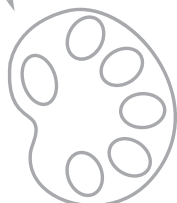
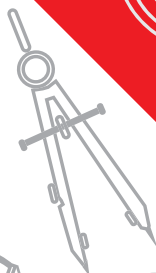
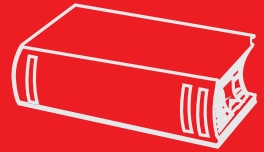


# *Enterprising Skills for the 21st Century*

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## Teacher handbook

Naomi Birdthistle  
Carla Riverola



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# Foreword

It goes without saying that we have entered a period of change like none other in human history. We have entered a new period of revolution: work is being transformed by artificial intelligence (AI) and robotics. The tasks and jobs that AI and robotics cannot replace in the next decade, and the new jobs that will emerge, are the ones that require high levels of creative thinking and emotional intelligence. It is even likely that people will have to create their own employment futures; that is, to be entrepreneurs.

According to new research, uninspiring workplaces, stress, and a lack of room for individual concentration are all contributing to the risk of a 'creativity crisis' (Bourne 2017). "Innovation is critical to growth, particularly as the speed of business cycles continues to increase". That said, while 84% of corporate executives agree on the importance of innovation, only 6% are satisfied with innovation performance within their organization. If you want your employees to excel at problem-solving, it's essential that you create an environment that encourages innovation and creativity in the workplace (Roth et al., 2017).

The ability to think creatively, to think like an innovator and think like an entrepreneur is vital if a person is to be employable in the new economic environment.

Yet, we persist in educating young people for an industrial era.

Some of the world's most successful entrepreneurs didn't even complete their formal years of schooling. They became entrepreneurs in spite of their education, not because of it.

It is true, you still need to have a deep understanding of knowledge but in this new age you need something more: the ability to create new knowledge and generate new ideas. We need to equip young people with the skills and dispositions they need to thrive in a digital and gig economy.

Thankfully there are educators who have recognised the problem and are designing solutions. Griffith University is one of those educators. Their work has resulted in this practical resource that helps teachers embed the lofty, aspirational statements about 21st century skills in the classroom and students be better equipped to create their own futures.

**Dr Paul Browning**  
**Headmaster St Paul's School**

# Introduction

Employers in the 21st century are seeking employees who display a set of skills such as flexibility, resilience, teamwork and creativity.

These skills are known broadly as 21st century skills and are essential for navigating the working landscape of the future. The literature has argued that students develop their ability to make positive and successful contributions as employees and employers because of the skills they learn in school and their interaction with subjects that have a 21st century skills lens. This **handbook** has been designed to assist teachers to embed these 21st century skills into their curriculum by interacting with exercises that are aligned with the various skills.

## Importance of 21st Century Skills

21st century skills are essentially the abilities and attributes students are required to possess, to enhance their ways of thinking, learning, working or living in the modern world. These transferable skills enable students to be able to thrive in a work environment that is ever changing and adapt to the new approach to learning. Embedding these skills into curriculum (specifically from a young age), has proven to reduce anxiety and stress, as well as improve the success of a student in academia and career. Further, as the world is complex and constantly changing, it is difficult to predict what circumstances the future holds. The development of 21st century skills, allows students to have the ability to tackle complex problems and flourish in any environment or industry.

The list of 21st century skills vary depending on what you read. For example, the [World Economic Forum](#) (2015) discusses the importance of developing a suite of skills to ensure students are employable for their future career. Employers are seeking soft skills that allow a person to interact positively with others, combined with a specific skillset and an analytical mindset. The WEF breaks down these skills into three key categories, these being: foundational literacies, competencies, and character qualities. The top 10 skills highlighted by this resource are as follows:

1. Complex problem solving
2. Critical thinking
3. Creativity
4. People management
5. Coordinating with others
6. Emotional intelligence
7. Judgement and decision making
8. Service orientation
9. Negotiation
10. Cognitive flexibility

The [Applied Educational System](#) brings attention to the fact that we are currently in an Information Age, and as such, students need key skills in order to succeed in the 21<sup>st</sup> century work force. All these skills help students keep up with modern markets and adapt to changes. These skills are as follows:

- Critical thinking
- Creativity
- Collaboration
- Information literacy
- Media literacy
- Technology literacy
- Flexibility
- Leadership
- Initiative
- Productivity
- Social skills



From an Australian perspective we have reviewed what some of the States identify as the 21<sup>st</sup> century skills. For example, the [Queensland Curriculum & Assessment Authority \(QCAA\)](#) outlines skills for young Queenslanders that are essential to be developed in the 21<sup>st</sup> century. The department states that students should aim to be innovators, entrepreneurs, lifelong learners and responsible global citizens. Further, QCAA highlights other key skills required for the 21<sup>st</sup> century, which underpin the current general syllabus as follows:

- Critical thinking
- Creative thinking
- Communication
- Collaboration and teamwork
- Personal and social skills
- ICT skills

Similarly, in Victoria, the [Victorian Curriculum and Assessment Authority \(VCAA\)](#) highlights the agreed employability skills in the 21<sup>st</sup> century. Within the VCAA, there is even a subject for entrepreneurship titled *Industry and Enterprise*, which provides students an opportunity to engage in a range of learning activities and assessment pieces. The 21<sup>st</sup> century skills of an employable student, identified by the VCAA, are as follows:

- Communication
- Planning and organising
- Teamwork
- Problem solving
- Self-management
- Initiative
- Enterprise
- Technology
- Learning

The Department of Education in South Australia recognises the importance of the entrepreneurial mindset to thrive in the 21<sup>st</sup> century. To ensure students can develop their entrepreneurialism, the [South Australia Education Authority](#) rolled out the *Entrepreneurial Learning Strategy* in 2018; which is a staged approach to begin embedding entrepreneurial learning into every learning area.

Outlined in the learning strategy are some key skills, which the Government of South Australia see as crucial for students to possess for the 21<sup>st</sup> century work force:

- Resourceful
- Flexible
- Creative
- Global
- Curious
- Optimistic
- Hardworking
- Self-aware
- Self-confidence
- Resilient
- Problem solving

In 2017, the [New South Wales Government – Department of Education](#) conducted an analytical report to determine the key skills individuals required for the 21<sup>st</sup> century. The prominent trends in the studies/research suggested that “as technology reduces the need for workers to complete routine, manual tasks they will spend more time focusing on people, solving more strategic problems and thinking creatively” (FYA, 2017). This means students require not only a broad and deep knowledge in key disciplines, but also a range of transferable skills and capabilities. The NSW Government identified the following key skills for students to thrive in the 21<sup>st</sup> century (as supported by policy makers, researchers, and practitioners):

- Critical thinking
- Creativity
- Metacognition
- Problem solving
- Collaboration
- Motivation
- Self-efficacy
- Conscientiousness
- Perseverance

To summarise the views on what the 21<sup>st</sup> century skills are, Table 1 identifies some of the key skills that have been mentioned previously and they are subsequently linked to the expected student outcomes in terms of his/her capacity and/or capability.

**Table 1: A snapshot of the 21<sup>st</sup> century skills**

<b>Creativity</b> – student’s capacity to think creatively and develop new ideas	<b>Innovation</b> – student’s ability to produce a value-added novelty	<b>Leadership</b> – student’s capability of influencing others to attain goals
<b>Confidence</b> – student’s feeling of self-assurance	<b>Teamwork</b> – students’ confidence and effectiveness working as part of a team.	<b>Presenting</b> – students’ ability to present to others to share ideas.
<b>Critical thinking</b> – student’s ability to assess the value of a claim or information and come to a conclusion about what to believe or to do about it	<b>Financial literacy</b> – student’s ability to understand and properly apply financial management skills	<b>Negotiation</b> – student’s ability to bargain to reach an agreement where some interests are shared, and some interests are opposed
<b>Problem-solving</b> – students’ ability to approach challenges and situations where the answer is not immediately clear	<b>Digital literacy</b> – student’s ability to find, evaluate and compose clear information through writing and other media on various digital platforms	<b>Global citizenship</b> – student’s awareness of and understanding of the wider world and their place in it

*Birdthistle et al., (2022)*

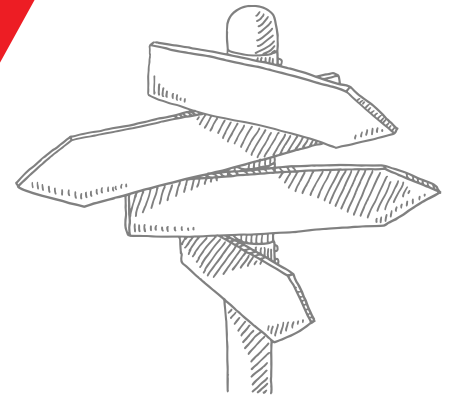
Appendix 1 provides some additional reading on the 21<sup>st</sup> century skills by highlight some of the key skills that are discussed.

### **Online exercises**

*Online exercises are valuable resources for students to develop the invaluable 21st century skills. Currently, there are very limited (and hard to find) online exercises available to teach, test or even assess these skills. These are a few that are currently available:*

- <http://www.atc21s.org/>
- <https://hi-hope.org/help-resources/could-you-be-an-entrepreneur>
- <https://barclayslifeskills.com/i-want-to-develop-my-skills-for-work/school/putting-enterprise-skills-in-to-practice/>

# How to navigate this workbook



Following the report on the 21st century skills (learning, literacy, and life skills) which encompass the skills allocated in the different Australian curriculums, this workbook uses the QCAA terminology for a better mapping with the Queensland curriculum. In other words, this workbook considers the following five skills: Personal and social skills, creative thinking, critical thinking, collaboration and teamwork, and communication skills.

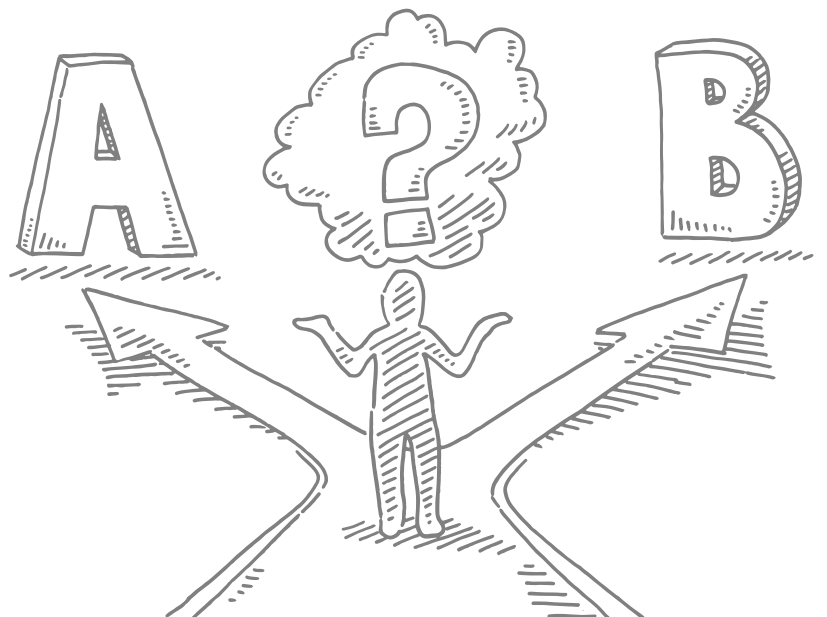
This workbook has been designed for the high school teacher and is divided into three main chapters.

The first chapter discusses the entrepreneurial mindset which provides the opportunity to discuss the traits needed in the future workforce, whether they decide to be self-employed or work in someone else's organization. In other words, this chapter sets the grounds for the meaning of the 21st century skills through innovators, entrepreneurs, lifelong learners, and responsible global citizens.

The second chapter focuses on understanding and strengthening each skill independently. Thus, the chapter is divided into **five** topics (Personal and social skills, creative thinking, critical thinking, collaboration and teamwork, **and** communication) and contains several activities for each of those.

Finally, the third chapter integrates the 21st century skills and proposes activities where students integrate them to solve real-world problems. This helps students see that to face the challenges of the 21st century, these skills are key to complement the technical knowledge acquired through their technical training.

This workbook has a parallel student version. References to the activities in the corresponding student workbook are provided within each activity. At the end of the activities, the workbook also includes a space for teachers to keep their own notes such as their experiences and reminders of the activity conducted.



# Chapter I. Entrepreneurial mindset

Our world is rapidly changing, driven in large part by business; new technologies, new products and services, more efficient and 'green' solutions to old and new problems.

As such, your students' careers will be varied, possibly including working in jobs and industries that are emerging or don't exist yet, working for start-ups, or establishing their own business(es). Success in this changing landscape is built on students possessing 21st century skills, particularly an entrepreneurial mindset. The Australian Curriculum and Queensland Senior Schooling Curriculums (and other state and territory curriculums, see page 2) acknowledge the importance of and need for these skills, and embed them within and across learning areas.

This chapter supports teachers and students in understanding the entrepreneurial mindset, conducting a self-assessment, and developing confidence and familiarity with entrepreneurs and their skills. Divided into four topics with nine ready-to-use activities, including teacher resources and answer keys, the entrepreneurial mindset can be taught as a stand-alone unit, or integrated within or across existing units of work. The topics and activities can be taught sequentially, or you may adapt the unit to best meet the needs of your students.

At the heart of 21st century skills and enterprise skills is thinking differently. Thinking creatively, critically, outside the box, laterally, divergently. Our approaches to teaching and assessment need to adjust to support the development of these skills.

In particular, teachers should focus on:

- Higher order questioning
- Processes over outcomes
- Supportive learning environments that embrace mistakes and growth
- Exploration and investigation
- Providing guidance and support but not answers
- Hands-on, authentic tasks.

## What is an enterprise?

An enterprise is a business or company created for profit ventures.



## What is entrepreneurship?

Entrepreneurship is the activity of designing, developing, and managing a business; taking on any risks associated, in the hopes of making a profit.

## Entrepreneurial mindset

It is a way of thinking characterized by the constant need for improvement, learning and continuous development.

## What is innovation?

Innovation is when an individual develops an idea that improves the way things are done or pushes the boundaries of what is currently possible. This skill is crucial for students to develop, as it allows them to think creatively, problem solve and apply their technical abilities. As society progresses, it is essential students can be innovative so that they can develop new products/ services for future generations and their potential needs.

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### *Extra resources that teach and assess these terms*

#### Resources and Readings

- <https://www.shopify.com.au/encyclopedia/enterprise>
- <https://www.investopedia.com/terms/e/entrepreneur.asp>
- <https://au.oberlo.com/blog/what-is-entrepreneurship>

#### YouTube Videos

- <https://www.youtube.com/watch?v=0b8JjqVfaXE>
- <https://www.youtube.com/watch?v=6fKVyeGdKxY>
- [https://www.youtube.com/watch?v=\\_LZ7pGICWzo](https://www.youtube.com/watch?v=_LZ7pGICWzo)
- <https://www.youtube.com/watch?v=YHBVjv4MYXE&list=PLH2l6uzC4UEVY8arV3ExtMVamFXTzMtZ4>
- <https://www.youtube.com/watch?v=MdNNGfoxrqA>

## TOPIC 1 The term Entrepreneur

“Entrepreneurship is the activity of designing, developing, and managing a business; taking on any risks associated, in the hope of making a profit.”

For decades, entrepreneurship has been associated with potential risk and failure which has in turn made this term sound unattractive or even intimidating for some. But where does the term entrepreneur come from? Cast your minds back, and when I say back, I mean back to the 18<sup>th</sup> century when an Irish-French economist, Richard Cantillon, first wrote a book *Essai sur la Nature du Commerce en Général* [English translation is: *Essay on the Nature of Trade in General*], where he contributed the conception of the entrepreneur as a risk-bearer.

*The term entrepreneur originates from the French word “entreprendre” which means “to start” or “to undertake”.*

Understanding the term entrepreneur’s goes beyond understanding self-employment as a career pathway for individuals. It is about understanding the importance of being able to undertake new challenges in the workplace and the role of individuals as empowered leaders for change and growth.

With the digital revolution and foreseeing the 4<sup>th</sup> industrial revolution, the workplace is now much more dynamic, fast changing, and uncertain than what our prior generations grew up with. Thus, employees and employers of the future must be entrepreneurial in the future workplace to stay competitive.

Discussing the term entrepreneur in class is key to changing the negative stereotype associated with the word and building a comprehensive understanding of the attributes that younger generations need to be competent in the future of work.

This topic includes two activities to introduce students to the term “entrepreneur” through exploring different definitions of the term and analysing the impact of real-world entrepreneurs.

### ACTIVITY 1.1: Definition of Entrepreneur

Asks students to examine several definitions of an entrepreneur (see page 3 of student workbook). Encourage them to ask others (family, friends, fellow classmates, teachers). Then, ask them to create a word cloud<sup>1</sup> of all the words associated with the term entrepreneur (this can be done in groups).

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#### *Definitions of an entrepreneur*

*Entrepreneurship is the process of designing, launching, and running a new business which is often initially a small business. The people who create these businesses are called entrepreneurs.* – Wikipedia

*One who organises and manages any enterprise, especially one involving considerable risk.* – Macquarie Dictionary

*A person who sets up a business or businesses, taking on financial risks in the hope of profit.* – Oxford Dictionary

*Someone who undertakes a significant project or activity finding new or better ways of doing things; they are opportunity-aware, take risks and utilise a range of behaviours, such as initiative and innovation, that create value and contribute to their success.* – Australian Curriculum, ACARA

*An entrepreneur is an individual who creates a new business, bearing most of the risk and enjoying most of the rewards.* – Investopedia

<sup>1</sup> To create a word cloud students can view this video of how to create a word cloud in Microsoft Word: <https://www.youtube.com/watch?v=my1JRX84tyc>

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*Notes:*

## ACTIVITY 1.2: Exploring entrepreneurs impact

Ask students to consider examples of actual entrepreneurs (living or deceased) and in their reflection consider what that person has done and who benefitted from their action (see page 4 of student workbook).

Name of entrepreneur	What they did	Who benefits?

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### *Database of Australian entrepreneurs*

**Business News Australia**

<https://www.businessnewsaustralia.com/articles/australia-s-top-100-young-entrepreneurs.html>

This 2021 article outlines Australia's Top 100 Young Entrepreneurs, which contains a mix of cultural backgrounds, genders, and business types.

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*Notes:*



## TOPIC 2 Who are entrepreneurs?

It's been said that entrepreneurs are

- Independent with a strong desire to control situations
- Self-confident and optimistic
- Persistent, determined and show initiative
- Assertive and action-orientated
- Capable of coping with uncertainty but do not take excessive risks
- Good at networking
- Good at relating to others
- Able to create teams, which support their ideas
- Capable of developing a vision
- Excellent communicators

What makes up an entrepreneur? Entrepreneurs hold many unique characteristics, traits, behaviours, motivations, and skills. These are displayed in the table below. You can encourage students to look at the table and identify what characteristics they identify with.

**Table 1: Who are entrepreneurs?<sup>2</sup>**

Characteristics & Traits	Behaviours	Motivations	Skills
- Creativity	- Plan their day	- Control and leading	- Critical thinking
- Passion	- Have proper nutrition and exercise	- Freedom and flexibility	- Creativity
- Motivation	- Position themselves to serve	- Making a difference in the world	- Collaboration
- Product/service knowledge	- Set clear goals	- Personal growth and accomplishment	- Communication
- Ability to network	- Take calculated risks	- Wealth and money	- Information literacy
- Self-confidence	- Know their strengths and weaknesses	- Creating a legacy	- Media literacy
- Optimism	- Hire A-team players		- Technology literacy
- Vision	- Constantly learning		- Flexibility
- Goal mindset	- Always looking for opportunities		- Leadership
- Risk-taking	- Evaluate their actions and priorities each day		- Initiative
- Persuasiveness			- Productivity
- Decision-making			- Social skills
- Tenacity			
- Money management			
- Adaptability			
- Hardworking			

This topic includes two activities where students reflect on the meaning of some entrepreneurial characteristics and assess their own entrepreneurial traits.

<sup>2</sup> Sources:

Indeed, 2020 <https://www.indeed.com/career-advice/finding-a-job/entrepreneur-characteristics>

Sujan Patel, 2015 <https://www.entrepreneur.com/article/246246>

Larry Alton, 2015 <https://www.entrepreneur.com/article/249417>

Martin Zwillig, 2015 <https://www.forbes.com/sites/martinzwilling/2015/08/27/6-top-motivations-that-drive-the-best-entrepreneurs/?sh=79ecb48626ff>

## ACTIVITY 2.1: Defining entrepreneurial characteristics

Present the following words to students and get them to consider what they mean... then present them with the findings (see page 5 of student workbook).

