisms could you use to dispense sweets?

How could the product effect the sweets that it stores?

Learning Objective: Gather evidence to support design ideas.

Your product needs to be appealing to its target market.

Use this sheet to research what people like, want or need in the product that you are going to design and make.

Specify what you will design based on that research.

Sum up the results of your research.

**SCAFFOLDING
QUESTIONS**

How could you gather lots of people's views together and decide on which view is the most common?

Will the colour or theme of the product influence a person to buy it?

Survey / questionnaire

Specification for product

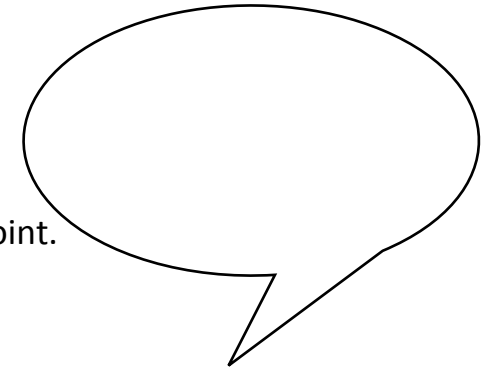
Summary of research

Learning Objective: Acquire and demonstrate new knowledge and skills.

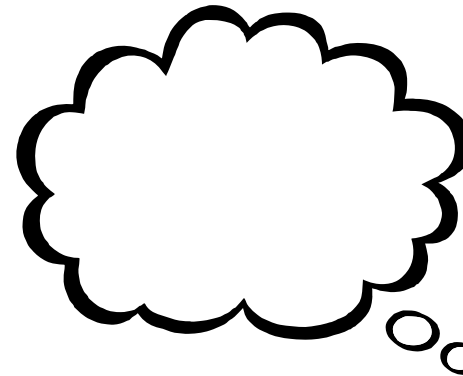
Pillar Drill

1. Select the appropriate PPE for the machine that I am using.
2. Change the drill bit to the size of the hole that I am going to use .
3. Set the depth of the hole that I am going to create so that the drill does not go passed this point.
4. Line up and clamp my work in place.
5. Drill a hole to the correct size and depth.
6. Turn off the machine safely.
7. Leave the machine in a suitable condition for the next user.

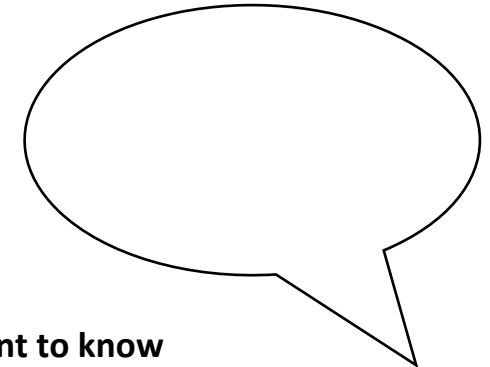
Verbal feedback



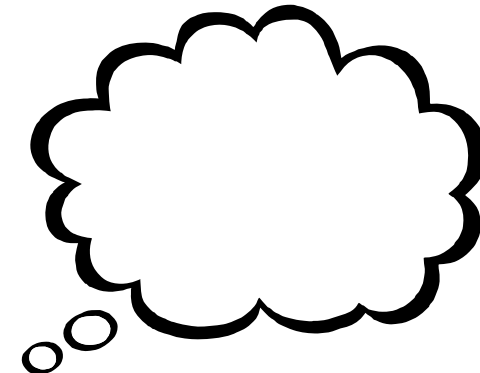
Things I want to know



Verbal feedback



Things I want to know



Measuring, marking out and Sawing

1. Identify the correct measurements to use.
2. Use a ruler, set square and sharp pencil to mark out material at a given length at 90 degrees.
3. Set up a bench hook to hold the work and protect the workbench.
4. Saw a piece of material at 90 degrees straight and accurately.
5. Clean the edges of my work using a draw file.
6. Glue 2 pieces of material together using the correct amount of PVA.
7. Work safely and co-operatively in the workshop area.

Learning Objective: Compile information together to propose alternative solutions.

Using all your investigation material design 4 alternative solutions for a sweet dispenser.

Alternative idea 1

Alternative idea 2

Use colour/ shading / 2D and 3D views to show your ideas.

