Muinín Catalyst STEAM Education for Sustainable Development and Futures Literacy

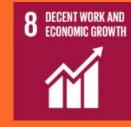
SGD9 Future of Space



Programme Phase 3: Implementation

Micro-Module 1: Space Design Challenge - Problem to Pitch

SUBJECT AREAS: Art and Design, Climate Action and Sustainable Development, Technology











SDG 9 Future of Space

Micro Module 7: Problem to Pitch Space Design



MM7: Space Design Problem to Pitch

Phase 3 Implementation

Subject Areas: Art and Design, CPSE, Climate Action and Sustainable Development, Engineering, Technology, SPHE

8 DECENT WORK AND ECONOMIC GROWTH



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



16 PEACE, JUSTICE AND STRONG INSTITUTIONS



17 PARTNERSHIPS FOR THE GOALS



Problem to Pitch is a core project-based learning module that can be adapted to any topic. It introduces students to the concept and process of Design Thinking; the cognitive, strategic and practical processes for creative problem solving.

Adapted for The Future of Space this module encourages students to engage and explore real-world space related problems and concerns in meaningful and tangible ways. The module encourages the development of 21st Century skills supporting students to keep up with the lightening pace of a constantly changing technologised world.

Design Thinking helps the students to understand that they can create their own future by enabling them to design their own experiences and participation.

Using linked learning and systemic thinking with practical methods of learning, including inquiry and project-based methods, the activities support teachers and students to undertake projects that address contemporary issues on a local scale, in line with the Sustainable Development Goals, Space4SDGs and the 2030 agenda.

In this project-based learning module, the learner will...

- develop skills of organising, planning and scheduling
- develop awareness of the basics of Design-Thinking for problem-solving
- practice problem solving and critical thinking skills as individuals and part of a group
- be introduced to project management tools such as Lean Canvas, Logic models, 5Ws (who, what when, why where)
- Vision boards and a Pecha Kucha presentation

This module includes:

- Lesson plans
- Accompanying resources
- Project-specific worksheets related to specific goals and other project modules,
- Optional assessments Skill support resources

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As a project support module, building core skills in circular design thinking, it is recommended this is undertaken before focusing on specific modules. The module is designed to work in tandem with the Space4SDGs and the Space Design Challenge Briefs

Further, the lessons can also be supported by working key aspects of with MM4 and MM5

Lesson 1: What is Design Thinking?

Design Thinking is the cognitive, strategic and practical process for creative problem-solving. This lesson will introduce students to the 5 stages of Design Thinking to build a foundational understanding of the process.

Resources: Introduction to Design Thinking, Stakeholder Mapping, Flipped Classroom

Lesson 2: Empathy 1

Stanford Design School's five-chairs exercise encourages students to learn how to develop design principles for a user profile. Students consider the 5 users' needs and develop ideas on paper and create 3D prototypes of their designs. This activity encourages students to iterate on their designs and practice using different materials.

Resources: User profiles worksheet, Empathy Map, Step into the Problem worksheet.

Lesson 3: Defining the Problem

In this lesson students will begin to understand how to define a problem. Students are asked to begin to identify a real problem they have wanted to address on a local or global level, using the SDGs as a starting theme. Students also have an opportunity to develop an awareness of a local problem

Resources: Define the Problem support sheet, Problem Tree worksheet

Lesson 4: Ideate, Generating and Remixing - Ideas

This lesson enables students to develop an understanding of the process of generating ideas starting with their personal experience and then moving into project themes.

Resources: Ideate Remix worksheet and Remix SWOT worksheet

Lesson 5: Ideate 2 Generating and Remixing Ideas 2.0 Good Idea / Bad Idea

This lesson builds on lesson 4 and enables students to develop an understanding of the importance of developing ideas and looking for opportunities to iterate and improve on existing ideas. Students are also introduced to Open Source concepts e.g. iteration and collaboration.

Lesson 6: Prototype Your Idea

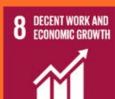
In this lesson students will begin to consider their ideas for prototyping, develop a concept statement and look at ways to prototype their ideas depending on their users / audience.