Term	Definition
Reserved	
Passive	
Practical	
Cautious	
Tough	
Confident	
Dependent	
Relaxed	
Outgoing	
Assertive	
Creative	
Adventurous	
Gentle	
Lacks Confidence	
Self-sufficient	
Tense	

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## *Answers*

**Reserved:** Someone who slowly reveals their emotions or opinions.

**Passive:** Someone who accepts and allows what others do, without resistance.

**Practical:** Someone who is concerned with carrying out an objective and can apply their knowledge to real problem.

**Cautious:** Someone who is careful and attempts to avoid potential problems.

**Tough:** Someone who is strong and can tolerate difficult times.

**Confident:** Someone who is certain of themselves and their abilities.

**Dependent:** Someone who depends on others for support.

**Relaxed:** Someone who can remain calm and collected.

**Outgoing:** Someone who is friendly and easily able to speak to others.

**Assertive:** Someone who communicates directly about their thoughts and opinions.

**Creative:** Someone who can use their imagination to develop original and innovative ideas.

**Adventurous:** Someone who is willing to try new things and take risks.

**Gentle:** Someone who communicates with others compassionately.

**Lacks Confidence:** Someone who is unsure of themselves and their abilities.

**Self-sufficient:** Someone who does not need the help of others

**Tense:** Someone who displays the inability to relax because of nervousness or anxiety

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*Notes:*

## ACTIVITY 2.2: Self-assessing your entrepreneurial traits

Ask the students to complete the table below, ticking the box that aligns with them (see page 6 of student workbook).

	Agree	Uncertain	Disagree
You like to participate in activities or projects that allow you to be creative?			
You are a goal setter and plan out your day in order to reach them?			
You like to collaborate with others and usually take on a leadership role in team activities?			
You have great social skills and can connect with others easily?			
You are confident in yourself and your abilities?			
You love to take risks, but always make sure they are calculated?			
You like being in control, and the ability to lead and making all the decisions excites you?			
You can manage your money effectively and use it wisely?			
You love learning, and are always evaluating yourself to determine how you can perform better?			
You want to make a difference in the world, and show others that you have?			

**TEACHER ONLY**



### *Answers and interpretation*

If the student has selected mostly **agree** boxes, then they possess the skills, characteristics, behaviours, and motivations of an entrepreneur.

If the student has selected mostly **disagree** boxes, then they DO NOT possess the skills, characteristics, behaviours, and motivations of an entrepreneur.

If the student has selected mostly **uncertain** boxes, then they may have been confused by the questions and they should retake it after another explanation

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*Notes:*

## TOPIC 3 Risk taking

Risk taking is a common trait of an entrepreneurial mindset. It is the willingness to take a risk and a skill needed in the 21<sup>st</sup> century to break boundaries and discover yours and the world's full potential.

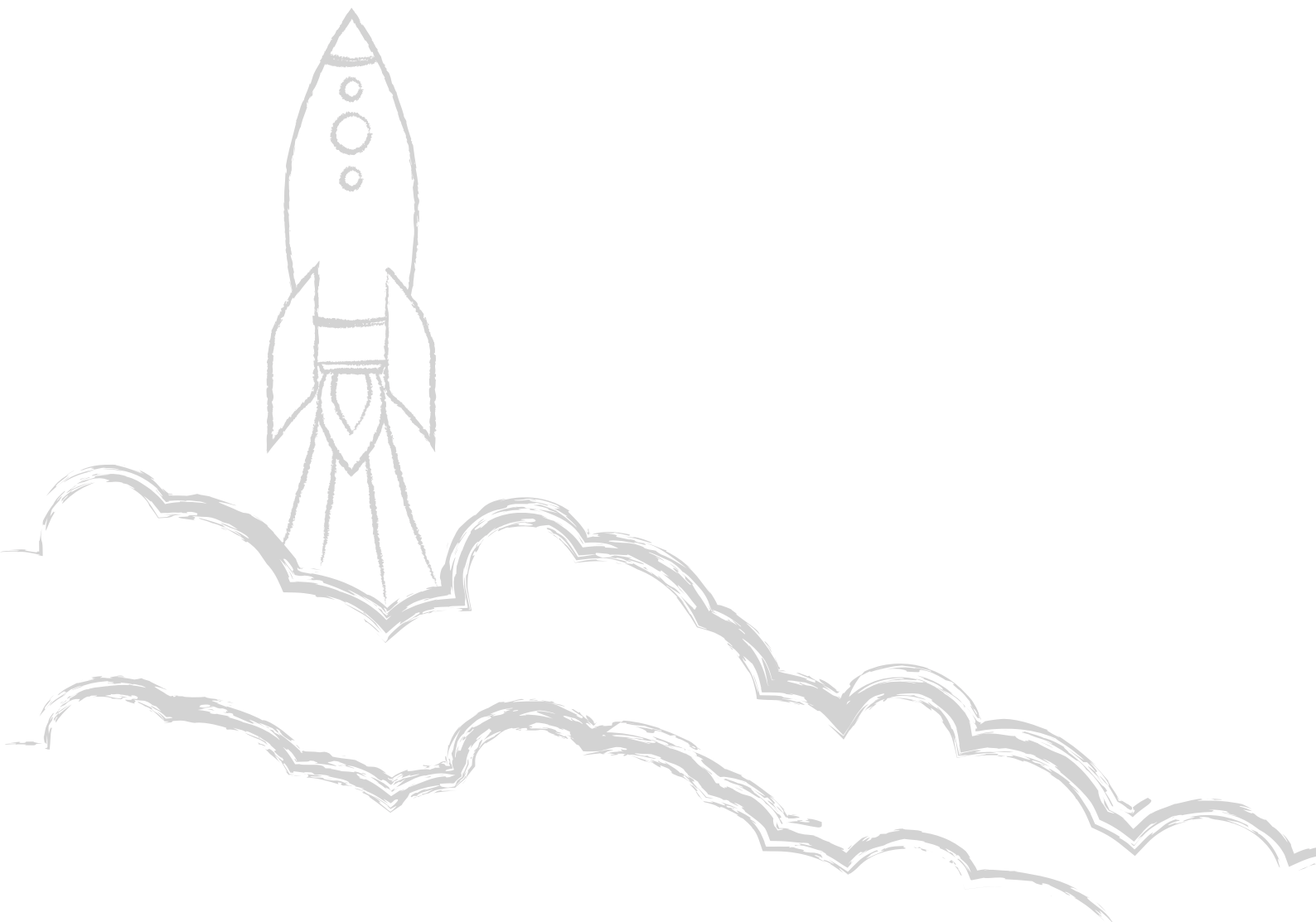
*Risk taking is the act to willingly take a risky action, in the hope that it creates a desired outcome.*

Risk taking does not mean blindly hoping for the best, but rather careful planning and hard work to determine a calculated risk; for example, investing money into a business you believe will succeed.

This skill is highly sought after in the 21<sup>st</sup> century, as it means a student can face the fear of uncertainty and take a leap of faith into a risky situation that they believe will offer them a positive return. By possessing this skill, students can also learn how to grow and be resilient when a risk turns out to be unsuccessful.

Students should be encouraged to examine their skills and aptitudes and in particular their attitude to risk. All entrepreneurs take calculated risks and the ability to assess risk and take appropriate risk is an underlying trait of all successful entrepreneurs.

This topic includes two activities to help students in evaluating their own strengths and attitudes to risk. These tools should enable students to evaluate objectively and improve upon their own skills and abilities.



### ACTIVITY 3.1: Are you a risk taker?

This activity provides a series of questions that will help students self-assess their view of risk taking. Ask the student to tick the answers that they feel apply most to them (see page 7 of student workbook).

Question	Definitely (A)	Maybe (B)	Not a Hope (C)
You have been asked to introduce yourself to someone you have not met before. Would you do it?			
Would you be a vegetarian when none of your friends are?			
You are with a group of friends you admire but do not know very well. They are talking about something you know nothing about. Would you admit it?			
Would you hang out with someone your friends do not like?			
Would you try out a sport your friends are not interested in?			
Would you become friends with someone who is not popular?			
Would you stand up for someone who is being treated unfairly?			
Would you wear your favourite jacket even if it was no longer in fashion?			

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#### *Answers to the quiz*

You can provide the students with the answer sheet if you like or you can use it as a discussion point with the class as a whole.

##### **Mostly As**

You enjoy taking risks. Life is full of risks, but you need to make sure that you calculate the risk involved and keep making smart risk-taking decisions.

##### **Mostly Bs**

You are inclined towards risk but not sure whether you want to take the final step. Gathering more information is always good but don't lose out by not being able to take a risk.

##### **Mostly Cs**

You might be a little too cautious. You may be denying yourself valuable experience and social contact or cutting back unnecessarily on your quality of life.



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*Notes:*

## ACTIVITY 3.2: The wastepaper basket game

The aim of this exercise is to encourage risk taking and risk analysis (see page 8 of student workbook).

You will need the following **MATERIALS**:

1. A wastepaper basket/bin per group
2. Five tennis balls per group
3. A scoreboard (see below)
4. Plenty of space should there be multiple groups doing the exercise at once

**METHOD:** The goal of the game is to try and throw the tennis balls into the basket from the furthest distance and includes three identical rounds.

1. Place the basket in an open space.
2. Mark off distances from the baskets in two-meter intervals up to six meters – 2m, 4m, 6m.
3. Each student will pick a distance marker for the round, either 2m, 4m or 6m.
4. The student will then try to throw all 5 tennis balls into the basket.
5. After their turn, the student will then rate their satisfaction on a scale of 1 to 10 (1 being the lowest).
6. This process is repeated for two more rounds for each student.

### WASTEPAPER BASKET GAME SCOREBOARD

Name	Try	Distance	Hits	Satisfaction

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### *Debriefing of the exercise*

The debriefing should concentrate on judging risks, taking risks; feelings of challenge; satisfaction, frustration, and disappointment.

Finding one's limits often means failing, otherwise the reality of situations would not be appreciated. Failing often requires people to succeed next time.

A knowledge of capabilities and careful assessment of the risk enables people to set themselves challenging but achievable goals. If the goal is too easy people get bored or do not bother because there is no risk. If the goal is too hard people give up or do not bother because there is too much risk.

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*Notes:*

## TOPIC 4 Students meet entrepreneurs<sup>3</sup>

It is important that students learn about entrepreneurs in the real world and not only in the classroom. This way, they can see and experience firsthand, the life of an entrepreneur.

This topic includes an activity where students have an interaction with an entrepreneur. Within these worksheets you are provided with a range of materials, which may be useful to you and your students in planning, experiencing, and evaluating these activities.

This topic includes a set of material for organising a 'visit in' which is where an entrepreneur visits the classroom and/or a 'visit out' where students go to the entrepreneurs premises. It also includes a set of resources to evaluate the visit which is useful for both visit ins and visit outs (see pages 9–12 of student workbook).

Details of the materials included are outlined below:

VISIT IN	Guidelines for the teacher Checklist Confirmation letter to the entrepreneur Thank you letter to the entrepreneur
VISIT OUT	Guidelines for the teacher Checklist Confirmation letter to the entrepreneur Parent permission letter
EVALUATION OF VISIT (FOR VISIT IN AND VISIT OUT)	Student visit preparation Student roles and responsibilities Question master sheet Student evaluation of visit Teacher evaluation of visit Entrepreneur evaluation of visit

<sup>3</sup> Topic 4 content and activities have been directly sourced with permission from: County & City Enterprise Boards (n.d.) *Exploring enterprise: A resource to enhance the teaching & learning of enterprise in 2nd level schools*, Second Level Support Service, Ireland.

## ACTIVITY 4.1: VISIT IN – Entrepreneur visit to the classroom

### Guidelines for the teacher (visit in)

#### ONE WEEK BEFORE THE ENTREPRENEUR VISITS

- Arrange car parking space if required
- Send parking details to the entrepreneur along with a map, include your mobile number in the communication
- Confirm the entrepreneurs visit – day, time, and location

#### DAY OF THE ENTREPRENEURS VISIT

- Arrange a 'greeter' to meet the entrepreneur at a pre-determine time and location
- Remind the students of the visitor coming
- Ensure the students have some questions to ask the entrepreneur
- Identify who will give the gift to the entrepreneur (if appropriate)
- Make sure you have all the necessary equipment for the entrepreneur to deliver his/her presentation (if required)
- Ensure batteries are charged in the camera (if appropriate)
- Ensure your students are neatly dressed and well groomed.
- Ensure the classroom is clean and waste bins empty
- Identify the timekeeper
- Identify a student to introduce the class
- Appoint a question master
- Appoint a member of the class to say thanks at the end and to write a thank you note on behalf of the class

#### DURING THE ENTREPRENEURS TALK

- Ask the student to introduce the class to the entrepreneur
- Introduce the timekeeper to the entrepreneur
- Introduce the entrepreneur to the class
- Confirm with the entrepreneur how long his/her talk will be.

#### AFTER THE ENTREPRENEURS TALK

- Ask the question master from each group to ask their question
- Ask the person to thank the entrepreneur and ensure they stand up and do so
- Ask the entrepreneur to complete the evaluation form
- Escort the entrepreneur out of the school

## AFTER THE ENTREPRENEUR DEPARTS

- De-brief the students
- Get the students to reflect on the talk
- Refer back to the original purpose of the visit and determine if you have achieved all the objectives
- Ask students to complete the student evaluation form
- Complete the teacher evaluation form
- File these forms with subject planning materials for future reference
- Send a thank you note to the entrepreneur



### Checklist (visit in)

- |   |  |
|---|--|
| <input type="checkbox"/> Date and time of visit   | <input type="checkbox"/> Water   |
| <input type="checkbox"/> Name of entrepreneur   | <input type="checkbox"/> Gift  |
| <input type="checkbox"/> Address and phone number of the enterprise                                       | <input type="checkbox"/> 'Do not Disturb' sign                               |
| <input type="checkbox"/> Directions to school given   | <input type="checkbox"/> Questionnaires                                      |
| <input type="checkbox"/> Parking details  | <input type="checkbox"/> Worksheets  |
| <input type="checkbox"/> Directions to car park   | <input type="checkbox"/> Notepad   |
| <input type="checkbox"/> Name of person to greet the entrepreneur at Reception (or change as appropriate) | <input type="checkbox"/> Pens  |
| <input type="checkbox"/> School phone number  | <input type="checkbox"/> Camera to record talk (if agreed with entrepreneur) |
| <input type="checkbox"/> Suitable room booked   | <input type="checkbox"/> Entrepreneurs' evaluation form                      |
| <input type="checkbox"/> Allocation of individual duties/responsibilities                                 | <input type="checkbox"/> Student evaluation form                             |
| <input type="checkbox"/> Equipment required   |  |

**TEACHER ONLY**



*Notes:*

## Confirmation letter to entrepreneur (visit in)

### School headed paper

#### Date

#### Dear XXX

I am writing to thank you for agreeing to visit our school – NAME OF SCHOOL – to meet with a group of XXXXX (insert grade / year of students) students. The purpose of this visit is to provide the students with an opportunity to develop a greater understanding of the principal features of entrepreneurship and to learn from your experience as an entrepreneur. In preparation for the visit the students will prepare a range of questions to ask you about your enterprise.

#### Details of the planned visit to the school are recorded below:

##### Date:

##### Time:

##### From:

##### To:

##### Number of students

The visit should take approximately XXXX. At the end of the visit the students will give you a short evaluation form. We would appreciate if you could complete this evaluation form and return it to the school as soon as possible.

If you have problems with these arrangements, please contact me at the school on XXXXX. I look forward to meeting you on the XXXXX.

Yours sincerely

-----

Teacher name



## **“Thank you” letter to entrepreneur (visit in)**

**School headed paper**

**Date**

**RE: Presentation to XXX students**

Dear XXX

I am writing to thank you for coming to our school and making a presentation about your business to a group of students taking part in the XXXXXX programme at our school. A total of XXXX students engaged in the ‘Visitor to the Classroom’ talk which took place on XXXXX.

The students were delighted with the information presented and they also welcomed the opportunity to ask many questions based on the learning outcomes of the subject they are involved in at school.

If I have not received your ‘Entrepreneur evaluation form’, I would appreciate if you could return it to the school at your earliest convenience. Your comments and ideas are important to us in reviewing the activity and in scheduling and planning similar events in the future.

Once again, many thanks for all your work in preparation for this visit. Wishing you all at XXXXXX every success in the future.

Yours sincerely

-----

Teacher name

## ACTIVITY 4.2: VISIT OUT – The students go to the entrepreneur’s premises

### Guidelines for the teacher (visit out)

#### BEFORE YOU GO ON THE VISIT

- Identify the purpose of the visit out and specify what you hope to achieve by engaging in the visit out exercise
- You must receive written permission from the parents before you leave the school
- Follow the normal school procedure for obtaining permission for an out-of-school activity
- Phone the entrepreneur to confirm that the visit is still on as arranged. Confirm the day, time, and location
- Confirm where the meeting point is
- Confirm where the bus can be parked (if appropriate)
- Make sure you have all the equipment required – notebooks, pens, worksheets. If you have approval for the use of a camera, bring it with you, fully charged
- Remind the students to be neatly dressed and well groomed
- Tell the students where you will be meeting them and at what time
- Identify a timekeeper
- Identify a student to introduce the group
- Appoint the question master
- Appoint a member of the class to say thanks at the end and to write a thank you note on behalf of the class

#### DURING THE VISIT

- Arrive on time
- Ask the student to introduce the group
- Confirm with the entrepreneur how long you have for the visit. Introduce the question master(s) and the timekeeper if appropriate
- Have questions ready to be asked. The question master should have a list of these questions and ask the member of the group to step forward and ask the question
- Students must always be reminded to stay together. They should follow instructions and observe all safety rules, especially if they are given a tour of the business
- When students are asking questions, remind them to speak clearly and always be polite
- Ask the ‘thanker’ to thank the entrepreneur. Refer to two/three interesting aspects of the presentation/tour
- Ask the entrepreneur to complete an evaluation form
- Return to school

## AFTER THE VISIT

- Each student should be encouraged to de-brief and evaluate individually directly after the activity
- Refer back to the original purpose of the visit and determine if you have achieved all the objectives
- Ask students to complete the student evaluation form
- Complete the teacher evaluation form
- File these forms with subject planning materials for future reference
- Send a thank you note to the entrepreneur



### Checklist (visit in)

- |   |  |
|---|--|
| <input type="checkbox"/> Date and time of visit                           | <input type="checkbox"/> Roll of students                |
| <input type="checkbox"/> Name of entrepreneur                             | <input type="checkbox"/> Permission slips from parents   |
| <input type="checkbox"/> Name of anyone else being met                    | <input type="checkbox"/> Worksheets                      |
| <input type="checkbox"/> Address and phone number of the business         | <input type="checkbox"/> Notepad                         |
| <input type="checkbox"/> Directions to the business                       | <input type="checkbox"/> Pens                            |
| <input type="checkbox"/> School phone number                              | <input type="checkbox"/> Camera (if entrepreneur agrees) |
| <input type="checkbox"/> Transportation – Bus/Tram/Other (if applicable)  | <input type="checkbox"/> Entrepreneurs' evaluation form  |
| <input type="checkbox"/> Allocation of individual duties/responsibilities | <input type="checkbox"/> Student evaluation form         |
| <input type="checkbox"/> Questionnaires (if necessary)                    | <input type="checkbox"/> Teacher evaluation form         |

## Confirmation letter to entrepreneur (visit out)

### School headed paper

#### Date

#### Dear XXX

I am writing to thank you for agreeing to facilitate a visit to your business for a group of XXXXX (insert grade / year of students) students.

The purpose of this visit is to provide the students with an opportunity to develop a greater understanding of the principal features of entrepreneurship and to learn from your experience as an entrepreneur. In preparation for the visit the students will prepare a range of questions about the business.

#### Details of the planned visit to your business are recorded below:

#### Date:

#### Time:

#### From:

#### To:

#### Number of students

The visit should take approximately XXXX minutes/hours (delete as appropriate). At the end of the visit the students will give you a short evaluation form. We would appreciate if you could complete this evaluation form and return it to the school as soon as possible.

If you have problems with these arrangements, please contact me at the school on XXXXX. I look forward to meeting you on the XXXXX.

Yours sincerely

-----

Teacher name

## Parent permission letter (visit out)

Date

Dear Parent/Guardian

Your son/daughter is taking part in XXXX subject at school. As part of this subject, a visit has been organised to a local business. The purpose of this visit is to provide students with an opportunity to develop a greater understanding of the principal features of entrepreneurship and also to learn from the experience of the local entrepreneur.

The details of the visit are outlined below:

- Place
- Date
- Departure time
- Return time
- Cost

If you wish your son/daughter to take part in this activity, I would appreciate if you could sign the permission slip below and return it to me by XXXXX.