Remember to Label sizes, materials and features of your design and explain how your investigation influenced these design decisions.

Alternative idea 3

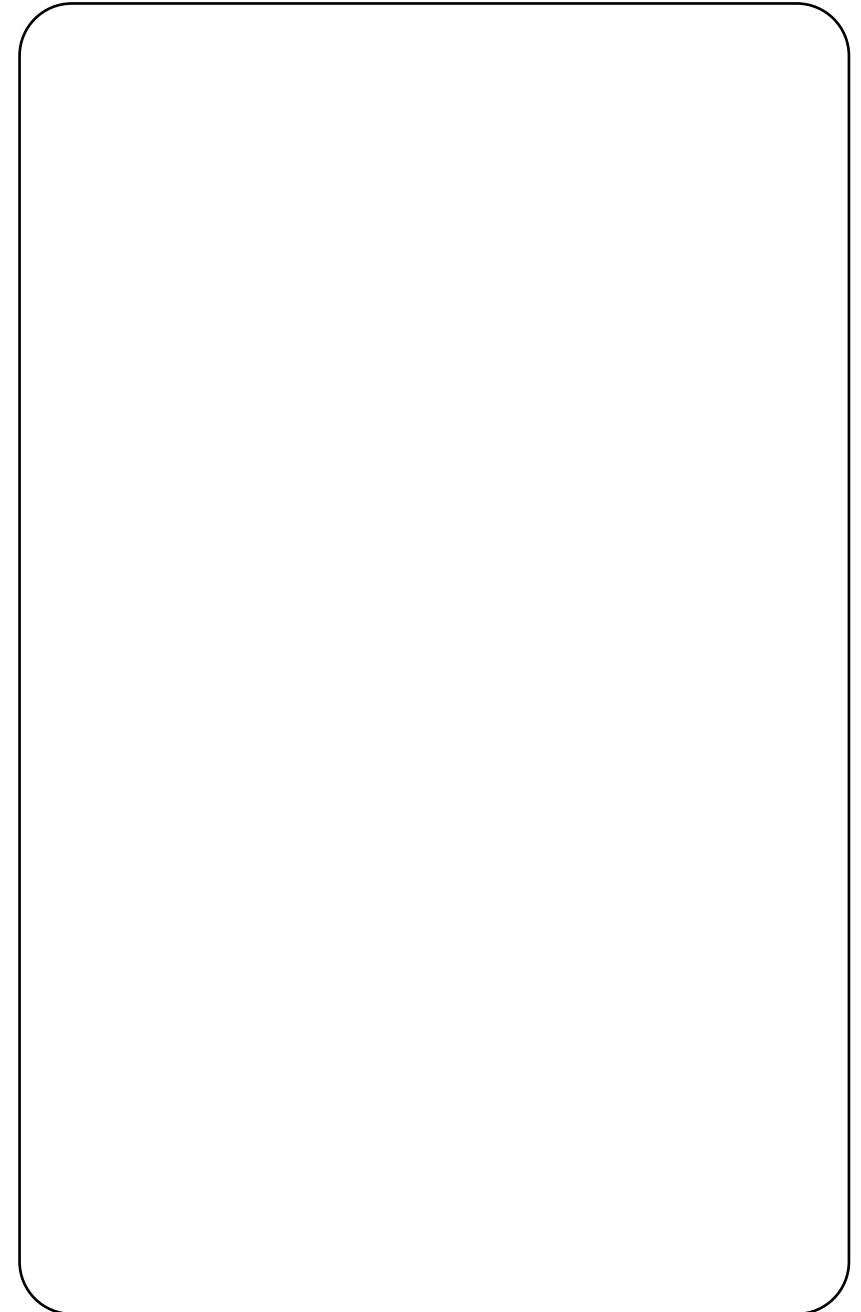
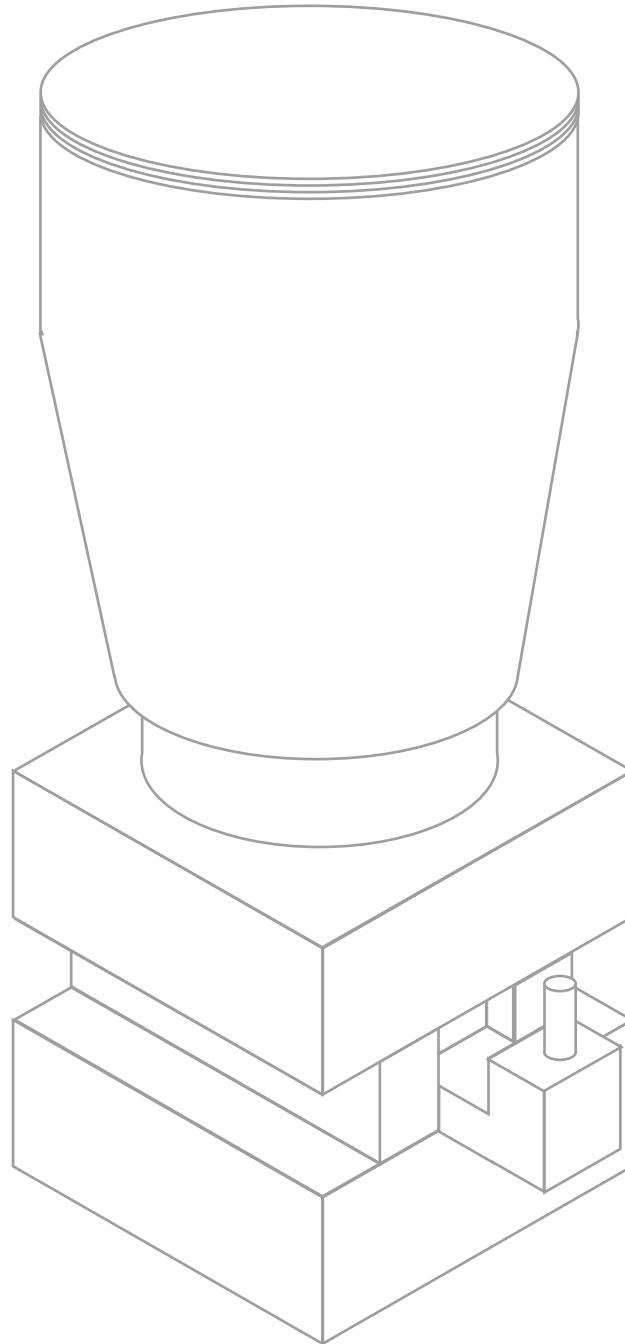
Alternative idea 4