Resources: Rapid Response prototyping worksheet and Ready, Set, Design worksheet

Lesson 7: Test Your Idea

Evaluating an idea is a key aspect of Design Thinking. In this lesson students will begin the process of testing their ideas with potential users. Students will learn that this is not the end of

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the process and that they may learn something that means they might need to return to an earlier stage e.g. Define or Ideate.

Resources: 5 Ws of Business planning, 8Ws Business planning, Lean Canvas and Zone Map

Model Development and Expertise: Dr Anita McKeown

Adaptations: Rebecca White

Using the Resources:

If you wish to use these resources, we can offer an induction and online support throughout the module to help you plan integration into your projects and timetable. To register for this option, please contact us e:hello@futurefocus21c.com

For more information on the resources please visit www.muinincatalyst.com

Setting up an online learning environment for the lessons on this module:

Our lessons integrate the use of virtual learning environments. To ensure seamless use of our lessons, a module should be setup on your school's virtual learning environment such as Teams, Google Classroom, etc. Learners are encouraged to upload documents to share with their peers. If your virtual learning environment does not support document sharing, we recommend OneDrive or Google Drive.

You can also use Google Sites or Microsoft Sway to encourage learners to present their work over the year - this can easily be set up to reflect the aims of TY and provide a showcase for their work as well as an assessment tool.

Setting up a Canva Education account.

As our lessons integrate design, our lessons also refer to Canva. Educators and schools can a free Canva for Education account by registering here: https://www.canva.com/education/

Canva for Education provides primary and secondary school teachers and students with premium features and templates. You can then also set up lessons and invite your learners to the class.

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MM7 L1 WS: DESIGN THINKING INTRODUCTION



WHAT IS DESIGN THINKING?



https://www.youtube.com/watch?v=a7sEoEvT8l8

Working in pairs google these words (or use a dictionary) to find out what they mean and re-write the definitions in your own words

- 1. Ergonmic -
- 2. Context -
- 3. Culture -
- 4. Stakeholders -

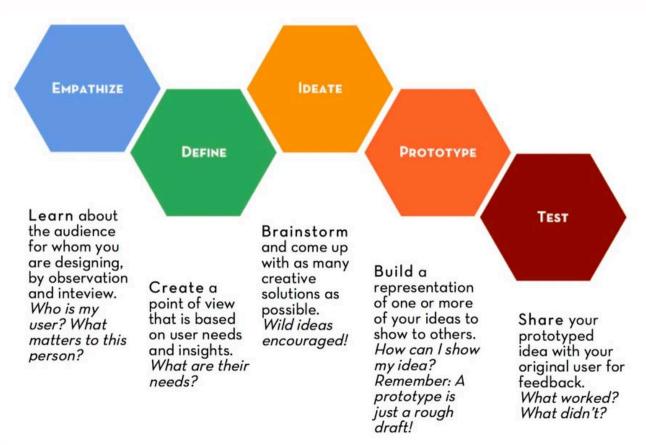
Your answers will be shared with the class to build a vocabulary list and definitions - this is called a glossary



MM7 L1 WS: DESIGN THINKING INTRODUCTION



The 5 stages of Design Thinking:



Before you start to work on your problem or project have a look at each stage and see what you need to think about in any project. You will also have to manage your time as the last three tasks will take more time.



Empathise - Most projects will involve people at some point. What might you need to think about - Discuss with your partner and write down 3 things that might matter to a user / audience member

- 1.
- 2.
- 3.



Define - What's your problem? Often we deal with symptoms - a runny nose, a sore throat but we need to deal with our immune system. In defining your problem you will look at the whole system. Write down 3 problems you know of in your community or the world.

- 3.

MM7 L1 WS: DESIGN THINKING INTRODUCTION



The 5 stages of Design Thinking:



Ideate - This is the stage in the process to think about as many ideas as possible. For now, write down the 2 worst ideas you can think of - swap them with your partner and try to create three good ideas from each others bad ideas.

Bad Ideas. Good Ideas

1.

2.