If your son/daughter suffers from any medical condition that may cause risk to his/her health I would appreciate if you could contact me directly at the school on XXXXX

Yours sincerely

\_\_\_\_\_

Teacher Name

Visit to: \_\_\_\_\_

**I give permission to my son/daughter to participate in the above activity**

Student Name: \_\_\_\_\_

Parent/Guardian signature: \_\_\_\_\_

Date: \_\_\_\_\_

## ACTIVITY 4.3: Evaluation of the visit (BOTH)

### Student visit preparation

Name of entrepreneur giving the talk:

---

Date:

---

#### BUSINESS DETAILS

Business Name

---

Contact person

---

Business address

---

Phone

---

Email

---

Website

---

#### DETAILS OF THE VIST

Time                      From                      To

Format (please tick)

Presentation

Tour

Q&A

Timekeeper:

#### Directions to the business (ONLY IF VISIT OUT EXERCISE)

Give details here:

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#### Purpose of the visit

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---

#### Aim of the talk

---

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**TEACHER ONLY**



## *Questions to ask the entrepreneur*

### **Entrepreneur background**

- Did anyone in your family start a business before you?
- What did you study in school?
- What age were you when you started your first business?
- How valuable has your education been to the success of your business?

### **Business background**

- When was the business established?
- Where was the business set up?
- Why did you choose that particular location?
- Why did you choose that name for your business?

### **Enterprise start-up**

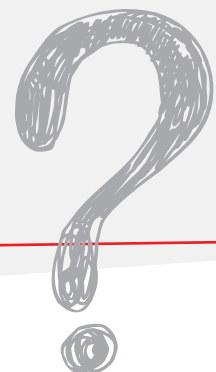
- How did the idea for your business come about?
- How did you know when you had the right idea?
- How do you generate new ideas?
- How did you test your product/service?
- How did you release your product/service to the market?
- Did you experience failure – if so, what did you learn from it?
- Are you a sole trader, a partnership, a limited company, a social enterprise?

### **Personal qualities and motivation**

- What were the main reasons for starting the enterprise?
- What planning did you do before you started?
- What risks do you have to take in this type of enterprise?
- What motivates you?
- What is your favourite part of being an entrepreneur?

### **Entrepreneurs skills**

- What does creativity mean to you?
- How do you network?
- How do you solve problems?
- How did you build your team?
- How did you choose your co-founders? (if applicable)
- What makes a good entrepreneurial leader?
- What would happen if you did not pay attention to the finances of your enterprise?
- How did you develop your prototype (if applicable)?







### **Product/service**

- Please describe your product/service
- Has technology impacted your product/service in any way?
- What competition exists in the market?
- How do you decide on how much to charge for your product/service?
- How do you get your product/service to your customers?

### **Personnel**

- How many people are employed in your enterprise?
- What are the type of jobs performed in your enterprise?
- How do you find people for your enterprise?
- What skills are you looking for in your new recruits?
- What training is important for your employees?

### **Financial**

- Did you get investment to start your business?
- Did you have any difficulties in raising funds?
- Are there any issues in the current environment that has an impact on your enterprise?
- Where do you see your business in 3 – 5 – 10 years' time?

### **Marketing, sales and promotion**

- Who are your main competitors?
- Who are your customers?
- What are your marketing strategies?
- What market research do you conduct?
- How do you sell your products or services?
- What is your percentage of online sales versus other sales?

### **Customers**

- How did you validate your product or service with your customers?
- Did you involve your customers in the design of the product or service?
- Why do your customers buy from you and not others?
- What is unique about your product or service?
- Do you have a procedure for dealing with customer complaints?

### **Sustainability**

- What sustainability measures have you taken?
- Do you know about the Sustainable Development Goals (SDGs)? If yes, which ones do you try to achieve?
- Do you recycle?
- Is your product environmentally friendly?
- Do you source ethical products?

## Student evaluation of visit

Enterprise name: \_\_\_\_\_

Name of entrepreneur: \_\_\_\_\_

Your name: \_\_\_\_\_

Date of visit: \_\_\_\_\_

### Format of visit (please tick)

Presentation

Tour

Q&A

1. Did you enjoy the activity  Yes  No

2. What did you enjoy most about the visit?

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3. Had you enough time for the activity?  Yes  No

4. What went well and why?

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5. What did not go well and why?

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6. Rate the group's performance in the following areas (please circle where 1 = poor 5 = excellent)

Timekeeping of visit	1	2	3	4	5
Interview with entrepreneur	1	2	3	4	5
Getting the information needed	1	2	3	4	5
Working as a team	1	2	3	4	5

7. Describe one thing you learned

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8. List one question you still have

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9. List one possible follow on activity

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---

---

10. How will you record your learning from this activity?

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11. What were your responsibilities in relation to this visit?

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12. To what extent were you able to develop your skills in the following areas?

(please circle where 1 = very little, 5 = a lot)

Carrying out research	1	2	3	4	5
Organising	1	2	3	4	5
Taking initiative	1	2	3	4	5
Problem solving	1	2	3	4	5
Working as part of a team	1	2	3	4	5
Communicating with adults	1	2	3	4	5

13. If you had an opportunity to take part in this activity again what would you do differently?

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Signed: \_\_\_\_\_

Date: \_\_\_\_\_

## Teacher evaluation of visit

Enterprise name: \_\_\_\_\_

Name of entrepreneur: \_\_\_\_\_

Your name: \_\_\_\_\_

Date of visit: \_\_\_\_\_

### Suitability of visit for relevant subject

Please evaluate the enterprise visited using the criteria outlined below:  
(Record a core of 1-5 below where 1 = poor and 5 = excellent)

Accessibility	1	2	3	4	5
Organisation of visit	1	2	3	4	5
Communication with students	1	2	3	4	5
Quality of information provided	1	2	3	4	5
Relevance to curriculum	1	2	3	4	5

### Overall rating of activity (please tick)

- Excellent
- Satisfactory
- Needs Improvement

### PREPARATION FOR THE VISIT

1. Was the enterprise adequately briefed on the aims/objectives of the visit  Yes  No
2. Were the students adequately prepared for this activity?  Yes  No
3. List some of the challenges you encountered when planning this activity.

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4. Identify possible ways of overcoming the challenges listed in question 3 above.

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**THE VISIT**

1. Outline the main benefits to your students of engaging in this activity

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2. List some of the benefits of this activity to you, the teacher

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---

3. In your opinion, how has the school benefited from this visit?

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4. What benefit(s), in your opinion, has this visit brought to the enterprise?

---

---

**AFTER THE VISIT**

1. List some useful methods of de-briefing and evaluating the visit exercise with your students

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2. List some possible follow on activities for your students arising from the visit exercise

---

---

---

3. How may your students use this activity to link with the various tasks/assessment components for their studies?

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4. What improvements would you like to see developed in relation to the visit activity?

---

---

---

Signed \_\_\_\_\_ Position \_\_\_\_\_ Date \_\_\_\_\_

## Entrepreneur evaluation of visit

Enterprise name:	_____
School name:	_____
Your name:	_____
Date of visit:	_____

### PREPARATION FOR THE VISIT

1. Were you adequately briefed on the aims/objectives of the visit?  Yes  No

2. Were there any difficulties for you arising out of this activity?  Yes  No

---

---

---

### THE VISIT

1. Were the students adequately prepared for this activity?  Yes  No

---

---

---

2. Do you think this experience is beneficial to the students?  Yes  No

---

---

---

3. What benefits has this visit brought to your enterprise?

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**FUTURE VISITS**

1. Would you be prepared to facilitate a similar visit at a future date?     Yes     No

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2. If the answer to Q1 above is yes, please suggest any area(s) for improvement with regards to a future visit exercise.

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3. What other link activities (if any) would you be interested in developing with the school?

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Signed: \_\_\_\_\_

Date: \_\_\_\_\_

*Thank you for taking the time to complete this evaluation form*

# Chapter II. Strengthening 21st Century skills

This chapter provides activities and tools that will help you teach and practice the 21st century skills. These are essential transferable skills that move across contexts, ensure job readiness, skills that empower students as confident and flexible agents of change within their own careers, and within the businesses and industries they contribute to.

21st century skills are competencies that can be developed through targeted teaching, authentic experiences and reflective practice. Within this workbook the 21st century skills reference the Queensland Curriculum and Assessment Authority's, however they align closely with many of the Australian Curriculum's General Capabilities and 'soft skills' outlined by other educational authorities.

This chapter provides information, teaching and learning activities across five 21st Century Skills areas:

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## 1. Personal and social skills



## 2. Creative thinking



## 3. Critical thinking



## 4. Collaboration and teamwork



## 5. Communication



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Importantly, the activities and teacher resources in this chapter ensure that students will participate in engaging, authentic tasks that build skills through experience and boost intrinsic motivation to be active and lifelong learners.





## TOPIC 1 Personal and social skills

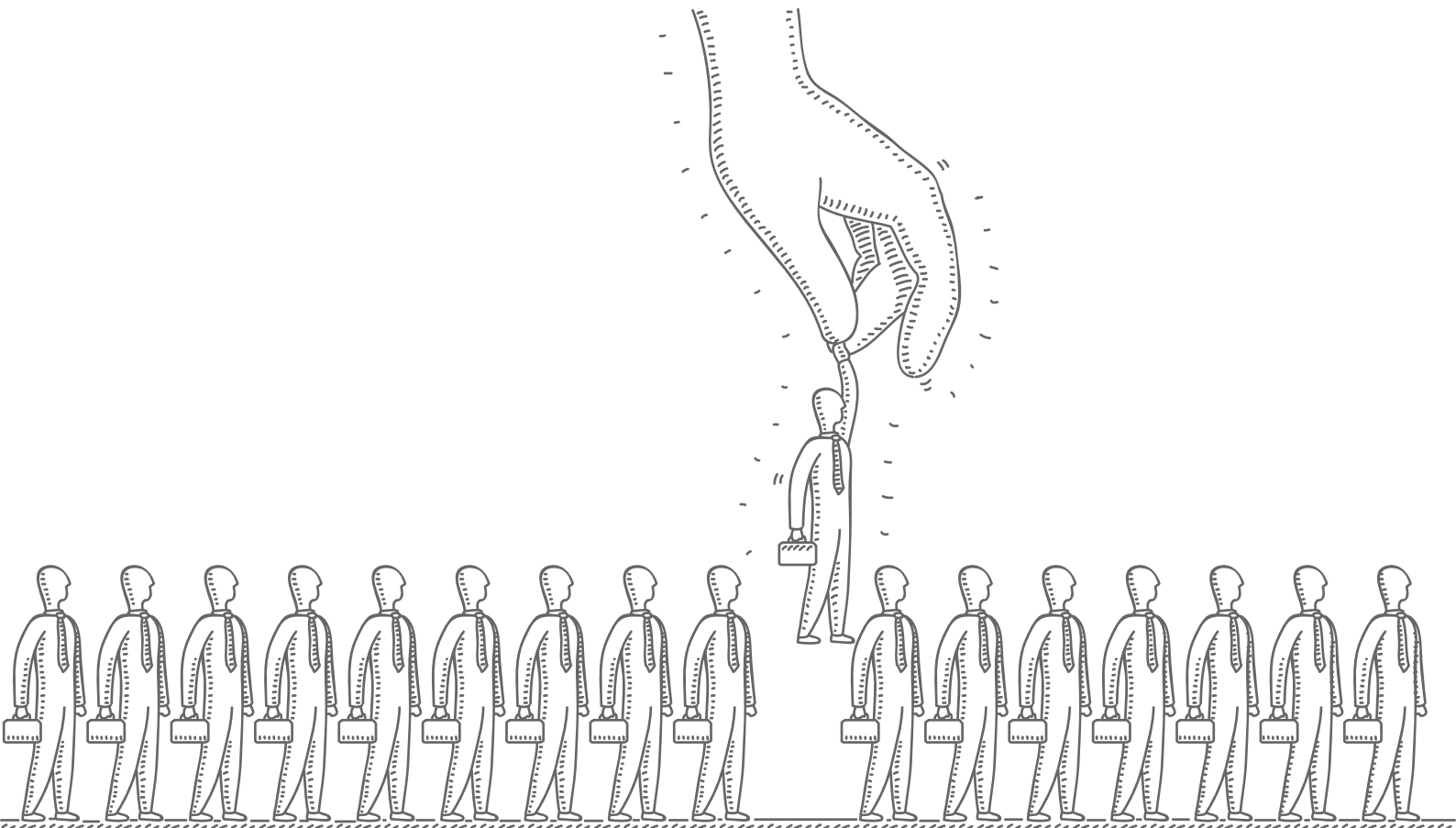
### Description of personal and social skills pillar

Personal and social skills are key to individuals in identifying their own identity, having a clear understanding of their personality, including strengths and weaknesses, and successfully developing relationships with others.

These skills are also key for developing their unique character and taking control through successful management of their time, career, and goals. These are also key in building resilience and flexible thinking that will help them successfully adapt to future challenges and opportunities.

The digital revolution has made the world more connected but also everyone more mobile. Personal and social skills also help understand the meaning of citizenship at a local, state, national or global level, as well as enhanced cultural awareness.

As seen in the previous chapter, entrepreneurs require strong personal and social skills to successfully bring their innovative ideas into new markets. Thus, they exhibit skills such as leadership, negotiation, networking, resilience, key to the 21st century. Thus, this topic includes three activities where students self-evaluate and reflect upon their enterprising skills.



## EXERCISE 1.1: What sort of businessperson are you?

It is quite amazing how an individual's personality traits can be identified by a test. There are all sorts of complex tests that can analyse everything about us. Researchers have analysed hundreds of pig drawings and have discovered that the way you draw a pig can tell a lot about you. Try it and see.

So, ask the students to draw a pig on a blank sheet of sheet. They should do this on their own initially and then they can compare their drawings and results with friends (see page 13 of student workbook).

**TEACHER ONLY**



### *Pig drawing*

The following is an answer key to interpreting the students pig drawing. You can provide the students with this answer key or you can put it up on the board.

<b>If the pig you drew is:</b>	<b>You</b>
Towards the top of the sheet	You tend to be positive, optimistic with a sunny outlook
Towards the bottom of the sheet	You tend to be pessimistic and may be prone to behaving negatively.
Towards the middle of the sheet	You tend to be a realist, very pragmatic
Facing left	You believe in tradition, are friendly and remember dates e.g. birthdays, anniversaries
Facing right	You are innovative creative and active but may not have a strong sense of family, preferring autonomy. You tend to forget dates.
Facing front	You are direct, enjoy playing devil's advocate, not afraid of confronting a bad situation. You also are prone to neither fearing nor avoiding confrontational discussions.
With many details	You tend to be analytical but may also be prone to being cautious to the point that you struggle with trust.
With few details	You tend to be emotional and to focus on the larger picture rather than focusing on details. You also tend to be a great risk taker and may sometimes be prone to reckless and impulsive decisions.
With fewer than four legs showing	You may be living through a period of change, self-reflection
With four legs showing	You have a healthy self-image, may be stubborn, but stick to your principles and ideals.
How big are the ears?	The size indicates how good a listener you are. The bigger the better.
The length of the tail?	This indicates the fun in your life (and again, more is better!)

**TEACHER ONLY**



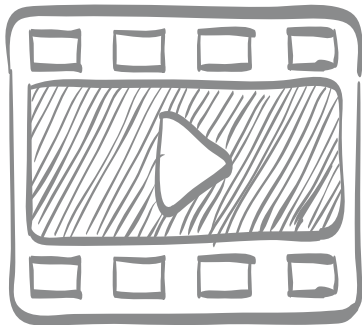
*Notes:*

## EXERCISE 1.2: Reflecting on your entrepreneurial traits

Another way a student can determine if they are an entrepreneur, is utilising online videos. YouTube has many great videos that outline key skills or attributes of entrepreneurs. These videos are listed below in the table and allow students to self-evaluate and determine if they are an entrepreneur.

Ask the students to watch one (or more) video(s). Identify the traits of the entrepreneur and reflect on what traits they already have that makes them entrepreneurial (see page 14 of student workbook).

Name	Link
Am I an Entrepreneur? (3 TOP SIGNS You Were Born TO Start Your Own Business)	<a href="https://www.youtube.com/watch?v=N-Zv7grOMkk">https://www.youtube.com/watch?v=N-Zv7grOMkk</a>
15 Signs You Might be an ENTREPRENEUR	<a href="https://www.youtube.com/watch?v=Jj1898au6C4">https://www.youtube.com/watch?v=Jj1898au6C4</a>
The Entrepreneur Mindset TEST – 100 Questions to Know if you are an Entrepreneur	<a href="https://www.youtube.com/watch?v=_fRbFCDN9rk">https://www.youtube.com/watch?v=_fRbFCDN9rk</a>
Entrepreneur vs Career   Which Are You?	<a href="https://www.youtube.com/watch?v=pkHvtU66sWU">https://www.youtube.com/watch?v=pkHvtU66sWU</a>



**TEACHER ONLY**



*Notes:*

## EXERCISE 1.3: Mapping entrepreneurial characteristics

### Select a video from Activity 1.2.

Having watched a video from Activity 1.2, ask students (in pairs) to discuss the characteristics they think the entrepreneur might display. Present them with this table (see page 15 of the student workbook). Ask them to decide where on the scale of 1 to 10 the entrepreneur lies, they should shade in the appropriate box. For example, if they think an entrepreneur is very reserved, they should shade in box 1 and/or box 2.

Example: A snail is very.....

Slow	1	2	3	4	5	6	7	8	9	10	Fast
<b>Description</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>Description</b>
Reserved											Outgoing
Passive											Assertive
Practical											Creative
Cautious											Adventurous
Tough											Gentle
Confident											Lacks confidence
Dependent											Self-sufficient
Relaxed											Tense

After the students have completed the task, put **'Sample of answers – Characteristics of an Entrepreneur'** up on the board, revealing it line by line. Before revealing each line, ask the students to suggest the ideal 'score' for an entrepreneur. Then reveal the relevant line.

If there is a significant difference between the students' views and the survey results, discuss the issue.

**TEACHER ONLY**



### Sample of answers - Characteristics of an Entrepreneur

Description	1	2	3	4	5	6	7	8	9	10	Description
Reserved			■	■	■	■	■	■	■		Outgoing
Passive								■	■	■	Assertive
Practical							■	■	■		Creative
Cautious											Adventurous
Tough	■	■	■								Gentle
Confident				■	■	■	■				Lacks confidence
Dependent								■	■		Self-sufficient
Relaxed						■	■	■			Tense

**TEACHER ONLY**



*Notes:*



## TOPIC 2 Creative thinking

### Description of creative thinking pillar

#### What is creativity?

Creativity is the ability for students to utilise their imagination to create innovative ideas. As we progress into the 21<sup>st</sup> century, it is important for students to be able to face complex problems and adapt and change to situations with their new ideas. This type of thinking enables students to think critically and innovate in a world that is everchanging.

#### How can you build your creative thinking?

There are different techniques to strengthen your creative thinking. In this topic we will be looking at activities on thinking outside the box and idea generation.

Generating new ideas is the cornerstone of a ventures success be it a start-up or a business that has been in existence for some time. The ability to think outside the box is a valuable skill that can help not only in the initial stages of a business start-up but also throughout the growth phases of the venture as you come across new problems and obstacles that arise.

All successful entrepreneurs are good at generating new ideas and thinking outside the box but idea generation is also a skill that can be learned by everyone. Basically, all you need is the ability to see things differently.

There are a whole array of idea generation techniques, which could be used in coming up with new ideas for businesses. Two of the more popular are (i) brainstorming and (ii) the SCAMPER method.

This topic includes three exercises to practice creative thinking, including techniques such as brainstorming and SCAMPER.....



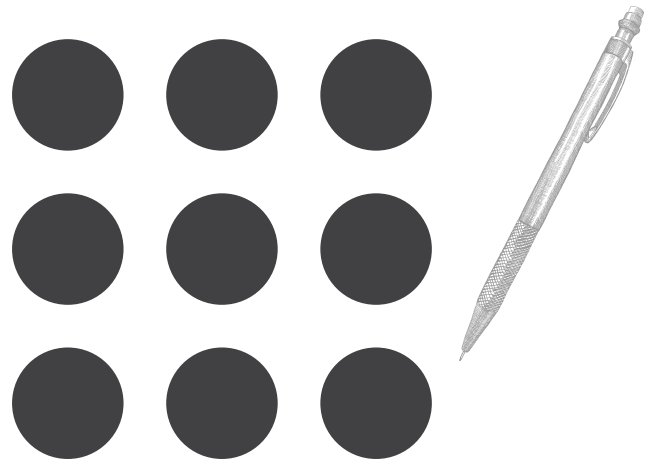


## EXERCISE 2.1: Thinking outside the box

This is an activity to help students think outside the box (see page 16 of student workbook).

Take a look at the diagram of the nine dots. First, ask students if they can join all nine dots using only **FOUR** straight lines, without lifting their pen once they have started.

Once they have found the answer (or you consider you have given enough time), ask them to do the same only using **THREE** straight lines, again without lifting the pen off the paper and connecting all the dots.