This is a simple outline of what the sweet dispenser will look like. It is drawn in isometric 3D.

Add details to the drawing to make it fun, realistic and appealing to your target market.

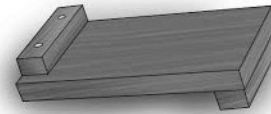
In the space provided draw how you think it will look from the front and side in 2D.

Use colour, texture and rendering techniques to enhance your design.



Learning Objective: Identify tools and equipment and recall what they are used for.

Identify the tools and equipment that you have used below and describe what you used them for.



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Explain how you measured , marked out, cut and joined the sections of your product.

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Learning Objective: Assess the quality of your work, work of others and justify your findings.

Use this sheet to assess your work against the marking criteria. Then get your class mates to give elements of your work a mark. Calculate the average and state whether you agree with the mark that you have gained.

Highlight the statement that best describes your work

2C- Some parts are measured and cut but the parts are not joined and the product is not completed.

2B- Sections of the practical are made well the parts are not joined and the product is not completed.

2A- The parts are cut and joined the product is completed but it lacks a suitable finish.

3C- The product is complete and some attention to detail has been applied to the final finish but there are some inaccuracies with the measurements.

3B- The parts have been accurately measured and cut. Practical is well made and completed to a good level with a some attention to the final finish.

3A- Overall the practical is completed and it looks well made. Most of the measurements are accurate.

4C- The overall product looks professional and well made and all the measurements are accurate.

4B- The overall product looks professional and well made and all the measurements are accurate. There have been extra features added to enhance the product.