Prototype- using only 1 piece of paper build or make one of the good ideas above. You will have to be creative, how will you make the shapes; folding, tearing? If you are to fix it together, how might you do this - links, cutting, what other ways of joining things together can you experiment with?

Remember: There is no right answer this is about experimentation - have fun.



Test - The final stage is testing. In this stage you learn about the product, service or idea you have created . Share your 'good idea' prototype with your partner and they will share with you.

Things to discuss / consider:

Test - The final stage is testing. In this stage you learn about the product, service or idea you have created . Share your 'good idea' prototype with your partner and they will share with you.

Things to discuss / consider and questions to ask:

- 1. Who might the user be?
- 2. Look at how it is made remember there were limits to materials so you are looking at their problem solving and creativity.
- 3. Is there anything they could try to make it better or improve it using the materials they had?
- 4. How might you explore the idea further if time and materials were not a limit?

MM7 L1WSB: DESIGN THINKING STAKEHOLDER MAPPING



Stakeholder Mapping

Usually, you will start this by having your decision challenge at the centre of your mapping, in this instance, this will be on one of the Space focused Scenarios below. These challenges align with space exploration with a sustainability focus, and will require careful identification of both space-related and environmentally focused stakeholders.

1. Launching a Space-Themed Pop-Up Store in a Space Tourism Hub

- Imagine you're launching a pop-up store that will be located in a space tourism hub, such as a spaceport or space-themed attraction. This store will sell space-related merchandise, apparel for space travelers, and collectibles celebrating space exploration.
- You'll need to map out key stakeholders such as space tourism companies, local space enthusiasts, government regulators, potential investors, and international space organisations.

2.Organising a Sustainable Space Technology Show Featuring Innovative Space Designers

- You are organising a sustainable space technology show, focusing on eco-friendly innovations for space exploration. The show will feature local designers and engineers showcasing sustainable spacecraft materials, energy-efficient space habitats, and other green technologies for space missions.
- Stakeholder mapping for this challenge would include aerospace companies, sustainable technology advocates, space agencies, space startups, environmental organisations, and tech investors.

Once you select your scenario, In small groups or as a class create a list of all the different individuals, groups, or organisations that you can begin to identify and categorise who you might need to discuss or share your project with. Use the questions below to help you.

1. Launching a Space-Themed Pop-Up Store in a Space Tourism Hub to sell space-related merchandise and apparel. Stakeholder Mapping Prompt Questions:

- Who are the primary customers for the pop-up store?
- Are they space tourists, local space enthusiasts, or the general public? What are their expectations for this store?
- Which space tourism companies or organizations are involved in the area?
- Are there partnerships or collaborations with companies like SpaceX, Blue Origin, or Virgin Galactic that could be valuable?
- What regulatory bodies oversee commercial activities in this space tourism hub?
- Are there local, national, or international regulations that you need to consider, such as space commerce laws or licensing?
- What type of support do you need from local authorities or spaceport operators?
- Do you need permissions, space allocations, or security clearances to operate within the hub?

MM7 L2 WS: DESIGNING FOR USER'S NEEDS



adapted from Standford Design's 5 chairs Design Thinking exercise https://dschool.stanford.edu/resources/the-5-chair-challenge

This exercise highlights 5 users each with different needs, you will identify the users' needs to develop the design principles, which are then used to create a paper design and if time allows a 3D 'prototype'.



What do you notice about their needs?

Read each of the user profiles and underline the important points of each of the user's needs - the clues are in the descriptions. Think about designs ideas for tools and technology to meet their needs.



Marge Simpson, 36, Space Habitat Manager

Marge is responsible for overseeing the general upkeep of the space habitat, ensuring all systems are functioning smoothly. She needs reliable tools and technology to monitor and maintain life support systems, energy use, and other critical habitat operations. Marge also focuses on ensuring the safety and well-being of the habitat's residents.

Think about monitoring systems, alert systems and resource mangement

Image: Download Clipart Marge Simpson Png



Homer Simpson, 39, Spacecraft Maintenance Technician

Homer is responsible for the maintenance and repair of spacecraft docked at the habitat. He needs advanced tools to manage regular system checkups, diagnose problems, and perform repairs, all while adhering to safety protocols. Given the demanding nature of his job, Homer also values technology that helps simplify complex tasks.