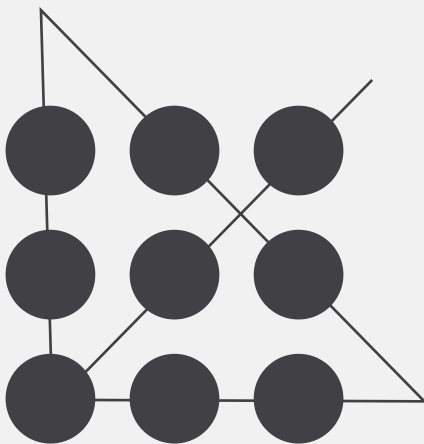
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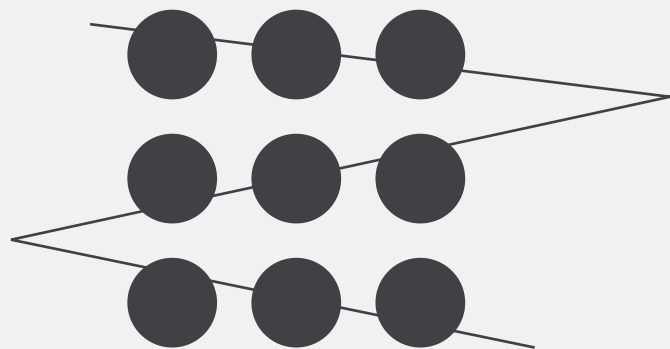
### Answers

The following are the answers to thinking outside the box activity:

#### Answer with 4 lines



#### Answer with 3 lines



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*Notes:*

## EXERCISE 2.2: Brainstorming

Successful brainstorming generates massive quantities of diverse and sometimes fantastic ideas. You want a high quantity of ideas during brainstorming, not quality. There will be plenty of time later to dissect and analyse. Effective brainstorming can take place in groups or individually. Some of the ideas submitted to a brainstorming session may seem off-the-wall initially. After consideration these may turn out to be perfectly good business ideas (see page 17 of student workbook).

### WITH BRAINSTORMING THERE ARE A FEW RULES:

1. Write down all the ideas you have and in the order you think of them.
2. The more ideas the better! Quantity over quality for brainstorming.
3. Crazy and strange ideas are a must.
4. Start with a practice round to get your creative juices flowing.

*Try brainstorming how many uses you can think of for a cardboard box – remember the crazier, the better!*

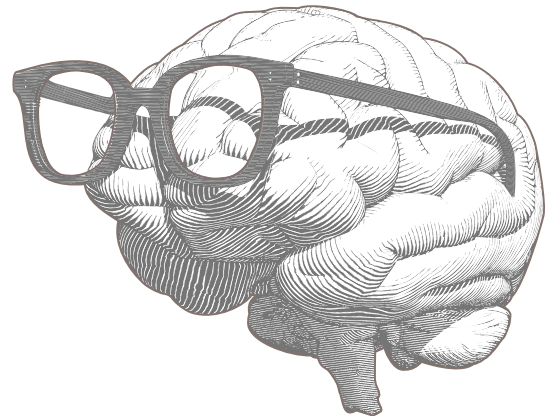
5. Set a timer for 20 minutes and let your mind wander and come up with as many ideas as you can.
6. Okay the timer has gone off, now what? You need to go through and pick the ideas you think you can take further. From those, brainstorm (yes again!) the positives and negatives of each until you choose one idea.

### Forced connections tool: Brainstorming Tool

[www.toolshero.com/creativity/forced-connections](http://www.toolshero.com/creativity/forced-connections)

#### Discussion questions:

1. Explain the process used to explore ideas for your product or service
2. Why do you think the method chosen actually worked?
3. On what basis did you decide on the final product or service?
4. What challenges does your choice of product or service present to you and your team?
5. What skills did you learn in the process?



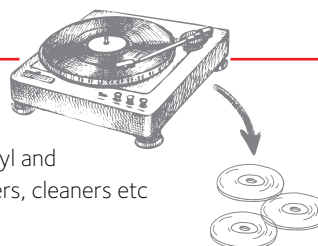
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## EXERCISE 2.3: Creating new ideas with SCAMPER

SCAMPER works by providing a list of active verbs that students are to associate with problems and hence create ideas. As they are all verbs, they are about doing and so get the students to think about action. For this you ask students to look at an existing product/service and apply the following to it (see page 18 of student workbook). Go through the different examples and then ask the students to answer the questions below with a product/service of your choice.



### **S – SUBSTITUTE (parts, people, ideas, materials, or components)**

An example would be where metal discs (CDs) were substituted for vinyl and opened up a whole range of opportunities for sales – CD holders, players, cleaners etc

### **C – COMBINE (mix, combine, use other services or methods)**

Examples would be candles and candleholders, swimming goggles and swimming hats – where you add something to the product on sale that adds or changes the final product or service you are selling. Combining electricity and bicycles gave us electric bikes. A futon – is it a bed or is it a settee?

### **A – ADAPT (alter, change function, use part of another thing)**

One very simple example was where someone decided to make shorts out of their jeans and so three quarter jeans and denims shorts were made. Also some people had ideas for making handbags from old jeans.

### **M – MODIFY (increase, reduce, change shape, colour, etc)**

The iPod Mini and Nanos are perfect examples of a product that was made in different sizes and colours and became a product range in their own right.

### **P – PUT (to another use)**

The tops of Pringles boxes can be used as scan savers e.g. if dog food has been opened and only half has been eaten. The bottom part of the box can be painted and decorated and make lovely pencil pots.

### **E – ELIMINATE (remove elements, simplify, cut costs, reduce time, waste, effort)**

A very simple example is where the need to eliminate bad odours led to the creation of air fresheners.

### **R – REVERSE or REARRANGE (turn inside out, upside down, etc)**

An example can be seen in some public parks where car tyres are turned inside out and form the shape of plan pots which are then painted and used as displays in these parks.

Ask your students the following questions to practice the SCAMPER method. You can apply these questions to “basic” products such as a pen, or more “complex” ones such a smartphone.

- How can you SUBSTITUTE something to make the product different and marketable?
- How can you COMBINE the product with something else to make something new or different that people will want to pay for?
- How can you ADAPT the product to make something else?
- How can you PUT the product TO ANOTHER USE that people are interested in using?
- What can you ELIMINATE from the product that would make it different?
- What about the product can be RE-USED or RECYCLED and how would you go about doing this?

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## TOPIC 3 Critical thinking

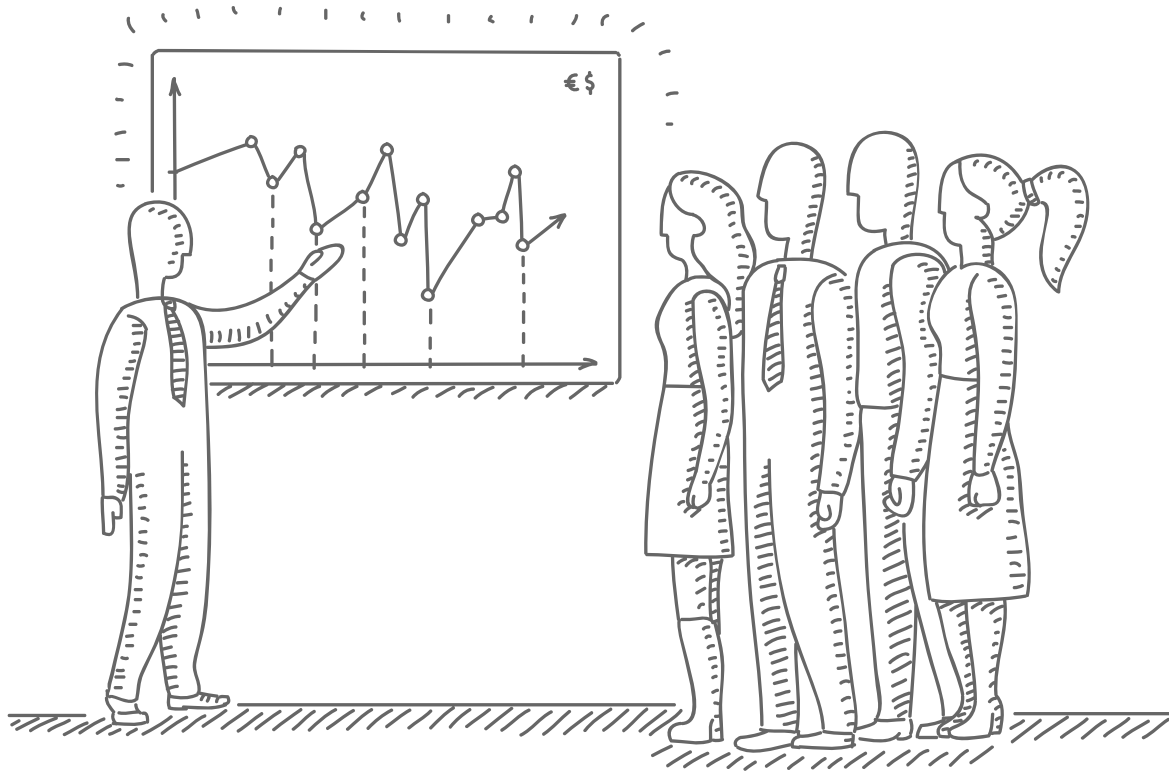
### Description of critical thinking pillar

Critically assessing information means analysing and evaluating information to determine the reliability, validity, and accuracy of it. It is important students can source good information and critically assess it in order to make informed and correct business decisions.

Problem solving is the ability to define, and determine the cause and provide a solution for a problem. This is an invaluable skill for students to possess, as it allows them to be able to identify and solve problems independently. Further, it makes students valuable and trusted assets to organisations because they will be able to find better ways to do things.

Despite the plethora of problems confronting us on a daily basis, few of us have had formal training in problem-solving. The exercises in this section employ tools for solving problems logically (based on the scientific approach of defining the problem, generating a list of possible solutions, selecting a solution, and then implementing, evaluating, and making adjustments as needed). The Five-Why tool will force us as problem-solvers to uncover the root cause of the problem, which will lead to a solution that permits expedient and results-oriented action.

This topic provides four tools and activities for students to practice their critical thinking, including swot analysis, the six hats, competitor analysis and market research.



### EXERCISE 3.1: SWOT analysis

A Strengths (S), Weaknesses (W), opportunities (O) and Threats (T) (SWOT) analysis is used to let you know what potential problems you might have to deal with in your business and the things, which will be of benefit to you if dealt with correctly. Carrying out a SWOT analysis means looking at the internal strengths and weaknesses and the external opportunities and threats.

To practice this, you may ask students to complete this for a chosen case in class (e.g. Tesla, Facebook). You can also choose competing products to promote a discussion in class. Moreover, in Chapter III, a SWOT analysis is embedded in the first worksheet (see page 19 of student workbook).

<b>STRENGTHS:</b> what do we do well?	<b>WEAKNESSES:</b> where do you need to improve?
<b>OPPORTUNITIES:</b> what are your goals?	<b>THREATS:</b> what obstacles do you face?



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## EXERCISE 3.2: The six thinking hats<sup>4</sup>

The “six hats” technique helps investigate an issue from different perspectives.

It can be applied individually but it is preferable to work in a of six group (see page 20 of student workbook). The technique reinforces to individuals that they should approach a problem from six different perspectives. More so it enables students and their team mates to separate thinking into six clear functions and roles. Each thinking role is then identified with a coloured symbolic ‘thinking hat’. By mentally wearing and switching hats, you get students to focus or redirect their thoughts, their conversations and/or the meeting they are having. The six hats are:

 <p><b>White</b> hat means <b>logic</b> and looks for facts. This hat calls for information known or needed.</p>	 <p><b>Green</b> hat means <b>creativity</b> and looks for possibilities and new ideas. This focuses on creativity, the possibilities, alternatives, and new ideas. It’s an opportunity to express new concepts and new perceptions.</p>
 <p><b>Red</b> hat means <b>emotion</b> and looks at feelings and instincts (don’t worry about the logic). The hat signifies feelings, hunches, and intuition. When using this hat, you can express emotions and feelings and share fears, likes, dislikes, loves, and hates.</p>	 <p><b>Yellow</b> hat means <b>optimism</b> and looks at issues in the most positive way. This hat symbolises brightness and optimism. Under this hat student will explore the positives and probe for value and benefit.</p>
 <p><b>Black</b> hat is the <b>Devil’s</b> advocate and looks at the difficulties and dangers. This is the most powerful hat. This hat needs to point out issues of risk with intent to overcome them.</p>	 <p><b>Blue</b> hat means <b>planning</b> and will look at summaries, conclusions, and decisions. This is used to manage the thinking process. It’s the control mechanism that ensures that all things are observed.</p>

This technique can be used where a group of six is formed and each individual wears a different hat or by having various rounds of thinking.

Usually, you start the technique with the white hat. Once several ideas have come up, you move to the next hat. Then, you repeat the same exercise for the next hat, and so on.

It is important to focus on the type of ideas required for each hat and not let other perspectives come. For example, if you are wearing creative hat (green) to come up with ideas, people are not allowed to come up with any negative comments.

Finally, you should conclude the exercise with the blue hat, which will state the final conclusions.

<sup>4</sup> DeBono (1985)

Form your students into groups of 6. Each student should be given a coloured hat perspective to work on the problem. Get the students to analyse a situation like: the cafeteria is thinking of replacing all food made at school with a 2 minute pizza machine – should the school do this? Get the students to discuss their thinking from the coloured hat perspective.

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### EXERCISE 3.3: Competing solutions










In this exercise, students use critical thinking to explore and critically analyse alternative ways of doing things and building innovative ideas (see page 21 of student workbook). How do they do this? Let's go through an example...




Patricia is a schoolteacher. She thinks cycling is the best way to get to work (school) as it is only 10KM away from home. She has considered other ways to get to work such as public transport and driving. She reckons that cycling is the fastest, cheapest, and most environmentally friendly option of all. She thinks that using public transport is inconvenient because it takes three times longer as there is no direct train or bus. Driving is way more expensive as she needs to account for petrol and car parking, and it is certainly not the best option for the environment. So... she made this table to capture her thoughts.

	BICYCLE	CAR	PUBLIC TRANSPORT
COST			
TIME			
ENVIRONMENT			

She is reassured her choice is definitely the best, until it rains! Oh no, not only is it uncomfortable to cycle in the rain, but the pavement is wet and slippery, so she feels it's very dangerous. Getting a taxi in rainy days is impossible in her neighbourhood, plus she wants a long-term solution that is not too costly, doesn't require much time and is not bad for the environment.

In this activity students come up with an innovative solution by analysing the pros and cons of the different alternatives. Use the table below for guidance and encourage students to include more rows to the table to analyse the alternatives in more depth – that will help them sharpen their new solution!

	BICYCLE	CAR	PUBLIC TRANSPORT	New solution
COST				
TIME				
ENVIRONMENT				
RAIN				

Good	Indifferent	Bad
		

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## EXERCISE 3.4: Market research

Every business needs to conduct market research to understand what the competition are doing, to see what gaps there are in the marketplace, and to know and understand customer's needs. The key to a good business is understanding what your customers want and meeting those needs in a way that is profitable for you. So, before any business starts to produce anything, it needs to do some market research.

### What is market research and why is it important to carry it out?

Market research will give a business valuable information from its potential customers so that the business can make decisions about its products and/or services. Businesses should use this information wisely to decide whether its business idea is viable.

### Where to start?

The following are questions that a person needs to ask when commencing market research:

1. Look at other similar products that are out there: Can you learn from them? What do they do well? How could they be improved and how is your product going to be better than everything else that is available?
2. Secondly, look at your target customers: what are their needs. A questionnaire can be very helpful here, but you might also consider talking to someone who is an expert in this area e.g. if you are producing a piece of craft, how about talking to a successful craftsman in the area? You might learn many valuable lessons.

### What are the different types of market research?

There are two main types of market research: primary research and secondary research. It is important that you carry out both types of research and to use the results of your research to determine if you have a viable business idea. You typically commence with secondary research and then conduct primary research.

Research type	Details
Secondary research (Desk research)	<ul style="list-style-type: none"><li>• Desk research is a term that generally refers to the collection of secondary data or data that has already been collected.</li><li>• To most people it suggests published reports and statistics, that are either electronic or in hardcopy. Therefore libraries, online databases and the Internet are important sources of secondary research.</li><li>• The advantages of secondary research are that it is quick and available and provides data that you may not be able to gather yourself. However, check your source and ensure the data is up to date.</li></ul>
Primary research (Field research)	<ul style="list-style-type: none"><li>• Primary research information you gather for your own purposes through field work such as questionnaires or conducting a mystery shopper report on your competitors by calling them or buying their product or service.</li><li>• You could also sit outside your competitors' premises and count the number of cars, customers and how often they receive deliveries.</li><li>• You can collect their brochures and price lists.</li><li>• The advantages of primary research are that it is gathered for your particular purpose and reflects your needs. However, conducting primary research takes time, it can be expensive and the response rate differs depending on what type of primary research method you adopt.</li></ul>

## Carrying out Field research

The secret to getting answers to your market research is asking the right questions, so it is important to decide in advance what information you require. When conducting your survey try to limit it to 10 or 12 questions. Your survey should include a mix of 'closed questions' and 'open questions'.

### What is the difference between 'closed' and 'open' questions?

<b>Closed questions</b>	<b>Open questions</b>
Questions that ask for yes or no answers only.	Questions that leave room for opinion or allow the person answering the survey to voice their own opinion
The answers are factual	The answers are a collection of opinions
Answers are easy to count and the information can be used to make graphs and tables to show results	Answers are difficult to represent in graphs/charts as they are a collection of opinions
You can write explanations e.g. 40% of people said... This is quantitative research	There may be useful suggestions in these answers to help you with your business idea. This is called qualitative research
<b>Examples</b>	<b>Examples</b>
Would you buy this product Yes / No?	Would you pay for this product and if so why?
Do you buy a new CD every week? Yes/No	What price range would you be willing to pay, please explain.

## Carrying out field research

If you are going to do a questionnaire, start by writing down what it is that you want to find out. Then write your questions. In your survey, the first few questions should be closed ones with Yes/No answers or tick box answers. You should also ask one or two 'open questions' such as 'please explain' or 'comment on', to get a feel for what the customer really thinks. Your aim in doing all this is to find out what are the exact needs of potential customers.

### Administering a questionnaire

There are plenty of free resources to help you design and administer a questionnaire and they include:

1. [www.Google.com/forms/about](http://www.Google.com/forms/about)
2. [www.surveymonkey.com](http://www.surveymonkey.com) (limited to 10 questions)
3. [www.typeform.com](http://www.typeform.com)

### EXERCISE 3.4: Market Research

This exercise will help students to reflect on how to formulate questions for their market research (see pages 22-23 of student workbook).

The questions below are from surveys and they all have "issues". Ask students to identify what the issue is and how you could rephrase them to get a much valuable response.

#### 1. When was the last time you changed your toaster and kettle?

Issue:

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---

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Re-write:

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#### 2. Now that you have seen how you can save time, would you buy our product?

Issue:

---

---

---

Re-write:

---

---

---

#### 3. What is your current age?

- a) 10 but less than 20
- b) 21 but less than 30
- c) 31 but less than 40

Issue:

---

---

---

Re-write:

---

---

---



4. What is your current age?

- a) 10 or less
- b) 10 to 20
- c) 20 to 30
- d) 30 or greater

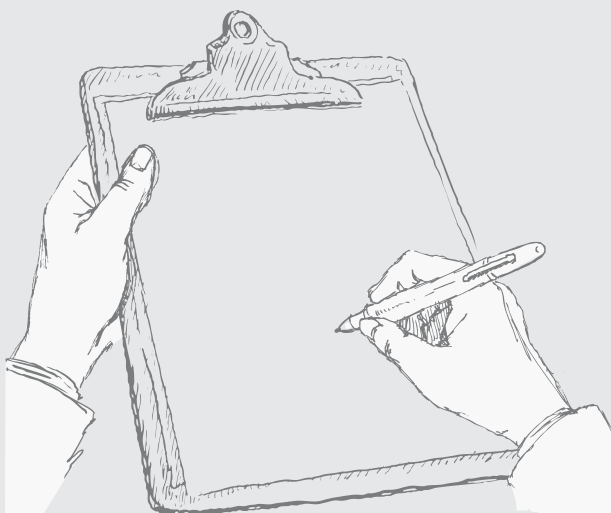
Issue: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Re-write: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

5. Thinking back to the last time you went on holiday, but excluding any weekend or short breaks or any holidays you took in this country, what type of holiday was that?

Issue: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Re-write: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_





## Questionnaire questions – issues and re-writes

The following is an answer key to the series of questions asked above. The issue is identified and a sample re-write is given.