4A- Product looks professionally made and CAD/ CAM enhances the overall finish of the product

Your Marking	0 - 10
Design	
Square	
Base	
Dispensing	
Finish - Sanding	
Finish	
Finish – Pencil Marks	
Total:	

Class Mate 1	0 - 10
Design	
Square	
Base	
Dispensing	
Finish - Sanding	
Finish	
Finish – Pencil Marks	
Total:	

Class mate 2	0 - 10
Design	
Square	
Base	
Dispensing	
Finish - Sanding	
Finish	
Finish – Pencil Marks	
Total:	

Teacher Mark	0 - 10
Design	
Square	
Base	
Dispensing	
Finish - Sanding	
Finish	
Finish – Pencil Marks	
Total:	

Marks	Level
32-35	4a
29-32	4b
25-28	4c
21-24	3a
17-20	3b
13-16	3c
8-12	2a
0-7	2b

Average Total:

Do you agree with the mark that you gained?

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How could you improve next time?

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Grade:

Look at all the products in and around your house. Create a fact sheet about all the products made from wood in your house

Tips:

Draw the products.

Name the products.

Say where they are used.

How much do they cost.

Why do you think they are made from those types of woods.

Feedback

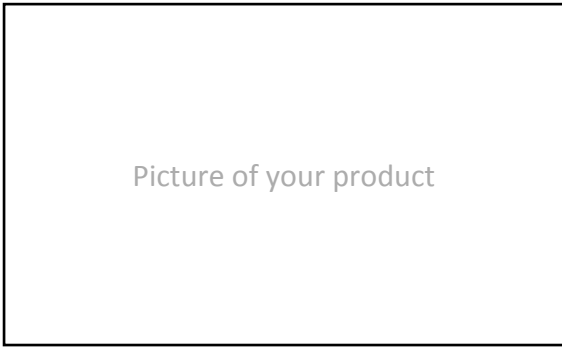
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How to improve

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Learning Objective: Validate the quality of your work against set criteria.

Evaluate the effectiveness of your product against the specifications that you wrote at the beginning



Picture of your product

A series of horizontal dotted lines for writing answers to the evaluation questions.

Double check your work

Spelling

Punctuation

Grammar

Key Words

Three horizontal dotted lines for writing key words.

Further Questioning

What else would you like to know about this topic?

Two horizontal dotted lines for writing further questions.

Key Points and Facts

Something you have learned

Two horizontal dotted lines for writing key points and facts.

What Went Well

Something you enjoyed

Two horizontal dotted lines for writing what went well.

Even Better If

What could be better?

Two horizontal dotted lines for writing even better if.

Feedback

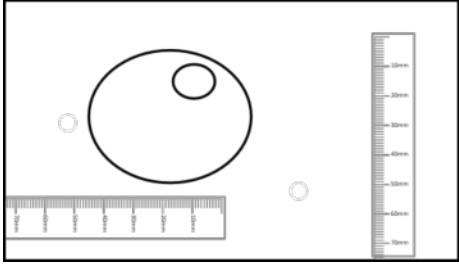
Two horizontal dotted lines for writing feedback.

Learning Objective: I can sequence information to show how I made my product.

Produce a step by step plan to explain how your product could be manufactured. Use diagrams and describe steps in the correct sequence.

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Step 1



First I measure my sweet to be dispensed to find the size of the hole that I need. I will use millimetres so that it is more accurate.

Step 2



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Step



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Step



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Step



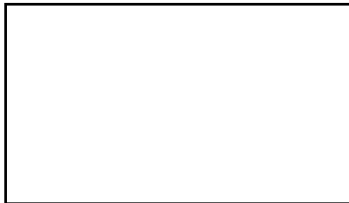
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Step



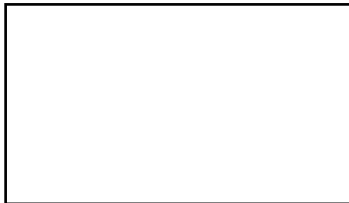
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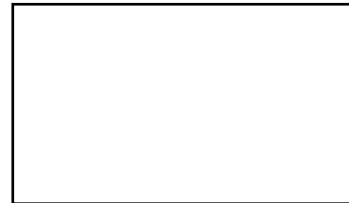
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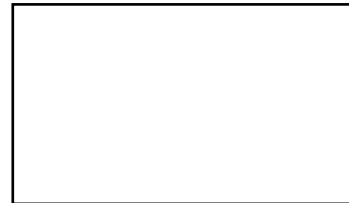
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Step



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Step



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Double check your work

Spelling

Punctuation

Grammar

Key Words

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