Think about diagnostic tools, hands free tools / technology, repair tools

Image: https://clipground.com/images/homer-simpson-clipart-free-4.png



Bart Simpson, 10, Aspiring Space Explorer

Bart is a playful, mischievous kid who spends his time skateboarding, avoiding homework and loves tinkering with the technology in the space habitat, often taking things apart to understand how they work. He needs access to educational and maintenance tools that allow him to safely explore his curiosity without causing harm to critical systems. Marge tries to involve him in minor maintenance tasks but he needs constant supervision.

Think about gamified interactive educational tools that teach about maintenance and repair, safety locked tools

Image: https://clipart-library.com/image_gallery2/Bart-Simpson-Transparent.png

MM7 L2WS: DESIGNING FOR USER'S NEEDS



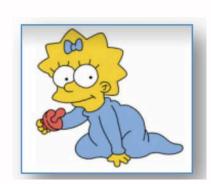


Lisa Simpson, 8, Space Student and Technology Advocate

Lisa is passionate about technology and sustainability, especially in space. She is eager to participate in maintaining the habitat's systems and learning about sustainable space technology. She needs tools that allow her to monitor and analyse the habitat's systems, focusing on energy efficiency and resource conservation.

Think about energy and water monitoring, collaboration with engineers for testing or analysis of sustainability

Image: Stanford D School 5 Chairs activity



Maggie Simpson, 1, Curious Space Baby

Maggie 1, is an active and curious baby who spends most of her time crawling, exploring, and playing. Though too young to actively participate in habitat maintenance, Maggie's safety depends on the proper functioning of technology around her. Her parents need tools and systems that keep her safe from hazards while maintaining the habitat. Additionally, technology should help them manage her needs efficiently in a space environment.

Think about safety and gravity as well as technology checking and perhaps robotic care

Image: Stanford D School 5 Chairs activity



Abe "Grampa" Simpson, 83, Retired Space Pioneer

Abe, 83 is retired and enjoys a slower pace of life. He has been through many space missions in his younger years, and now he enjoys tinkering with small repairs around the habitat in his spare time. However, due to his age, he requires maintenance tools that are simple, easy to use, and safe for elderly hands. He values classic technology but is open to newer, more efficient tools that help him stay involved.

Think about easy to handle or voice activated tools or memory support

Empathy in Design

Image: Stanford D School 5 Chairs activity

Empathy is the ability to put your self in someone else's shoes. It is important to use empathy within design otherwise our designs will not be useful. In a world with limited resources sustainable design must make sure that designs are not wasting valuable resources because they don't work and there was no engagement with the user.

MM7 2WSB USER EMPATHY MAP - EMPATHY MAP

Walking in someone else's shoes

What does your user think and feel?

- What really matters to them?
- What do they think about?
- What are their worries, dreams or aspirations?

What sort of things does your user hear / listen to?

- Where does your user get their information?
- Who might your user listen to or be influenced by?

HEAR

- WHAT DO THEY SAY AND DO
- What other things are they interested in?

What other things might your user do?

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

What does your user see?

- What sort of views might your user see?
- Where might they shop for food / clothes?

SEE

 What might ideas or trends might they notice?

MM7 L3WS: P2P DEFINE YOUR PROBLEM SUPPORT



Problem Solving

First Step in problem-solving - Understand the Problem:

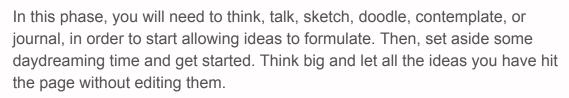
While it may seem obvious, identifying the problem is not always as simple as it sounds. The biggest issue can be identifying the wrong source of a problem. This could mean your attempts to solve it are inefficient or even useless. Remember: Once the correct source of the problem has been identified you need to fully define it before it can be solved effectively.