ISSUE	RE-WRITE
<p><b>Question: When was the last time you changed your toaster and kettle?</b></p>	
<p>Double-barrelled question covering more than one topic i.e., toaster and kettle. Respondents who have upgraded one without upgrading the other wouldn't know how to answer. When you are analysing the data, how will you know which part of the question was answered? "And" or "or" within a question usually makes it double barrelled. Try eliminating the less important topic or create two questions.</p>	<p>When was the last time you changed your toaster?                      When was the last time you changed your kettle?                      When was the last time you changed the following:                      • Your kettle _____                      • Your toaster _____</p>
<p><b>Question: Now that you have seen how you can save time, would you buy our product?</b></p>	
<p>This is a leading question. A leading question suggests to the respondent that the researcher expects or desires a certain answer. The respondent should not be able to discern what type of answer the researcher wants to hear. By citing proof, the product is good (i.e., it saves time), the questioner has tipped his hand that he wants a "yes" answer.</p>	<p>Does this product save you time? Yes No                      Would you buy this product? Yes No</p>
<p><b>Question: What is your current age?</b>  <b>10 but less than 20    20 but less than 30    30 but less than 40</b></p>	
<p>Response options are exhaustive when there is a response option available for every potential response. This is an example of a question where the response options are not exhaustive because there is no option available for respondents less than 10 years old or more than forty years old.</p>	<p>What is your current age?                      (i) Less than 10                      (ii) 10 but less than 20                      (iii) 20 but less than 30                      (iv) 30 but less than 40                      (v) 40 or greater</p>
<p><b>Question: What is your current age?</b>  <b>10 or less    10 to 20    20 to 30    30 or greater</b></p>	
<p>Closed-ended questions require response options that are mutually exclusive. Response options are not mutually exclusive if a potential answer fit more than one of the response options. These response options are not mutually exclusive because a person who is 10 years old fits into both of the first two response options (same with respondents aged 20 and 30). Respondents will find this confusing.</p>	<p>What is your current age?                      (i) Less than 10 (or it can be written &lt;10)                      (ii) 10 but less than 20 (or it can be written 10 &lt; 20)                      (iii) 20 but less than 30 (or it can be written 20 &lt; 30)                      (iv) 30 or greater (or it can be written &gt;30)</p>
<p><b>Question: Thinking back to the last time you went on holiday, but excluding any weekend or short breaks or any holidays you took in this country, what type of holiday was that?</b></p>	
<p>This is a long/convoluted question</p>	<p>What was the last type of holiday you took?                      Cruise                      Ski                      Romantic break                      City tour                      Other (please specify) _____</p>

**TEACHER ONLY**



*Notes:*



## TOPIC 4 Collaboration and teamwork

### Description of collaboration and teamwork pillar

Collaboration is the ability for a student to work with others towards a common goal. This skill is important as it enables work to be distributed evenly and allows students to be able to develop high quality communication and listening skills and learn how to take responsibility.

When setting up an enterprise, students will need to consider whether they wish to go it alone or work in a team. There are advantages and disadvantages to both. Many entrepreneurs set up their enterprise as a one-person operation but gradually build a successful team around them as the business expands. Not only does an entrepreneur need to consider whether to work as an individual or in a team, an employee in a business also has to consider this as well – should s/he set up a team to complete a task or is there more benefit in working alone to achieve the goal. The following table compares working alone with working in a team.

Working individually	Working as part of a team
I get to make all the decisions	Decision making is shared
I get to keep all the profits	Profits are shared
I may lose money on the business	Losses are shared
I can work at my own pace	We can get more done together
I take all the responsibility	I enjoy working with others
Feedback may be slow because I work on my own	Instant feedback from the team
I rely on my own skills	A range of skills from each member of the team

### Characteristics of a good team



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### *Suggested discussion*

It is important to understand the difference between groups and teams.

A **group** is several individuals who have some collective reason for being together for example a group in a classroom would be those who study French or Music or some other subject. They all do the same thing, go to class at the same time, have the same teacher, study the same subject and get the same homework and exams.

A **team** however has the difference of being a group, which has a common goal in mind and works together to achieve a goal. Team members cooperate and share tasks to achieve a goal. Failures are not blamed on individuals as they do not operate in fear of failure but see failure as a learning opportunity.

This topic includes three exercises to learn about collaboration and teamwork. First, students are asked to complete a quiz for self-assessing whether they are good team players. Then, a hands on exercise challenges students to work with others and experience different teamwork dynamics, and finally, a self-evaluation exercise will help students reflect on their experience when working in teams.

## EXERCISE 4.1: Are you a team player

This activity is a self-assessment quiz for students around their collaborative skills (see page 24 of student workbook).

Ask students to tick each statement on how closely it resembles their current situation, attitudes and feelings. Give the instructions below for allocating scores.

A= strongly agree    B= agree    C = neither agree nor disagree    D = disagree    E = strongly disagree

SCORE \_\_\_\_\_ points

1. For most projects, I prefer to rely on my own skills and abilities rather than work with others  
 A     B     C     D     E
2. While I am focused on my academic success while in high school, I do truly support my team members and want the team to succeed.  
 A     B     C     D     E
3. For the most part, I believe that my team members do not work as hard as I do.  
 A     B     C     D     E
4. I seek out ways to learn to get along better with people, to do a better job of collaborating, and to be a better team member.  
 A     B     C     D     E
5. I tend to come up with the best solutions to the problems my team faces, yet I usually receive very little of the credit.  
 A     B     C     D     E
6. People generally enjoy working with me in a team  
 A     B     C     D     E
7. I understand that the value of teamwork is the emergence of new ideas and creative solutions as well as the sharing of the workload  
 A     B     C     D     E
8. The reality of the workplace requires me to work in teams – even if I do not like it.  
 A     B     C     D     E
9. I always end up carrying my team and its disappointing that I do not receive more credit for doing so.  
 A     B     C     D     E
10. I am very flexible and can quickly adjust to new situations and changing demands of the team and the team leader.  
 A     B     C     D     E

**TEACHER ONLY**



## Quiz scores and meanings

Use this system for scoring each of the 10 responses

Question	A - Strongly agree	B - Agree	C - Neither agree or disagree	D- Disagree	E - Strongly disagree
Question 1	1	2	3	4	5
Question 2	5	4	3	2	1
Question 3	1	2	3	4	5
Question 4	5	4	3	2	1
Question 5	1	2	3	4	5
Question 6	5	4	3	2	1
Question 7	5	4	3	2	1
Question 8	1	2	3	4	5
Question 9	1	2	3	4	5
Question 10	5	4	3	2	1

Students should now add up all their scores.

Analysis of scores:

**40-50 points:** You are a great team player! You understand the value and importance of collaboration. You can be a great inspiration to other members of your team.

**30-39 points:** You are a good team player. You recognise the value and importance of teamwork but have not quite mastered being a great team player. Find opportunities to develop your team skills more.

**20-29 points:** You are just a 'so-so' team player. With the importance that most people place on teams, think carefully about finding ways to develop team skills.

**Less than 20 points:** You may not like working in teams. So, you have two choices, firstly you could invest a lot of time and effort in improving your teamwork skills or secondly, you may decide to set up a business on your own.

**TEACHER ONLY**



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## EXERCISE 4.2: The airplane contest<sup>5</sup>

The objective of this exercise is to build a team and to develop collaboration skills along with resilience in the face of challenges or frustrations. Students will develop design and testing skills through prototyping, and they will see how prototyping is an effective way to develop a product or service in an unknown environment. Students will also develop communication skills through practicing a pitch of their idea and understand the importance of communicating your pitch versus the idea (see page 25 of student workbook).

### Task description

- Students are to design a paper airplane that is capable of carrying coins to the value of \$1.
- The plane can carry any number of coins as long as the combined value is \$1.
- Groups are made up of 3-4 students.
- Students give a 2-minute pitch of the design to the class BEFORE the contest takes place to convince other students that their design is the best.

### Materials

- One standard size paper sheet per student for plane construction.
- Coins adding to \$1.
- A piece of paper to record votes

### The design will be assessed according to:

- Time that the plane can stay aloft
- Distance it will travel
- Number of votes the design gets from classmates in each category (time and distance).

### Rules of the game

- A group of 3 will get 3 sheets of paper, a group of 4 will get 4 sheets of paper.
- Design pitch must be limited to 2 minutes

**Voting:** Each student is allowed to vote for one team/design only (excluding his/her own team).

**Plane demonstration rules:** Each team gets only one throw of its plane. The throwing student must not cross a line on the floor that everyone must throw from.

**TEACHER ONLY**



### *Suggested discussion*

- How did you view the issue of coins, as a constraint or an opportunity?
- Did you try to optimise your design for time or distance or both?
- How did you work on your design? Did you prototype and test?
- What was the biggest challenge when you needed to pitch your design to your classmates?
- Why do you think others voted for or did not vote for your design? How would you change your pitch if you had a chance to present your design again?

<sup>5</sup> Adapted from George (2014)

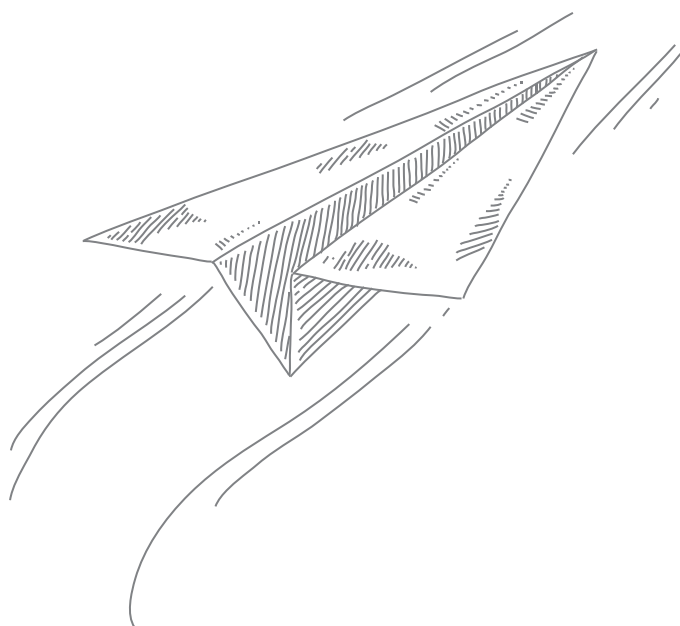


**TEACHER ONLY**



### *Additional information*

- Time required for the exercise depends on the number of students and teams since each team needs to pitch their design.
- If you decide to use an online voting system, it needs to be setup before the class
- Explain the task, ensure every team has the necessary materials and give them time to create their paper airplane and prepare their pitch.
- After the design time is up, explain voting rules
- As the next step each team should pitch its design, strict time limit is 2 minutes (use the countdown clock for each team, e.g. online stopwatch <https://www.online-stopwatch.com/>)
- Have the students record their votes? Students cannot vote for their own design.
- Take students to an open area to test the planes. Indoors could be done in a gymnasium or in good weather the activity could be conducted outdoors, however windy weather could affect the outcome.
- Watch that the throwing student does not cross the line on the floor /ground.
- Record the time that the plane stayed aloft and after the plane lands measure the distance.
- Involve other students in measuring the planes performance.
- Display results of votes and measurements for each team.
- Have a discussion on the design experience.



**TEACHER ONLY**



*Notes:*

### EXERCISE 4.3: Team reflection

This is a reflective exercise for students around forming and working in teams (see page 26 of student workbook).

1. Explain the process used to pick your team

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2. Was this a good method for picking teams? Why?

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3. What difficulties did you encounter in the process?

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4. How did you overcome these difficulties?

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5. What did you learn about yourself in the process?

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6. What did you learn about other members of your team in the process?

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7. What skills could you or your team learn so that your team can work more efficiently?

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**TEACHER ONLY**



*Notes:*



## TOPIC 5 Communication

### Description of communication pillar

Coming up with ideas and innovating is a key 21<sup>st</sup> century skill, but so is the ability to communicate these ideas.

Pitching is a method of verbal communication that involves succinctly presenting the value of your business idea to potential investors and customers. Through this, businesses are able to acquire resources, financial aid and clientele. By developing verbal communication skills such as pitching, it allows students to improve their confidence and ability to communicate with others. Further, it increases the likelihood of their future businesses or entrepreneurial ventures to succeed.

For pitching activities please refer to the following activities:

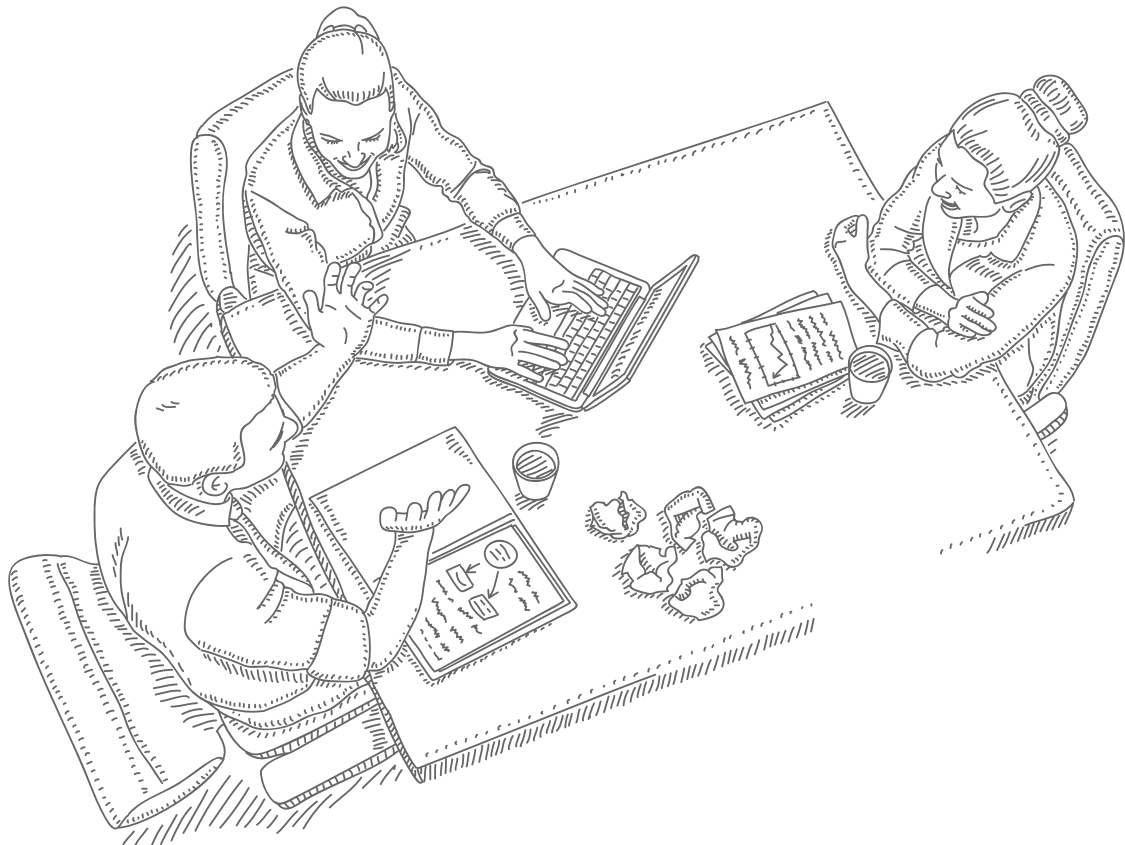
- Bugs Report - **page 91**
- Innovating a product - **page 94**
- The Airplane contest - **page 73**
- Students meet entrepreneurs - **page 21**

Written communication is also key to convey your ideas with your team, funding parties and potential customers.

Written communication tasks can be found in the following worksheets:

1. Students meet entrepreneurs- **page 21**
2. Market research - **page 63**

In addition to those resources, this topic includes three exercises where students are challenged to use both verbal and non-verbal forms of communication, and interviewing their peers to learn to be good listeners as well.



## EXERCISE 5.1: This is (not) me!

This activity shows students how to discuss ideas assertively (see page 27 of student workbook).

Propose some controversial statements. Some examples of topics are:

- The beach is the worst place to spend holidays
- Cats are much better companions than dogs
- It is better to drive everywhere in a petrol guzzling car

Ask students on whether they agree or disagree. Then, students take the opposite view and prepare a presentation to defend it.

For this activity, it is recommended that students prepare a three to five minute presentation, which will allow (and force) them to do some research to justify their facts and prepare a well-documented presentation.

### How to prepare a successful presentation?

When talking to an audience, we need to consider that they will only be able to retain three ideas. Therefore, it is recommended that when you prepare a presentation you identify the top three key points you would like your audience to take away with them and work on your presentation around these three ideas.

A recommended structure for a presentation is as follows:

- **Introduction:** This is a short enumeration of the three ideas they will discuss around the topic to make their point.
- **Body of presentation:** This part of the presentation aims to discuss the reasoning behind the three ideas (or claims) to support their position on the topic.
- **Conclusion:** The final part of a presentation should focus on summarizing and highlighting the relevance of the key three ideas.

**TEACHER ONLY**



### *Suggested discussion*

Start by asking how credible the presenters were in defending their views.

Then encourage further discussion by asking the presenters how did they feel presenting something they initially did not agree with?

You can facilitate the discussion by reflecting on the importance of preparing and documenting your presentation to focus on facts.

**TEACHER ONLY**



*Notes:*

## EXERCISE 5.2: Don't talk about it!

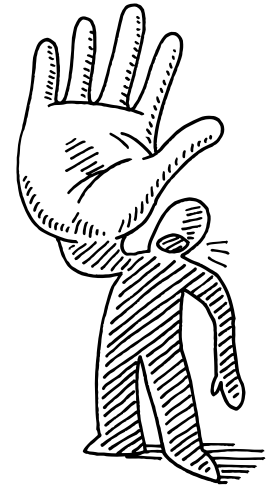
This activity strengthens non-verbal communication amongst students (see page 28 of student workbook).

This is important to complement their communication skills by empowering non-verbal communication through gestures, face expressions, and body language. This can be done either in groups or as a whole class.

One student at a time needs to tell a little story with body language (i.e., gestures, facial expressions etc.) and they are not allowed to use words.

Some topics recommended for this activity are as follows:

- I went swimming with my family and I almost drowned
- I went for a hike, and by the end I was exhausted
- I got home late, my parents were angry
- I played football with my friends, we lost but I still had a great time



**TEACHER ONLY**



### *Suggested discussion*

The focus of this exercise is to reflect on the non-verbal communication skills of the student. Encourage the discussion through asking the students about:

- What did the presenter try to tell us?
- What gestures, facial expressions, or body language did the presenter use to represent those emotions?

Reflection: How do gestures complement our presentations?

You can also encourage students to create a list of body language expressions and what they mean.



**TEACHER ONLY**



*Notes:*

## EXERCISE 5.3: Interviewing skills<sup>6</sup>

This exercise is to help students develop interviewing skills along with imaginative and creative thinking. It also gets students to explore interests other than 'their' own (see page 29 of student workbook).

### Instructions for teachers

1. Allocate the students into pairs and assign each student in the pair each letter A or B
2. Make the list of questions below available to the students
3. Explain how to run the interviews
4. Explain about creating three entrepreneurial ideas and evaluating ideas of the other team member – stress the importance of honesty.
5. Many students struggle to come up with entrepreneurial concepts so they will come up with less than three ideas
6. Poll each student on how many ideas they 'passionately like'.

### Step 1: in pairs, interview each other using the following questions

- What do you love to think about when you have free time?
- What problems do you see in your community or the world?
- What websites do you frequent?
- What apps are your favourites (if any)?
- What do you want to be doing in 10 years?
- Who do you want to be when you grow up?
- How would your friends describe you?
- Name three things you are passionate about
- If you could make your life easier, how would you do that?
- What do you like to do with friends during your free time?
- If I gave you \$100, what would you do with it?
- What kind of person do you aspire to be?
- What daily life problems are you most annoyed by?
- If you could make one simple change in people's lives, what would that be?

### Step 2: find three entrepreneurial ideas

Come up with three entrepreneurial ideas having your partner in mind. Ideas should be based on the information gathered through the interviewing process. Ideas can be for-profit or non-profit.

### Step 3: share your ideas

Share your ideas for each other with each other. Rate each of the ideas your partner created for you:

1. Do not like the idea
2. Like the idea
3. Passionately liked the idea

<sup>6</sup> This activity is based on the activity by Hart (2015)

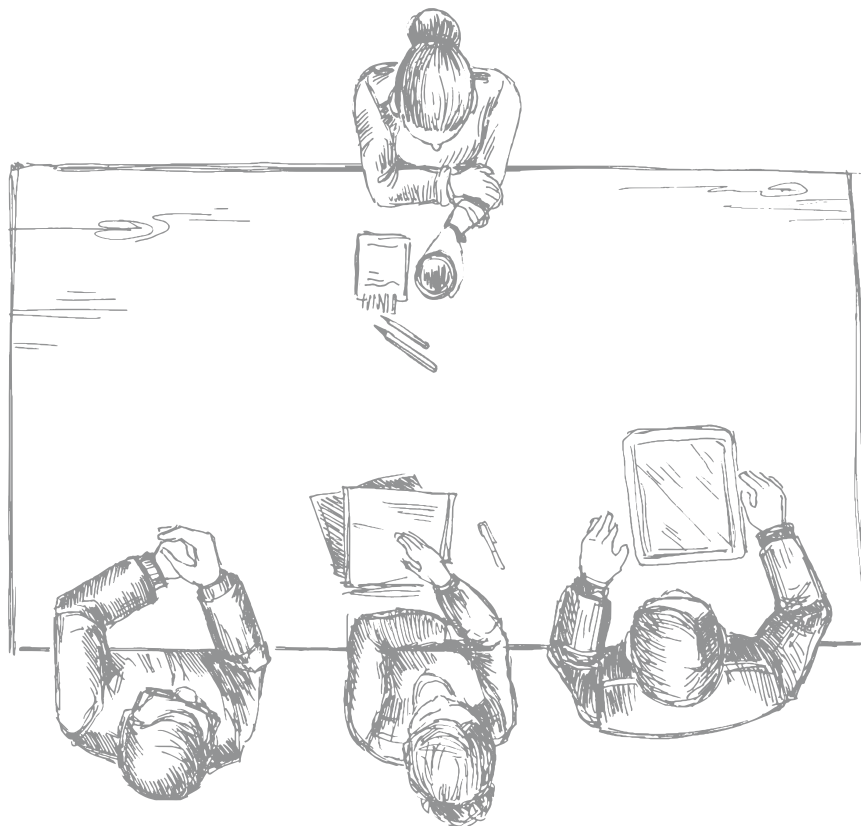
**TEACHER ONLY**



### *Suggested discussion*

In relation to the idea selected for discussion:

- What expertise is needed to implement the selected idea?
- Where is the market for this product/service?
- What kind of technology could be used to support the implementation of this idea?
- Are there any risks associated with implementing this idea?