Things to think about:



- What do I know already about the problem? Make a list.
- Can a picture or diagram help you? Try to visually draw or map the problem.
- Who's telling me about this problem? What is their perspective?
- What do I need to find out?
- Do I need to speak with anyone else about this problem?
- Try rewriting the problem in your own words?
- What do you think the problem is?

Step two: BRAINSTORM





Step Three: Research - How are you going to turn the idea into a reality?



Brainstorming, researching and refining your problem go hand in hand. You will be going back and forth between the three until you come up with a plan. Once you brainstorm some great ideas for your business, you will need to research to learn more about the problem, product or service. In turn, that leads to more brainstorming and refining your problem.

In the next phase you will think of how to turn your idea into a reality. Start to make a make a list of any questions or concerns that come to mind. Its never too early!

- What materials do you need?
- · What will it cost?
- Can you build it yourself or will you need help?
- If you will need to collaborate on this piece, decide who that will be and make plans to work together?



MM7 L3WS: PROBLEM SOLVING TREE

Cause and Effect

Find out different ways to solve a problem. Pick the best one.

Cause and Effect

Cause and Effect

I choose solution number because **PROBLEM**

8 DECENT WORK AND ECONOMIC GROWTH











MM7 L3WS: PROBLEM SOLVING TREE

Solution 3

Use your Cause and Effect Discussions to consider possible solutions

I choose solution number because

Solution 1

Solution 3

T PARTNERSHIPS FOR THE GOALS

8 DECENT WORK AND ECONOMIC GROWTH

PROBLEM









MM7 L4 WS: Idea Remix 1

Team Name

Date



This worksheet will help you play with ideas using space technology items.

Fill in the boxes - to work will then work with the whole group to develop a number of possible ideas.



MM7 L2WSB SPACE TECHNOLOGY SOLUTION SWOT ANALYSIS

Name		
Date		



Use this adapted SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis to consider each of your group's Space Technology ideas.

Take one idea from each of the group members and work together to complete the boxes for each Space Technology Solution





MM7 4WSc: Step into the problem

This worksheet helps you think about your users and any issues they might have

- What's the Problem A
- Empathy A, Step into the problem

Possible ideas / Solutions:

- What's the Problem B
- Empathy B, Step into the problem

Possible ideas / Solutions:

- What's the Problem C
- Empathy C, Step into the problem

Possible ideas / Solutions:

Jame.

Assessment

+7

MM7 2WSB USER EMPATHY MAP - EMPATHY MAP

Walking in someone else's shoes

What does your user think and feel?

- What really matters to them?
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SEE

 What might ideas or trends might they notice?

MM7 L5WS: LEAN CANVAS

		PRODUCT MARKET		
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE				
ng on the ear.	We will initially sell online with the goal to being on the shelves of major pet stores by end of year.	We will in	of materials, production marketing, PR.	Product design, sourcing of materials, production costs, engineering, marketing, PR.
	ams s of revenue	Revenue Streams List your sources of revenue	tts	Cost Structure List your fixed and your variable costs
	campaign.			separate carriera device triat can be worn by your pet, but nothing exists that works as a GPS, camera and communication device in one.
Early adapters are pet owners who love to keep up and own the latest tech innovations as soon as they oome out.	Give away for free to celebrity pet owners and celebrity TV personalities on Animal Planet, then do a billboard, print and web and social media	Love Paws is the Nest of pet tracking devices.	Number of units sold.	There are various collars on the market that track your pet's location. Some track steps and various other stats. There is a
Early Adopters List the characteristic of your ideal austomer	Channels List your path to customers	High Level Concept List your x for y analogy (e.g. youtube = flicker for videos	Key Metrics List the key numbers, that tell you how your business is doing	Existing Altematives List how these problems are solved today
high income, tech-sawy pet owners who spend a significant time away from their pets.	I am Cesar Milan, world famous dog trainer and I have my own TV show and numerous celebrity dients.	Love Paws makes it possible to be with yourpet even when you' re:away.	all times. worry that pet is up to no good when home alone-you will be able to see what your pet is doing at all times. miss pet and want a way to connect while at work-you will be able to connect using your voice while you're away	-worry that pet will get lost -worry that pet is up to no good when home alone -miss pet and want a way to connect while at work
Customer Segments List your customer segments and users	Unfair Advantage Somthing, that can't be easily copied or bought	Unique Value Proposition Single, clear compelling message, that turns an unaware visitor into an interested prospect	Solution Outline a possible Solution for each problem worry that pet will get lost-you will be able to track your net at	Problem List your customer's top 3 problems