**TEACHER ONLY**



*Notes:*

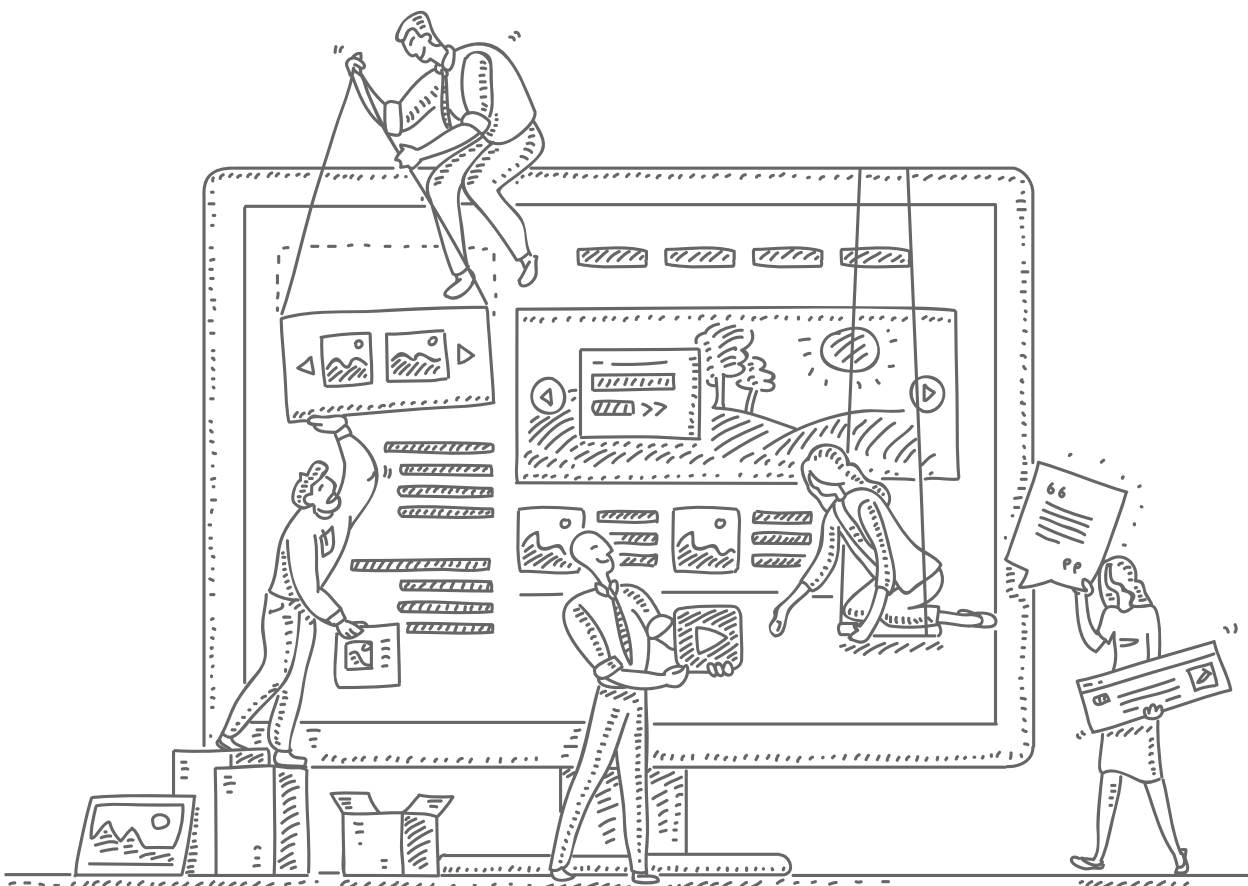
# Chapter III. Integrating the 21st Century skills in the real world

## Why are the 21st century skills useful in the real world

Practicing 21st century skills in the safe and supported school environment will empower students with the confidence and competencies required for an entrepreneurial mindset for the future of work, from ground-breaking tech start-ups to tradespeople starting their own businesses, as well as for those who rather than self-employment will become a key asset for someone else's organisation. These essential skills, once mastered, equip students for success in an uncertain and rapidly changing employment market.

This chapter focuses on the real-world application of the 21st century skills developed through the activities in the previous two chapters of this **handbook**. It helps to solidify skills and understandings in an authentic and engaging way. As teachers guide students in the application of their learning to life, they will develop an understanding of the future use of the activities and the 21st century skills they are developing. Authentic tasks, including finding solutions to products and services that 'bug' them (worksheet 2), are a motivating factor and help students to become life-long learners.

A safe and supportive learning environment, where students feel empowered to try, fail, reflect, and try again, is essential for students completing the worksheets in this chapter. Students need to practice growth mindsets and metacognitive skills including planning, organising, monitoring and reflecting on their tasks and learning. Students must put into practice their 21st century skills to complete these worksheets, including responding to pressure and challenges with their personal and social skills. Teachers provide mentoring and support students as they develop their entrepreneurial spirit.



## WORKSHEET 1 Entrepreneur diagnosis<sup>7</sup>

Ask students to watch a video of an entrepreneur of their choice and complete this activity. It is recommended to use the videos provided in Activity 1.2 Reflection on your entrepreneurial traits, to complete this exercise (see pages 30–32 of student workbook).

Entrepreneur name: \_\_\_\_\_

Business: \_\_\_\_\_

In two sentences explain the entrepreneur's business:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

1. Having looked at this clip can you complete the following task individually:

One thing I learned: \_\_\_\_\_

One question I still have: \_\_\_\_\_

2. What skills and qualities do you think this entrepreneur possesses?

Entrepreneurs name: \_\_\_\_\_

Skills

Qualities

1

1

2

2

3

3

4

4

5

5

3. Where did the idea for the enterprise come from?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

<sup>7</sup> The content and activities contained in this worksheet have been directly sourced with permission from: County & City Enterprise Boards (n.d.) *Exploring enterprise: A resource to enhance the teaching & learning of enterprise in 2nd level schools*, Second Level Support Service, Ireland.

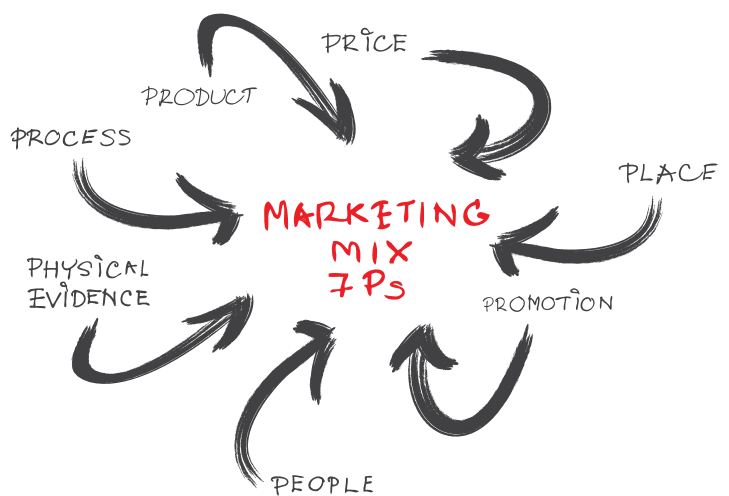
4. Could you complete a SWOT analysis for this enterprise?

(SWOT stands for strengths and weaknesses which are internal and the opportunities and threats the business faces externally).

<p><b>STRENGTHS</b></p>	<p><b>WEAKNESSES</b></p>
<p><b>OPPORTUNITIES</b></p>	<p><b>THREATS</b></p>

5. Can you complete the marketing mix for the product/service? (A marketing mix are the set of marketing tools that are used in order to achieve the businesses objectives within the target market identified).

- **Product** (What is the product that is best to solve the customers problem?)
- **Price** (The price is the minimum the company sets that covers its costs and provides it with a profit but is something that customers are willing to pay).
- **Place** (This is where your customers will go to purchase your product/service)
- **Promotion** (This is the channels by which you communicate your product/service to your customers)
- **People** (This is where all those involved in getting the product/service to the customer have intimate knowledge of your product/service)
- **Physical evidence** (This relates to how your brand is displayed in store and/or online, communicated, and how the product/service is packaged)
- **Process** (This is ensuring that delivering your product is done in an efficient, sustainable and reliable approach)



6. What were the benefits and challenges to the entrepreneur of running his/her own enterprise?

<b>Benefits</b>	<b>Challenges</b>

7. List two ways the enterprise could link with the local community

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8. If this enterprise decides to go international i.e. sell in other countries, is there anything they need to consider?

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9. If you decide to set up your own enterprise, what support would be available to you locally? List four forms of support locally and outline how they could support you.

Name of the organisation/government agency

Type of support given

1. 

---

2. 

---

3. 

---

4. 

---

10 Can you think of a similar business locally?

---

11. Can you list four other entrepreneurs in your local area?

<b>Name of Person</b>	<b>Business Name</b>	<b>Website/Email</b>	<b>Product/Service</b>

12. Having watched this video, list one possible follow-on activity for your class.

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**TEACHER ONLY**



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## WORKSHEET 2 Bugs report<sup>8</sup>

This exercise is an experiential entrepreneurship exercise to develop students creative and innovative ability (see page 33 of student workbook).

The task has a series of objectives:

1. To explore potential issues for product and service improvements
2. To learn to be more creative and innovative through the negative experiences in their daily life by evaluating products or services that 'bug' them.
3. They then explore 'worst' case scenarios to develop potential avenues for new concepts.

Students are encouraged to reflect on their life, their own personal needs and activities, their hobbies, observations etc for sources of 'bugs'.

### Tasks being completed

The task for the student is to create a table of 8-10 products or services that bother or bug them. They then, briefly, need to identify why that item bothers them. They then, briefly, identify how they might improve each item. The student reviews the list of bugs and the ideas to improve each and then chooses one bug to pitch to their team. Students are broken into teams (circa 5). The team members reflect on all the bugs presented by the group, and they vote on which one bug they will take further. They might also decide to pivot one of the bugs and/or amalgamate some elements of other bugs into a new bug. Then, as a team, they give a three-minute pitch on the revised item. The task concludes with a debate and a reflection on the exercise.

### Step 1: Complete the following table with your bugs report

	Explain item	Why it bothers you?	How might you improve it
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

<sup>8</sup> Based on Kim and Fish (2009)

## Step 2: Pitch your bugs report

For this task students should start with what is known as the Gaddie pitch. There are three parts to the Gaddie pitch, (part 1) starts with the student saying 'You know how...' and here the student describes the problem. In part 2, the student says 'Well, what I propose to do' OR 'Well I can solve the problem in this way by...' The student puts forward the solution to the problem stated in part 1. Lastly, in part 3, is commenced with 'In fact'... and here the student supports the rationale why the solution is better than the competitor.

### You know how...

Here the student is introducing the bug – what product or service s/he has a problem with.

Then the student should state what they want to do with the product or service to make it more innovative, better and usable. The student then should use the following for the second line of the pitch

### Well, I can solve the problem in this way by...

They can conclude by saying

### In fact...



**TEACHER ONLY**



*Notes:*

## WORKSHEET 3 Innovating a product

The objective of this worksheet is to explore potential issues to get product improvements and to develop opportunities for innovation. It will also help students to develop their communication skills (see page 34 of student workbook).

### Step 1: Can you make a product, better?

Ask students to think about some existing products that have not been changed for a while that could be changed for the better. They need to come up with an innovation that will make the product better. Their innovation could include:

1. Combining two existing ideas – a pencil with an eraser on the end
2. Changing the shape or design of something (cooking utensils with big thick handles for people with arthritis)
3. Changing what it is made from (paper banknotes replaced with polymer banknotes)

### Step 2: Share your innovative products

Students are to create a 2-minute presentation describing the old product versus the new innovative product. The presentation should address:

1. What are the shortcomings of the original product?
2. Which of the shortcomings will your innovation solve?
3. Who will benefit from this innovation?
4. What are the negative aspects of the innovation?

**TEACHER ONLY**



### *Suggested discussion*

These questions can be posed to the students after their presentation.

- What expertise is needed to innovate the product?
- Which of the proposed changes could be difficult to implement for the manufacturer?
- Do you think these changes will cost more or less to the manufacturer? Justify your answer.
- Will the improved product result in expansion of the market?
- Is your idea feasible in the real world?

**TEACHER ONLY**



*Notes:*

## WORKSHEET 4 Best worst product competition

Sometimes one of the challenges is to find a use for an invention, rather than creating a solution to a problem that already exists (see page 35 of student workbook).

For example, when laser was developed, its uses were not clear. Nowadays we use laser technology for medical applications, welding and cutting, (laser) printing, CDs and optical discs and barcode scanners, and that is just to name a few uses!

For this exercise you will give students an apparently useless invention (you have some examples in the images below) and ask them to find a use for it. Then, all the groups will compete for the “best worst product”.

### Step 1: Make the product useful

In groups, ask students to think about a use for the useless invention of your choice (picture you have provided them). Ask them to brainstorm about:

- How could this product be used?
- Who could be interested in this product?
- Why would they be interested in the product?

### Step 2: Prepare a presentation

Once all groups have identified some potential uses for the useless invention, they choose the “best product” (the one they think would be most successful if launched in the market) and prepare a convincing presentation.

Thus, each team will prepare an interactive presentation about their “best product”:

- It is recommended to allow a maximum of 1 minute per presentation.
- The presentation should include Who will use the “best product”? Why? When? and How?

All groups are competing for the best “worst product” market share. This means that each group needs to convince the rest of the class that their product is worth investing in.



### Step 3: Compete for customers

To prepare for the best “worst product” competition, give students a piece of paper with the information below for them to fill in (you can choose to do this in an online form if you want to go paperless: consider using <https://www.polleverywhere.com> as an online polling mechanism).

Your name		Your team	
Vote to (team name)		Vote to (team number)	
Reason for your vote			

Tell the students to think like investors. If they needed to invest their only coin (paper) into one of the ideas, which one would they go for to make profits?

#### Rules:

- Students cannot vote for their own team
- Students need to justify their vote. They can comment on the idea (innovation) or the (entrepreneurial) team. For example: “the idea solves a real problem”, “the team is passionate, which shows they won’t give up until they make their idea succeed”, etc.

Finally count the votes and acknowledge the winner.

**TEACHER ONLY**



### *Suggested discussion*

Read some of the positive comments and acknowledge how other teams may have also done well.

These questions can be posed to the students after the activity.

#### **(Questions about their idea)**

- What process did you follow to come up with your use for the product?
- Did you have more than one use? If so, how did you decide which one was “best”?

#### **(Questions about their process for voting)**

- How important is the idea?
- How important is the team behind an idea?

In here you can summarise that it is equally important to have a “good product” and that the team demonstrates knowledge and passion towards the new venture.



**TEACHER ONLY**



*Notes:*

## WORKSHEET 5 Digital sustainable solutions

This activity aims to design digital innovations to help address the challenges for global sustainable development. In other words, the SDGs (Sustainable Development Goals, <https://sdgs.org.au/>) proposed by the United Nations, are 17 global goals that seek to build on the three pillars of sustainability (people, planet, profit) to build a sustainable future (see pages 36–37 of student workbook).

A responsibility of all, governments, enterprises, and society, is to contribute to those goals as much as possible. Individuals can do so by changing small behaviours in their daily life. For example, we could shop locally, take public transport, reduce waste, eat less meat, and donate what we don't use. You can find more daily routines we can easily do to make an impact in "The lazy person's guide to saving the world" from the United Nations (<https://www.un.org/sustainabledevelopment/takeaction/>).

In this activity, students will work in teams to create a design for a Digital App that encourages a positive behavioural change.

### Step 1: Explore the challenge

First, the teacher proposes a challenge to the students. The challenge can be chosen from the list of routines (see above, lazy person's guide) or the teacher can suggest a general "good" habit (e.g. exercise more, eat healthier).

Then, ask the students to explore what routines could be changed in their daily life to make a positive impact to either their health or the environment. For example, if they have chosen "exercise more", they could suggest that they could exercise more by:

- Using the stairs instead of the lift
- Walking/cycling to school/work

### Step 2: Understand the challenge

Ask students to choose one (or a combination of some) and understand the problem a bit more deeply by interacting with others. Ask them to diagnose the routine by answering the questions: "WHY?" and "WHY NOT?". A good practice is encouraging them to ask family and friends as well, to capture as many ideas as they can on why people have adopted certain routines.

For example, some people prefer the lift because it's faster, others because they are too tired to walk, etc.

### Step 3: Design your app

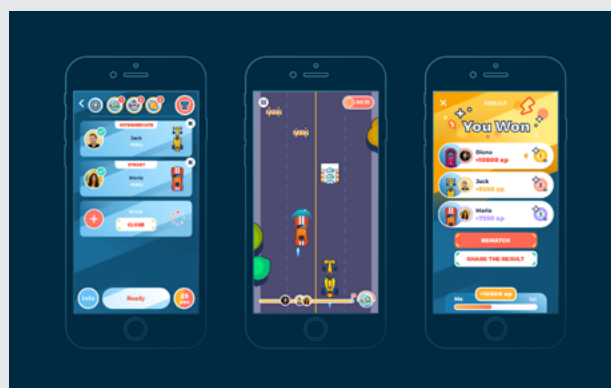
At this stage, students should have a good understanding of the pros and cons of certain routines. Ask students to design an app that encourages the behavioural change. One of the requirements I like to include is that the app should have a gaming component for users (Isn't that the success behind Pokemon Go? because who doesn't like to play games?)

So, ask students to think about:

- How do users interact with the app? (If a game, how is the game played)?
- How is the game encouraging individuals to change their routine?
- How can users monitor their progress (score/rewards if a game)?

### Step 4: Create a poster!

Ask students to create a poster that shows the design of the app. They should include a design for the game and another for the rewarding system. Post the designs in the classroom and use some time for everyone to go around and exchange ideas on each other's gaming apps.



**TEACHER ONLY**



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## WORKSHEET 6 Potluck scenario<sup>9</sup>

The potluck scenario is a case that showcases the early stages of the management of a new venture. Thus, in this activity, students will prepare a market research and a SWOT analysis (see pages 38–39 of student workbook). Additionally, a complementary Annex has been provided in this workbook to introduce students, through the potluck scenario, to basic financial literacy (see Annex).

### Step 1. Market research

Sheila is the marketing manager for 'Pot Luck' and with her friends Robert who is the financial manager, and Jane the production manager, they have set up a business hand painting ceramic bowls. Sheila has conducted primary research by distributing a questionnaire to 50 potential customers and competitors both inside and outside her school. She started with friends, teachers, and family, however she also stopped and asked people in the street. She visited local craft shops in her area and got permission to survey people in a local shopping centre.

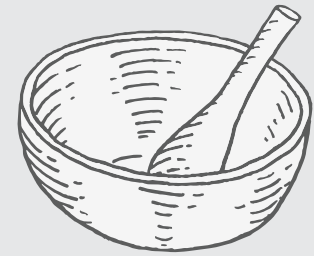
Sheila drew up a survey with 7 questions comprising both closed questions with yes/no answers or tick boxes and some open questions to get a feel for what her customers or competitors really think. Her aim with customers was to find out what their needs were. The most important thing for Sheila is once she conducted her market research, she took on board the results and where necessary the team adapted their product.

#### SAMPLE QUESTIONNAIRE FOR POT LUCK

1. How many times a year do you buy gifts? (please tick)  
 0<5       5<10       10 or more
2. Would you buy hand painted ceramic bowls as a gift or for yourself?  
 Yes       No
3. How much would you pay for our hand painted ceramic bowls? (Please tick)  
 \$15       \$18       \$20       more than \$20
4. What size bowls would you prefer? (please tick)  
 Small       Medium       Large
5. What are your favourite colours?  
\_\_\_\_\_  
\_\_\_\_\_
6. Are you interested in personalised hand painted ceramic bowls and if so what design/ theme would you like?  
\_\_\_\_\_  
\_\_\_\_\_
7. How many ways do you intend to use these bowls?  
\_\_\_\_\_  
\_\_\_\_\_

**Thank you for taking the time to complete this questionnaire**

<sup>9</sup> The content and activities contained in this worksheet have been directly sourced with permission from: County & City Enterprise Boards (n.d.) *Exploring enterprise: A resource to enhance the teaching & learning of enterprise in 2nd level schools*, Second Level Support Service, Ireland.