PROBLEM	SOLUTION	UNIQUE VALUE PROPOSITION	UNFAIR ADVANTAGE	CUSTOMER SEGMENTS
List your top 1-3 problems.	Outline a possible solution for each problem.	Single, clear, compelling message that states why you are different and worth paying attention.	Something that cannot easily be bought or copied.	List your target customers and users.
EXISTING ALTERNATIVES List how these problems are solved today.	KEY METRICS List the key numbers that tell you how your business is doing.	HIGH-LEVEL CONCEPT List your X for Y analogy e.g. YbuTube = Filckr for videos.	CHANNELS List your path to customers (inbound or cutbound).	EARLY ADOPTERS List the characteristics of your ideal customers.
COST STRUCTURE List your fixed and variable costs.		REVENUE STREAMS List your sources of revenue.	AMS	



INTRODUCTION

Watch the following video: 'What is Design Thinking?' https://www.youtube.com/watch?v=a7sEoEvT818

Answer the questions below. You can re-watch the video as many times as you need to.

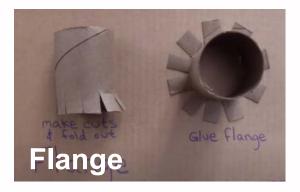
a) What or who does design thinking help you focus on?	
b) How do design thinkers learn?	_
c) What do simple prototypes do?	
d) What do rapid prototypes do?	_
e) If you ideate, prototype and test too early - what are three mistakes that can be made?	
f) Write down the two reasons for using design thinking.	
g) What are the five stages of design thinking?	

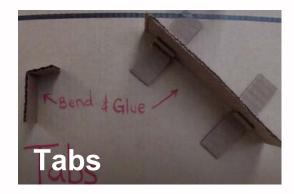
Watch the video: 'How to make a cardboard prototype' https://www.youtube.com/watch?v=k_9Q-KDSb9o Write down as many tips as you can.

READY, STEADY, BUILD: KNOWLEDGE GATHERING

Today we are going to experiment with rapid prototyping with materials that we have to hand. You will explore three basic elements - useful for rapid prototyping:

- Structure
- · Fastening / Joining
- Surface
- 1. <u>Structure</u> this will provide support and form to your prototype. The structure provides strength by load-bearing if re-enforced or solid, e.g. columns or supports for covering, or other materials, e.g. tent poles. Here's some simple tips for creating structure.





INDUSTRY, INNOVATION AND INFRASTRUCTURE





Watch the short video on structural techniques - all these processes can be scaled up to make bigger models and forms.

Write down the key ideas in the video. Use bullet points.

Creating 3D sculptures https://www.youtube.com/watch?v=pi6Y7yCz7Y8

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

2. <u>Fastening / joining and attaching</u> - this can be done using structural approaches, such at slots and tabs, or using other materials like pins, paperclips, string tape or glue.







Some techniques can be both structural and used to join things together like the slots / tabs here on the left.

What other ways do you know of joining things together? Discuss this in your group and make a list.

Knots are another useful joining technique- here's a useful website for learning to tie knots https://www.animatedknots.com/complete-knot-list

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

3. <u>A surface</u> - a surface has a number of functions, such as protection, decorative, textural, adhesive, and are made from numerous materials, e.g. plastic, wood, fabric, paper, both natural and synthetic.



Sometimes they can be structural as well as serving other functions. This surface material could provide support and be used as an attachment or joining function as well as offering a decorative purpose.



Natural materials often have other properties such as insulation, waterproofing, protection as well as being structural, making them good for outdoor construction.



Waterproof, or those that are water repellent materials (hydrophobic), are often inspired by nature, whether a rough surface that minimises water contact and absorption or the nanopatterns of insects who fly in the rain undisturbed. You can also treat materials with sprays to make them waterproof.



Safety surfaces can be both decorative and functional. They often use bright colours and recycled materials from other processes. They can be highly durable and so reduce maintenance.



Interior design surfaces, e.g. upholstery, curtains, wallpaper, bedding, worktops, are increasingly synthetic and made from recycled materials, e.g. SeaQual or Econyl from recycled fishing nets. They can be durable, easily cleaned and pleasurable to look at.

MM7 L7WS: THE 5 W'S OF BUSINESS



WHAT WHY WHO WHEN WHERE



1. WHAT Is the problem?

Give 3 reasons for your business, product or service

2. HOW does your solution 'fix' the problem?



3. WHO will use your solution?
Think of 2 - 3 users



4. WHY should anyone buy / use your solution?



5. WHERE / HOW will you reach your customer?



6. WHAT resources do you need for your business?

MM1 L7 WS: THE 5 W'S OF BUSINESS



WHAT WHY WHO WHEN WHERE



7. WHAT will it cost?

8 WHAT is the investment? How will you make the money you need to fund your solution?





9. WHEN should this be done?



10. WHEN / HOW will you know you are successful?



11. WHAT do you need to do next?

MM7 L7WSB: LEAN CANVAS

	Solution	noitiagnad and a variable	Infair Advantage	O estomor Somonte
Problem List your customer's top 3 problems	Outline a possible Solution for each problem worry that pet will get lost-you will be able to track your pet at	Single, clear compelling message, that turns an unaware visitor into an interested prospect	Somthing, that can't be easily copied or bought	List your customer segments and users
-worry that pet will get lost -worry that pet is up to no good when home alone -miss pet and want a way to connect while at work	will be able to track you pet at all times. worry that pet is up to no good when home alone-you will be able to see what your pet is doing at all times. miss pet and want a way to connect while at work-you will be able to connect using your voice while you're away	Love Paws makes it possible to be with your pet even when you' re away.	I am Cesar Milan, world famous dog trainer and I have my own TV show and numerous celebrity dients.	Ideal customers are middle to high income, tech-sawy pet owners who spend a significant time away from their pets.
Existing Alternatives List how these problems are solved today	Key Metrics List the key numbers, that tell you how your business is doing	High Level Concept List your x for y analogy (e.g. youtube = flicker for videos	Channels List your path to customers	Early Adopters List the characteristic of your ideal customer
There are various collars on the market that track your pet's location. Some track steps and various other stats. There is a	Number of units sold.	Love Paws is the Nest of pet tracking devices.	Give away for free to celebrity pet owners and celebrity TV personalities on Animal Planet, then do a billboard, print and web and social media	Early adapters are pet owners who love to keep up and own the latest tech innovations as soon as they oome out.
separate cantera device that can be worn by your pet, but nothing exists that works as a GPS, camera and communication device in one.			campaign.	
Cost Structure List your fixed and your variable costs	ts	Revenue Streams List your sources of revenue	ams s of revenue	
Product design , sourcing of materials, production costs, engineering, marketing, PR.	of materials, produαion marketing, PR.	We w≡ sh	We will initially sell online with the goal to being on the shelves of major pet stores by end of year.	ng on the ear.
				9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
		PRODUCT MARKET		



PROBLEM List your top 1-3 problems.	SOLUTION Outline a possible solution for each problem.	UNIQUE VALUE PROPOSITION Single, clear compelling message that states why you are different and worth paying attention.	UNFAIR ADVANTAGE Something that cannot easily be bought or copied.	CUSTOMER SEGMENTS List your larget customers and users.
EXISTING ALTERNATIVES List now these problems are solved today.	KEY METRICS List the key numbers that telf you how your business is doing.	HIGH-LEVEL CONCEPT List your X for Y analogy e.g. YouTube = Fitchr for videos.	CHANNELS List your path to customers (inbound or outbound).	EARLY ADOPTERS List the characteristics of your ideal customers.
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MM7 L7WSC: THE 8W'S OF BUSINESS PLANNING

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



1. WHAT are you planning to do?



2. WHY do you want to do this project? WHO will benefit?

3. WHEN and WHERE will the activity take place?

Date:

Time:

Location:



4. WHAT funds are needed to do this activity?

MM7 L7WSC: THE 8W'S OF BUSINESS PLANNING

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



5. WHO needs to approve this project

8 WHAT kind of publicity is needed? WHEN?

Type of publicity When needed?