## Step 2: SWOT analysis

When Sheila completed her research, she then did a SWOT analysis, which she used to discover potential problems that they might have to deal with in their business and the things which will be of benefit to them if dealt with correctly.

<b>STRENGTHS</b> Pot Luck's products are very popular as they are hand painted and they are unique. They are not perishable; therefore, they have a long self-life and will not go out of date. Seasonal bowls for Christmas or Easter can be stencilled and painted in advance by Jane thus reducing delivery times to customers.	<b>WEAKNESSES</b> Some of Pot Luck's bowls are hand painted individual designs which are time consuming to paint. However, because of market research, non-personalised bowls are also offered to customers. Bowls with acrylic paint can be used for decorative purposes only but bowls with glazed finishes can be used for foodstuffs.
<b>OPPORTUNITIES</b> Pot Luck availed of a local potter to give their business any cast-offs which were surplus to his requirements as well as purchasing plain ceramic bowls. A friend of Sheila's mother has a local shop where their products can be displayed and sold. This opportunity provided the team with experience of selling somewhere other than school and it gave them a chance to learn about trading with the public.	<b>THREATS</b> Pot luck has competition from other shops in the area where lighter, less expensive mass-produced coloured bowls are on sale taking some of their market share, however, the team examines their products constantly for quality and regularly review their designs as sale trends dictate. They managed to find a niche in the market.

**TEACHER ONLY**



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# ANNEX. FINANCIAL LITERACY THROUGH POTLUCK SCENARIO<sup>10</sup>



Financial literacy is being able to understand and effectively utilise financial skills. There are five key competencies students will develop because of possessing financial literacy, and they are: earning, saving, investing, spending, borrowing, and protecting. Through these competencies, students are equipped with knowledge that allows them to manage and grow their money effectively.

This annex will navigate you through the potluck scenario case to show you different concepts that will complete your student's financial literacy. These concepts include price (fixed, variable and total costs), preparing a budget, cashflow forecast, sources of finance, record keeping, accumulated cashbook and profit and loss account.

## 1.1 PRICE vs COSTS

**Price is the amount of money a customer is willing to pay for a product or service.**

When determining price, the entrepreneur must consider:

- The labour costs and profit margins. These are not the same.
- What competitors are charging. If you have a unique product/service can you charge more?
- What are customers willing to pay? Your customers want value for money therefore you must find out what they are prepared to pay and if this price is realistic for your business with you making a profit. You might also offer discounts or have special offers from time to time for students and the elderly.

## Scenario

Through market research Sheila has considered labour costs, materials, and profit margins and that the breakeven figure is close to \$14 to make personalised individual hand painted bowls. She has checked out their competitors and found that as 'Pot Luck' has a unique hand painted feature they can charge more. Their competitors' products are priced less expensive but are mass produced and weigh lighter. Pot Luck can only offer discounts or have special offers from time to time on non-personalised bowls.

Jane is artistic and the team decided to use her talents in the business. They are going to purchase plain ceramic bowls and add value by hand painting individual designs on the bowls. They can buy the bowls for \$4 each and a friend of Jane's mother has offered to buy 20 bowls from Pot Luck at \$10 each. Should they accept the offer?

Another way of putting this question is to ask: Will Pot Luck cover all their costs and make a profit by selling the bowls at \$10 each?

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### Answer

Students can't answer this question until they look at what the 'total costs' for the bowls will be.

It is vital to know how much the product is going to cost before it is sold. Sheila needs to break down the product into all its individual pieces and make sure she knows exactly how much each little piece costs. Total costs are made up of variable costs and fixed costs.

**FIXED COSTS + VARIABLE COSTS = TOTAL COSTS**

<sup>10</sup> The content and activities contained in this worksheet have been directly sourced with permission from: County & City Enterprise Boards (n.d.) *Exploring enterprise: A resource to enhance the teaching & learning of enterprise in 2nd level schools*, Second Level Support Service, Ireland.

## Fixed costs

Fixed costs are costs that will remain the same regardless of the level of activity.

In the real business world, rent, rates, and insurance are examples of fixed costs. However, students are unlikely to encounter these. It is important that students recognise all costs that they will incur and include them.

Fixed costs are for the entire period of the business and are not dependent on the number of bowls sold. However, to calculate the total costs of each bowl it is important to assign a portion of the fixed costs to each bowl. To do this the team will have to estimate the number of bowls they think they will sell. They can use the results of their market research to do this and they should also consider the number of bowls that Jane is going to have time to produce.

### Estimating fixed costs per bowl

Robert and Sheila will have to be paid for their time working on marketing and managing the finances of the business. It has been agreed to pay them \$75 each. This \$150 would normally be referred to as administrative wages and is a fixed cost.

Costs will be incurred in promotion, for instance, Pot Luck have decided to have business cards printed and will print colour posters using a computer and printer. These costs are estimated based on the cost of paper and ink to be used in printing the posters (they are not free!) Costs will be incurred to call customers and suppliers and an estimate of this should be included. Travel costs will be incurred to collect the materials from suppliers and deliver the product to customers.

<b>Fixed costs (for 6 months)</b>	<b>\$</b>
Admin Wages	150.00
Business cards	20.00
Pens	10.00
Posters	5.00
Phone calls (\$4.17x6)	25.00
Travel costs (\$3x6)	18.00
<b>Total fixed costs</b>	<b>\$228.00</b>

Sheila has estimated that they will sell 60 bowls during the period of the project. Fixed costs as shown above are divided by 60 to give the fixed cost per bowl as follows:

$$\mathbf{\$228 / 60 = \$3.80 \text{ Fixed costs per bowl}}$$

## Variable costs

Variable costs are costs that change with the level of activity.

In Pot Luck's case variable costs will include – purchase of bowls, paint, labour costs and packaging. It is important that the time that will be spent working on the business is also costed. Questions to ask include: how much time does it take to make each product? Do some products take longer to make than others? If so, can you charge more for them?

### Estimating cost of labour per bowl

In Pot Luck's case, Jane can find out the time it takes to paint a bowl by painting one. Say she finds that it takes her 30 minutes to paint each bowl and the Team have decided to pay her \$10 per hour. The variable cost of labour per bowl is 30 minutes/60 minutes x10 = \$5.00 per bowl.

### Estimating cost of paint per bowl

Jane can estimate the cost of paint, taking into account the number of colours she will use and how many bowls she can paint from a tube of paint. Assume paint costs work out at \$0.25 per bowl, the boxes costs \$1.00 each, the variable costs can now be summarised as follows:

<b>Variable costs</b>	<b>\$</b>
Purchase bowl	4.00
Paint per bowl	0.25
Labour per bowl	5.00
Box and label	1.00
<b>Total variable costs per bowl</b>	<b>\$10.25</b>

## Total costs

Let's go back to the initial question: A friend of Jane's mother has offered to buy 20 bowls from Pot Luck at \$10 each. Should they accept the offer?

Remember our formula for total cost:

$$\text{FIXED COSTS} + \text{VARIABLE COSTS} = \text{TOTAL COSTS}$$

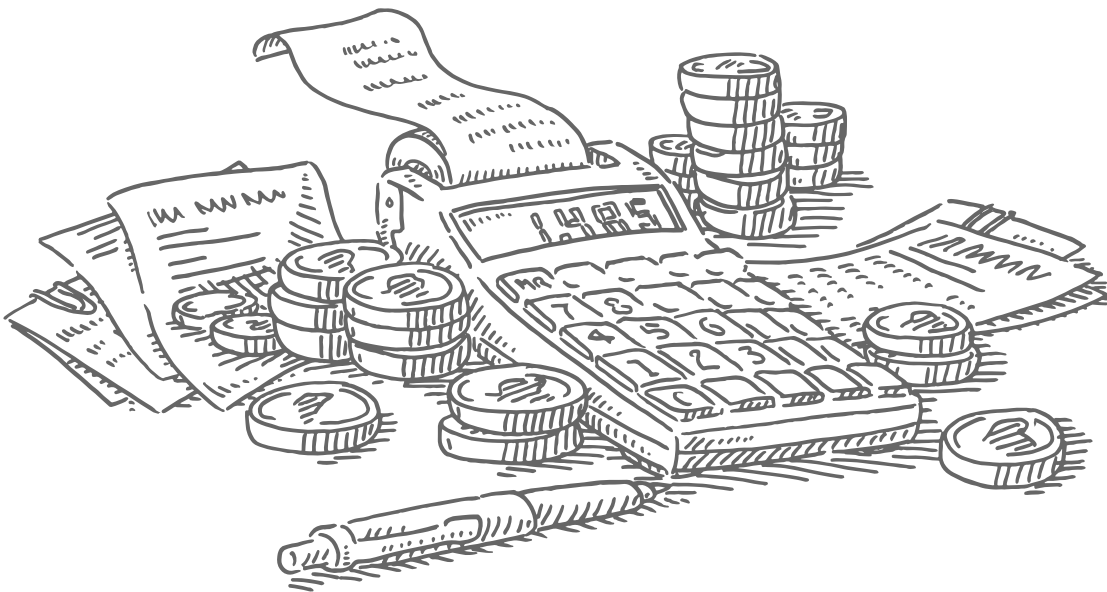
$$\text{To produce 1 bowl} \quad \$3.80 + \$10.25 \quad = \quad \$14.05$$

If Pot Luck sell the bowls at \$10.00 each, they will actually make a loss of \$4.05 per bowl (see calculation below):

$$\text{To produce 20 bowls} \quad 20 \times \$14.05 \text{ per bowl} \quad = \quad \$281.00$$

$$\text{To sell 20 bowls at } \$10 \text{ each} \quad 20 \times \$10 \text{ per bowl} \quad = \quad \$200.00$$

$$\text{Total loss} \quad = \quad \mathbf{\$81.00}$$





## WORKSHEET A.1 Pricing your product<sup>11</sup>

To price a product, the unit costs must be calculated and then decisions can be made about how much the product can be sold for. This is called pricing policy and there are several ways it can be done. But before *deciding the pricing policy*, the unit cost for the product must be calculated (see page 40 of student workbook).

### Calculating unit costs

#### A. Calculate your Fixed Costs

Fixed Costs	\$
Total fixed costs	\$
Fixed cost per unit	\$

#### B. Calculate your Variable costs

Variable Costs	\$
Total variable costs	\$
Variable cost per unit	\$

#### C. Add 'Fixed costs per unit' and 'Variable costs per unit' together:

Do your calculation here:

<sup>11</sup> The content and activities contained in this worksheet have been directly sourced with permission from: County & City Enterprise Boards (n.d.) *Exploring enterprise: A resource to enhance the teaching & learning of enterprise in 2nd level schools*, Second Level Support Service, Ireland.

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## *Pricing policy*

**Cost plus pricing** – here a percentage, for example 10% is added to the unit price and that then becomes your price. The percentage added is referred to as a 'Mark-up' so you would have a 10% mark up. Example: if the unit price were \$14 and you add a 'mark-up' of 10% i.e. \$1.40 you would have a selling price of \$15.40.

**Competitive pricing** – here you set your price very near your competitor's price. For example, if your competitors are charging \$14.20, you might decide to charge \$14.00. Think this through very clearly as this could limit the amount of your profit.

**Loss leader** – here prices are set at cost or even below cost so that you get customers interested quickly and make your profit on something else they buy. You need to be careful not to put yourself out of business. An example of this could be a shop where you sell newspapers below price because if someone comes into the shop they will probably buy sweets where the profit is higher. Remember, however, if you have nothing else to sell this is not appropriate.

**Penetration pricing** – here your price is above cost but lower than your competitors and then you have a choice to raise the price and so make some profit. An example of this could be where you offer the first edition of a magazine at a reduce price so that people start to look for it in the shops and then you charge full price for every other edition.

**Creaming pricing** – here you make the price high because it has some unique feature and is considered a luxury. You have a chance to cover a lot of your costs quickly.

**Price discrimination** – here you charge different prices to different customers e.g. Old Age Pensioners and students are charged a cheaper price.

**REMEMBER** – check your market research results to see what price people are prepared to pay.

**Having taken everything into consideration, the Pot Luck team has decided to introduce the bowls to the market at a price of \$17.50 each.**

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*Notes:*

## 1.2 PREPARING A BUDGET

### What does a budget mean?

A budget is an essential tool in planning for any business, as it details the expected financial performance of the business.

Budgeting is anticipating what you might need tomorrow, which we can call forward planning. Forward planning is an important method of reducing the risk of business failure. It also enables the entrepreneur to calculate how much money is needed to start their business and will enable them to monitor business performance on an ongoing basis and take corrective action if targets are not being met.

What is the most appropriate format of a budget? A cashflow forecast is the most appropriate format of a budget to use. The cashflow forecast can be on a weekly or monthly basis. The entrepreneur can use the results from the market research conducted on costs and pricing to help provide some of the figures for the cashflow forecast. Below is an example of a cashflow forecast:

Month	Month one	Month two	Month three	Month four	Month five	Month six	Month seven	Month eight	Month nine	Month ten	Month eleven	Month twelve	Total
Cash balance at the start of each month	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
<b>Cash in (record when actually received)</b>													
<b>Operating revenue</b>													
Cash receipts from customers	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	<b>\$0</b>
Collection of receivables	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	<b>\$0</b>
Other operating revenue received	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	<b>\$0</b>
Total Operating Revenue	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	<b>\$0</b>
<b>Other Sources of Cash Inflows</b>													
Proceeds from sale of assets	0	0	0	0	0	0	0	0	0	0	0	0	<b>0</b>
Funds borrowed	0	0	0	0	0	0	0	0	0	0	0	0	<b>0</b>
Tax refund/rebates	0	0	0	0	0	0	0	0	0	0	0	0	<b>0</b>
Other sources of cash inflow	0	0	0	0	0	0	0	0	0	0	0	0	<b>0</b>
Total other cash inflows	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	<b>\$0</b>
<b>Total monthly cash in</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

Month	Month one	Month two	Month three	Month four	Month five	Month six	Month seven	Month eight	Month nine	Month ten	Month eleven	Month twelve	Total
<b>Cash out (record when actually paid)</b>													
Total Cost of Goods	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total General & Administrative	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Marketing & Promotional	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Operating Expenses	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Motor Vehicle Expenses	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Website Expenses	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Perm. Employ Exp	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Casual Employ Exp	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Workcover Insurance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Occupancy Costs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Other Expenses	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Other Cash Outflows</b>													
Purchase of assets	0	0	0	0	0	0	0	0	0	0	0	0	0
One-off bank fees	0	0	0	0	0	0	0	0	0	0	0	0	0
Principal Loan repayments	0	0	0	0	0	0	0	0	0	0	0	0	0
Payments to the owner/s	0	0	0	0	0	0	0	0	0	0	0	0	0
Investment of surplus funds	0	0	0	0	0	0	0	0	0	0	0	0	0
Other cash inflows	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Other Cash outflows	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total monthly cash out</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Net difference</b>													
(subtracts the Cash out from Cash in)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Cash balance at the end of each month</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

## Cashflow forecast for Pot Luck

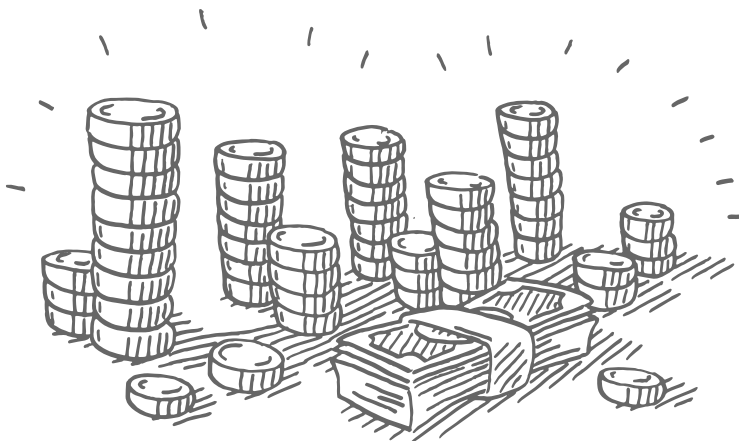
It is important to indicate the assumptions that your figures are based on. For instance, the sales figures will be estimated using results from the market research and pricing exercise already completed.

In the case of Potluck, Sheila, the Marketing Manager has estimated that she will sell 60 bowls over 6 months.

- Having completed the pricing exercise Potluck has decided on a selling price of \$17.50 per bowl. Costs have also been identified. The timing of sales and purchases has also been estimated.
- Sheila has assumed that no sales will be made in September and that there will be an increase in sales in December because of the Christmas Craft Fair and in February following increased promotion.
- For September they have decided to purchase 6 bowls at a cost of \$4 each and 4 tubes of paint at a cost of \$7.50. Robert, the Finance Manager, thinks that they will spend approximately \$20 on getting business cards printed, \$10 for promotional pens and another \$5 on posters, which Potluck will use to promote their product.
- Estimation of expenditure on phone calls is \$4.17 and \$3 on travel per month. Wages for Sheila and Robert have been set at \$75 each, taking account of the time they will spend working on the business.

The format for the cashflow forecast/budget can be as follows:

Month	September	October	November	December	January	February
Cash balance at the start of each month	\$0	\$0	\$0	\$0	\$0	\$0
Cash in (record when actually received)						
Operating revenue						
<b>Total Operating Revenue</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
Other Sources of Cash Inflows						
<b>Total other cash inflows</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Total monthly cash in</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>



Month	September	October	November	December	January	February
Cash out (record when actually paid)						
Labour	\$0	\$0	\$0	\$0	\$0	\$0
Bowls	\$24.00	\$0	\$0	\$0	\$0	\$0
Boxes	\$6.00	\$0	\$0	\$0	\$0	\$0
Paint	\$7.50	\$0	\$0	\$0	\$0	\$0
Administration wages	\$0.00	\$0	\$0	\$0	\$0	\$0
Business Cards	\$20.00	\$0	\$0	\$0	\$0	\$0
Pens	\$10.00	\$0	\$0	\$0	\$0	\$0
Posters	\$5.00	\$0	\$0	\$0	\$0	\$0
Phone calls	\$4.17	\$0	\$0	\$0	\$0	\$0
Travel	\$3.00	\$0	\$0	\$0	\$0	\$0
<b>Total Other Cash Inflows</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Total monthly cash out</b>	<b>\$79.67</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
Net difference (subtracts the Cash out from Cash in)		\$0	\$0	\$0	\$0	\$0
<b>Cash balance at the end of each month</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

This shows that the total expenses for September before any income is made from sales. This indicates the amount of money needed to finance the start-up costs of the business. This then leads us to look at the sources of finance for the business.

## Sources of finance

There are two sources of finance an entrepreneur can use – (1) their own; (2) someone else's.

Your own money, when invested in a business is known as **equity investment** and other people's money is generally in the form of **loans**.

Sponsorship can be a relevant source of finance for some student enterprises such as magazines and calendars. In some cases, students will undertake an initial enterprise to raise the finance needed to start their main enterprise. Students could, for instance, wash cars to raise finance. In Pot Luck's case the team has decided to invest \$30 of their savings and Jane's parents have agreed to loan them \$50.

These figures should not be entered under income. Income is only money that is actually received or paid out that is entered in the cashflow. There is \$0.00 entered for labour even though an allowance for labour is included in the costing of the item, it will only be entered into the cashflow in the month that it will be paid out.

Month	September	October	November	December	January	February
<b>Number of items sold:</b>	<b>0</b>	<b>6</b>	<b>10</b>	<b>25</b>	<b>5</b>	<b>14</b>
Cash balance at the start of each month	\$0	\$0	\$0	\$0	\$0	\$0
Cash in (record when actually received)						
Operating revenue						
Total Operating Revenue	\$0	\$0	\$0	\$0	\$0	\$0
Other Sources of Cash Inflows						
Investment	\$30.00					
Loans	\$50.00					
Total other cash inflows	\$80.00	\$0	\$0	\$0	\$0	\$0
<b>Total monthly cash in</b>	<b>\$80.00</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
Cash out (record when actually paid)						
Labour	\$0	\$0	\$0	\$0	\$0	\$0
Bowls	\$24.00	\$0	\$0	\$0	\$0	\$0
Boxes	\$6.00	\$0	\$0	\$0	\$0	\$0
Paint	\$7.50	\$0	\$0	\$0	\$0	\$0
Administration wages	\$0.00	\$0	\$0	\$0	\$0	\$0
Business Cards	\$20.00	\$0	\$0	\$0	\$0	\$0
Pens	\$10.00	\$0	\$0	\$0	\$0	\$0
Posters	\$5.00	\$0	\$0	\$0	\$0	\$0
Phone calls	\$4.17	\$0	\$0	\$0	\$0	\$0
Travel	\$3.00	\$0	\$0	\$0	\$0	\$0
Total Other Cash outflows	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total monthly cash out</b>	<b>\$79.67</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
Net difference (subtracts the Cash out from Cash in)	\$0.33	\$0	\$0	\$0	\$0	\$0
<b>Cash balance at the end of each month</b>	<b>\$0.33</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>



For October Pot Luck estimates that they will first sell the six bowls that Jane has painted and then purchase a further 10 bowls from the shop. They will not need to buy paint this month. The figures can be inserted accordingly. All three members of the team have decided not to take any wages out of the business at present in order to keep money in the business to purchase materials and repay loans.