- 1.
- 2.
- 3.
- 4.

7. WHO will do the WORK?

1 Task 3 Task

Person Responsible Person Responsible

Date Due Date Due

2 Task 4 Task

Person Responsible Person Responsible

Date Due Date Due





WHAT went well? WHAT didn't go well?

WHAT would you do differently next time?

WHO needs to receive a thank you note? Name WHO will write it?

MM7 L7WS: CREATE A VISION / MOOD BOARD





TEP 1 THE 'WHAT' OF YOUR BUSINES

Develop an image that represents the reason for your business - the 'problem' you want to fix. Use pictures, texts or quotes that help you tell what your business is.



Develop the central message this is an image that will represent your business idea.

Keep it colourful and visual Our brains love images.

Use can use Pinterest,
Google images, cut out images
and texts from magazines and
drawings

Vision board examples on Pinterest. https://www.pinterest.ie/scrap pinmichele/vision-boardsamples/?!p=true



STEP 3 THE 'WHO 'OF YOUR BUSINESS Develop an image of the people who will use your business. Use pictures, texts,

quotes, statistics that help to you define

your customers.



STEP 4 THE 'HOW' OF YOUR MARKETING

How will you reach your customers? Use pictures, texts and quotes, that help you tell the reason for our

ousiness.

STEP 2 THE WHY OF YOUR BUSINESS

Develop an image that will show what your business will provide for people or fix their problem. Use pictures, texts and quotes that help you show how your business helps your customers.

MM7 L7WS: CREATE A VISION / MOOD BOARD









STEP 1 MATERIALS

You can choose to do your vision board online but if you make it you will need to gather card board, card /paper, glue, scissors, images.



be responsible for one of the four sections in the image board worksheet.

STEP 3 PLANNING YOUR BOARD

As a group you can start to plan the size, shape and format of your vision board - see examples but don't be limited. It should reflect your project.





STEP 5, ORGANISE YOUR INFO

Begin to gather images that tell the story

STEP 4 GATHERING IMAGES

cut outs, images printed from Google or Pinterest or if digital, you can scan your

images online.

of your project - you can use drawings,

You can organise the sections in different ways - think about your audience - who are you trying to reach? Look at examples of posters, communication for that audience.



REMEMBER MESSAGE AND AUDIENCE

- 1. Will they read left to right?
- 2. Will you direct them how to read using arrows or numbers?
- Will your central idea be the biggest image?





CREATIING A DIGITAL VISION BOARD USING CANVA

Step 1: Gather and share your digital Images

When you have decided who is working on what section – gather your digital images and save them all together in a folder. You can create and use a shared drive folder to work in a group.

Step 2: Open an account in Canva

https://www.canva.com/

Step 3: Open a new design in Canva

Design," and choose the template you like, perhaps poster Once you're signed in, you'll want to click "Create a or photo collage.

USE CUSTOM DIMENSIONS. You can see this in the top If you plan on printing your vision board, you can choose right of the screen.

Step 4: Import your images into Canva





HTTPS://WWW.PINTEREST.IE/SUNFLOWERWA YS/CREATING-A-VISION-BOARD/

MM7 L7WS: ZONE MAP EXERCISE

A zone map allows us to start from ourselves Zone 0 (our project or our town) and include other people, places or things in relationship to ourselves Zone 1 - 5

Zone 4 - Location of county e.g. Munster or Ireland Zone 5 - Location of province or country e.g. Ireland or

Zone 1 - Location of project e.g. school or town

Zone 0 - the self, the project

Zone 2 - Location of school or town

Zone 3 - Location of town e.g. Iveragh, Kerry

Europe Zone I Zone 3 Zone 5