Month	September	October	November	December	January	February
<b>Number of items sold:</b>	<b>0</b>	<b>6</b>	<b>10</b>	<b>25</b>	<b>5</b>	<b>14</b>
Cash balance at the start of each month	\$0	\$0.33	\$0	\$0	\$0	\$0
Cash in (record when actually received)						
Operating revenue						
Total Operating Revenue	\$0	\$0	\$0	\$0	\$0	\$0
Other Sources of Cash Inflows						
Sales Value		105.00				
Investment	\$30.00					
Loans	\$50.00					
Total other cash inflows	\$80.00	\$0	\$0	\$0	\$0	\$0
<b>Total monthly cash in</b>	<b>\$80.00</b>	<b>\$105.33</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
Cash out (record when actually paid)						
Labour	\$0	\$0	\$0	\$0	\$0	\$0
Bowls	\$24.00	\$40.00	\$0	\$0	\$0	\$0
Boxes	\$6.00	\$10.00	\$0	\$0	\$0	\$0
Paint	\$7.50	\$0	\$0	\$0	\$0	\$0
Administration wages	\$0.00	\$0	\$0	\$0	\$0	\$0
Business Cards	\$20.00	\$0	\$0	\$0	\$0	\$0
Pens	\$10.00	\$0	\$0	\$0	\$0	\$0
Posters	\$5.00	\$0	\$0	\$0	\$0	\$0
Phone calls	\$4.17	\$4.17	\$0	\$0	\$0	\$0
Travel	\$3.00	\$3.00	\$0	\$0	\$0	\$0
Total Other Cash outflows	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total monthly cash out</b>	<b>\$79.67</b>	<b>\$57.17</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
Net difference (subtracts the Cash out from Cash in)	\$0.33	\$0	\$0	\$0	\$0	\$0
<b>Cash balance at the end of each month</b>	<b>\$0.33</b>	<b>\$48.16</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

## WORKSHEET A.2 Cashflow<sup>12</sup>

With the following information, complete the cashflow statement for Pot Luck (see page 41 of student workbook).

Pot Luck has decided on a selling price of \$17.50 per bowl. Sheila has assumed that 60 bowls will be sold in total, with no sales made in September, six bowls sold in October, ten bowls sold in November and there will be an increase in sales in December because of the Christmas Craft Fair (25 bowls). Five bowls will be sold in January and in February following increased promotion 14 bowls will be sold.

For September they have decided to purchase 6 bowls at a cost of \$4 each and 4 tubes of paint at a cost of \$7.50. Robert, the Finance Manager, thinks that they will spend approximately \$20 on getting business cards printed, \$10 for promotional pens and another \$5 on posters, which Potluck will use to promote their product. They will need to buy 6 boxes at \$1 each. Estimation of expenditure on phone calls is \$4.17 and \$3 on travel per month. Wages for Sheila and Robert have been set at \$75 each, taking account of the time they will spend working on the business however they will not be paid this month. There are no administrative expenses this month nor any labour expenses. The team have decided to invest \$30 of their savings and Jane's parents have agreed to loan them \$50.

For October Pot Luck estimates that they will sell their first six bowls that Jane has painted and they will purchase a further 10 bowls at \$4 each from the shop. They will not need to buy paint this month nor make any posters, but they will have to buy 10 more boxes at \$1 each. Phone expenditure and travel expenditure is the same in October as it was in September. There are no administrative expenses this month. All three members of the team have decided not to take any wages out of the business at present in order to keep money in the business to purchase materials and repay loans.

The figures for sales could be varied – what happens if they only achieve sales of 15 bowls in December? In each case the consequences for cash should be examined and corrective action taken if negative cashflow results.

	September	October	November	December	January	February
<b>No of items</b>	0	6	10	25	5	14
<b>Income</b>	\$	\$	\$	\$	\$	\$
Sales value						
Investment						
Loans						
<b>A. Total income</b>						
<b>Expenditure</b>						
Labour						
Bowls						
Boxes						
Paint						
Admin. Wages						
Business cards						
Pens						
Posters						
Phone calls						
Travel						
Other						
<b>B. Total expenditure</b>						
<b>C. Income less expenditure (A-B)</b>						
Opening balance						
<b>Closing balance</b>						

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## Answer

	September	October	November	December	January	February
No of items	0	6	10	25	5	14
<b>Income</b>	\$	\$	\$	\$	\$	\$
Sales value	0	105.00				
Investment	30.00					
Loans	50.00					
<b>A. Total income</b>	<b>80.00</b>	<b>105.00</b>				
<b>Expenditure</b>						
Labour	0.00	0.00				
Bowls	24.00	40.00				
Boxes	6.00	10.00				
Paint	7.50	0.00				
Admin. Wages	0.00	0.00				
Business cards	20.00	0.00				
Pens	10.00					
Posters	5.00	0.00				
Phone calls	4.17	4.17				
Travel	3.00	3.00				
Other	0.00	0.00				
<b>B. Total expenditure</b>	<b>79.67</b>	<b>57.17</b>				
<b>C. Income less expenditure (A-B)</b>	<b>0.33</b>	<b>47.83</b>				
Opening balance	0.00	0.33				
<b>Closing balance</b>	<b>0.33</b>	<b>48.16</b>				

<sup>12</sup> The content and activities contained in this worksheet have been directly sourced with permission from: County & City Enterprise Boards (n.d.) *Exploring enterprise: A resource to enhance the teaching & learning of enterprise in 2nd level schools*, Second Level Support Service, Ireland.

### 1.3 RECORD KEEPING

Every business needs to know where it stands financially on an ongoing basis. The questions for business are:

- Are we making profit?
- How much are we selling?
- What are our costs?
- Do we have enough cash?

These questions can only be answered if the business maintains appropriate financial records – the records must be both accurate and timely.

For student enterprises it would be sufficient to enter financial transactions in a Cashbook. A cashbook is the record of all the cash that comes into and goes out of a business daily.

Receipts							
Date	Paid by	Ref	Amount	Sales	Loan	Investment	Other

Payments								
Date	Paid by	Ref	Amount	Purchase materials	Wages	Print/Promo.	Travel	Other

Receipts and payment can be totalled on a regular basis and this will let you know how the business is progressing. You will also have recorded the information that you need for the preparation of the accounts for the business. However, if some analysis of receipts and payments is included in the cashbook it will make it much easier to compile accounts later.

‘Pot Luck’ completed a cashbook for transactions in September and October and everything went exactly as predicted in the cashflow forecast.

## WORKSHEET A.3 Cashbook

Prepare a cashbook for the transactions made in September and October (see page 42 of student workbook).

In September the business received a loan from Jane's parents (A. Shaw) for \$50 and the three team members agreed to invest \$30 in total in the business.

Receipts							
Date	Paid by	Ref	Amount	Sales	Loan	Investment	Other
20/09	A. Shaw	Loan/1	\$50.00		\$50.00		
20/09	Robert, Sheila and Jane	Invest	\$30.00			\$30.00	
<b>Total for September</b>			<b>\$80.00</b>		<b>\$50.00</b>	<b>\$30.00</b>	
<b>Total Year to Date</b>			<b>\$80.00</b>	<b>\$0.00</b>	<b>\$50.00</b>	<b>\$30.00</b>	<b>\$0.00</b>

A number of invoices were raised in September and they include the following:

Payments									
Date	Paid to	Ref	Amount	Purchase materials	Wages	Print / Promo.	Phone	Travel	Other
25/09	Bowl Makers PTY Ltd	349	\$24.00	\$24.00					
25/09	Paint Suppliers PTY Ltd	0076	\$7.50	\$7.50					
25/09	Box Supplies PTY Ltd	0126	\$6.00	\$6.00					
28/09	ABC Printers Ltd	2407	\$20.00			\$20.00			
28/09	ACE Promo	1298	\$10.00			\$10.00			
29/09	A.Jones	Ink	\$5.00			\$5.00			
29/09	A.Shaw	Phone	\$4.17				\$4.17		
30/09	A.Jones	Travel	\$3.00					\$3.00	
<b>Total for September</b>			<b>\$79.67</b>	<b>\$37.60</b>	<b>\$0.00</b>	<b>\$35.00</b>	<b>\$4.17</b>	<b>\$3.00</b>	<b>\$0.00</b>
<b>Total Year to Date</b>			<b>\$79.67</b>	<b>\$37.60</b>	<b>\$0.00</b>	<b>\$35.00</b>	<b>\$4.17</b>	<b>\$3.00</b>	<b>\$0.00</b>

It will be important to differentiate transactions that are appropriate to the profit and loss of the business and those that are not. In general, transactions that will be used to calculate profit or loss are sales and the costs incurred in making sales. All the payments can be associated with making sales – materials were bought to make the bowls that will be sold. Printing, telephone, and travel are classified as fixed costs when you look at costing. These are costs associated with sales as advertising is essential to generate sales, goods must be ordered, collected, and delivered these types of costs are also referred to as overheads. However, the receipts for September will not be used for calculating profit and loss. Loans and investments are items that would be included in a balance sheet.

In October the following sales transactions occurred:

Receipts							
Date	Paid by	Ref	Amount	Sales	Loan	Investment	Other
4/10	B.Jones	01	\$17.50	\$17.50			
5/10	Cash sale	Cash	\$35.00	\$35.00			
6/10	A.Lorry	02	\$17.50	\$17.50			
8/10	J.Curtin	03	\$17.50	\$17.50			
19/10	A.Big	04	\$17.50	\$17.50			
<b>Total for October</b>			<b>\$105.00</b>	<b>\$105.00</b>			
<b>Total Year to Date</b>			<b>\$185.00</b>	<b>\$105.00</b>	<b>\$50.00</b>	<b>\$30.00</b>	<b>\$0.00</b>

In October the following expenditure receipts were received:

Payments									
Date	Paid to	Ref	Amount	Purchase materials	Wages	Print / Promo.	Phone	Travel	Other
20/10	Bowl Makers PTY Ltd	459	\$40.00	\$40.00					
25/09	Box Supplies PTY Ltd	0526	\$10.00	\$10.00					
29/09	A.Shaw	Phone	\$4.17				\$4.17		
30/09	A.Jones	Travel	\$3.00					\$3.00	
<b>Total for October</b>			<b>\$57.17</b>	<b>\$50.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$4.17</b>	<b>\$3.00</b>	<b>\$0.00</b>
<b>Total Year to Date</b>			<b>\$136.84</b>	<b>\$87.50</b>	<b>\$0.00</b>	<b>\$35.00</b>	<b>\$8.34</b>	<b>\$6.00</b>	<b>\$0.00</b>

It will then be possible to generate accounts for the business from the cashbook figures.

**Accounts are prepared by businesses to show how the company has performed financially for any specified period. This includes the Accumulated cashflow, Balance sheet and Profit and Loss account.**

While accounts for a business would also include a Balance Sheet, student enterprises normally would not have assets or debtors/creditors to any significant extent so will not be considered here. However, a Balance Sheet can be included if considered appropriate and students demonstrate that they prepared and reviewed accounts on a regular basis. This will certainly create a better impression when it comes to competitions.

Profit and loss are the normal format of accounts for manufacturing and retail businesses with Income and Expenditure generally used by service businesses. A Profit and Loss Account (P&L) as the name clearly implies will tell what profit (or loss) a business has made on its activities during the period. The account starts with a trading account, which shows the income from sales and the direct (variable) costs of making the items actually sold.

## Accumulated cashbook

Using the Receipts and 'Payments' template identify what has been spent and what income has been made (see page 43 of student workbook).

Receipts	Amount	Sales	Loan	Investment	Other
Total Year to Date					

Payments	Amount	Purchase materials	Wages	Print / Promo.	Phone	Travel	Other
Total Year to Date							

**TEACHER ONLY**



### Answer

If we assume that the cashflow projection for Pot Luck turned out to be very accurate and the only variation was that actual sales turned out to be 57 bowls as against the 60 projected. All other costs turned out as projected. The accumulated cashbook would look like this.

Receipts	Amount	Sales	Loan	Investment	Other
Total Year to Date	\$1077.50	\$997.50	\$50.00	\$30.00	\$0.00

Payments	Amount	Purchase materials	Wages	Print / Promo.	Phone	Travel	Other
Total Year to Date	\$923.00	\$315.00	\$450.00	\$35.00	\$25.00	\$18.00	\$80.00

Note that the payments refer to the cost of 60 bowls as 60 were purchased and prepared. The \$80 under 'other' refers to the repayment of the investment and loan. This will not be taken into the P&L account.

## 1.4 PROFIT AND LOSS ACCOUNT

A profit and loss account, also known as an income statement, identifies to the entrepreneur what income/revenue they have made but also what expenses they have incurred during a particular period. When the entrepreneur reads the profit and loss account statement s/he will know if the business is making a profit or a loss for the given time period. This statement, along with the balance sheet and the cashflow statement lets the entrepreneur understand the financial health of the business.

The profit and loss account commences with the sales income or revenue that the business has made by selling products/services to its customers. Next is the 'Cost of goods sold', which is the cumulative total of direct costs incurred for the goods or services sold, including direct expenses like raw material, direct labour cost and other direct costs. However, it excludes all the indirect expenses incurred by the business.

Subtracting this figure from the sales income gives the entrepreneur the gross profit. Gross profit is the earnings of the business from its core business activity i.e., the profit that is arrived after deducting all the direct expenses like raw material cost, labour cost, etc. from the direct income generated from the sale of its goods and services.

The Net Profit is calculated by deducting all other expenses such as taxes and interest paid on debt.





## WORKSHEET A.4 Profit and Loss account<sup>13</sup>

You are required to calculate the profit and loss for Pot Luck at the end of the year (see page 44 of student workbook).

Profit and Loss Account for the x months ended DD/MM/YYYY			
	\$	\$	\$
Sales Income (57 bowls @ \$17.50)			
<b>Less cost of goods sold</b>			
Opening stock			
(plus) cost of production 60 units: Materials			
(plus) cost of production 60 units: Labour			
(less) closing stock: 3 Units: Materials			
(less) closing stock: 3 Units: Labour			
Cost of goods sold			
<b>Gross Profit</b>			
Expenses			
Admin wages			
Printing, production			
Telephone			
Travel costs			
<b>Total expenses</b>			
<b>Net profit</b>			

<sup>13</sup> The content and activities contained in this worksheet have been directly sourced with permission from: County & City Enterprise Boards (n.d.) *Exploring enterprise: A resource to enhance the teaching & learning of enterprise in 2nd level schools*, Second Level Support Service, Ireland.

**TEACHER ONLY**



## Answer

Profit and Loss Account for the x months ended DD/MM/YYYY			
	\$	\$	\$
Sales Income (57 bowls @ \$17.50)			997.50
<b>Less cost of goods sold</b>			
Opening stock	0		
(plus) cost of production 60 units: Materials	315		
(plus) cost of production 60 units: Labour	300	615.00	
(less) closing stock: 3 Units: Materials	15.75		
(less) closing stock: 3 Units: Labour	15.00	30.75	
Cost of goods sold			584.25
<b>Gross Profit</b>			<b>413.25</b>
Expenses			
Admin wages		150	
Printing, production		35	
Telephone		25	
Travel costs		18	
<b>Total expenses</b>			<b>228.00</b>
<b>Net profit</b>			<b>185.25</b>

**TEACHER ONLY**



*Notes:*

**TEACHER ONLY**



*Notes:*

# Appendix 1: Reports on the 21st Century skills

21st century skills have become increasingly researched, with emphasis placed on how to develop and embed them into curriculum. With this, a variety of reports have been published that outline the skills students need to possess in the 21st century.

Overall, the skills outlined are similar and in line with the ones stated earlier. To recap, the skills are broken down into three categories: being learning, literacy and life.

## Learning skills encompass:

- Critical thinking – the ability to find solutions
- Creativity – being able to think outside the box
- Collaboration – working in a team with others
- Communication – effectively conveying and sharing ideas

## Literacy skills are comprised of:

- Information literacy – being able to understand facts, figures, data and statistics
- Media literacy – being able to understand how and where information is published
- Technology literacy – being able to use technology effectively for a specific task

## Life skills involve:

- Flexibility – being able to adapt to unexpected changed efficiently
- Leadership – motivating others to act on achieving a common goal
- Initiative – to take charge
- Productivity – having high efficiency when completing a task
- Social skills – the ability to interact positively with others



## 21<sup>st</sup> Century Skills: What potential role for the Global Partnership for Education

This report explores the skills and considers the role that the GPE has in supporting and embedding 21<sup>st</sup> century skills in their systems and education.

<https://www.globalpartnership.org/sites/default/files/document/file/2020-01-GPE-21-century-skills-report.pdf>

## Assessment and teaching of 21<sup>st</sup> century skills: Methods and approach

The book teaches how to identify, develop, measure and teach 21<sup>st</sup> century skills.

<https://link.springer.com/book/10.1007/978-94-017-9395-7>

## Project-based learning for the 21<sup>st</sup> century: Skills for the future

This journal article discusses how to implement PBL, to allow students to develop critical skills to help them thrive in the 21<sup>st</sup> century.

<https://www.tandfonline.com/doi/abs/10.1080/00098650903505415>

## “21<sup>st</sup> Century” Skills: Not New, but a Worthy Challenge

The article focuses on identifying skills students need to be successful and how they should be developed.

<https://dbweb01.aft.org/sites/default/files/periodicals/RotherhamWillingham.pdf>

## Education for Life and Work: Developing Transferable Knowledge and Skills in the 21<sup>st</sup> Century

This consensus study report highlights key skills and how education can be structured to develop these.

# About the authors



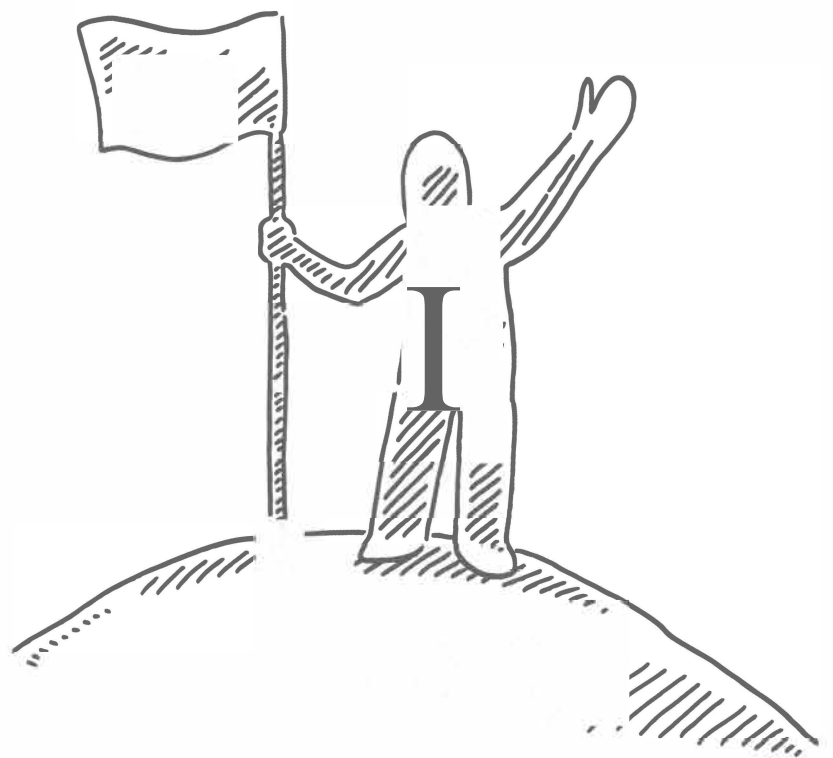
## Naomi Birdthistle

Naomi has entrepreneurship in her blood. She started her first from a very young age, buying and selling books, then another business in her teens. She subsequently ran her own consulting business for 10 years and worked in her family business on a part-time basis for 20 years. Naomi has helped the Irish government design the high school enterprise program, that is now completed by over 16,000 students each year. She also guides the European Commission on entrepreneurship programs that are seeking funding. Naomi has published three books, 17 book chapters, 30 peer-reviewed papers and an abundance of national and European reports.



## Carla Riverola

Carla is passionate about entrepreneurship, innovation management and sustainability. She believes it is key to expose students to entrepreneurial skills from an early age that will help cope with the uncertain future workplace. She is also involved in research projects related to the diffusion of sustainable innovations and has partnered with entrepreneurs and policy makers around the world.





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