

The Journey to the Top

Instilling The Mindset of an Entrepreneurial Engineer

INSTRUCTION MANUAL

For 2 to 6 Players (Teams)/Ages 10+

This informative game of a life of entrepreneurship will give students the opportunity to step into the shoes of an entrepreneurial engineer and observe and/or analyze the techniques used to achieve success. Players or teams (we suggest teams of 4 or 5 students, with that noted the directions refer to teams and not players) will engage in risky decisions, learn what it is like to budget, and will ideally develop a basic understanding of what aspects are associated with entrepreneurial engineering. This board game is meant to replace a traditional lesson and it is meant to allow students to engage in a competitive environment in an effort to motivate them about the subject.

With this basic understanding, students will have a new positive perception of engineering entrepreneurship.

Game Contents

Game Board

6 Pawns

1 Die

1 Timer/Stopwatch

50 Risk/Reward Cards

20 Legal/Ethical Issues Cards

20 Resources Cards

25 Curriculum Cards

20 Networking Cards

17 Final Question Cards

Professor's Objective

To introduce students to a new branch of engineering that is becoming more popular as time progresses. To make entrepreneurial engineering seem appealing and not intimidating. To use a game as a method of teaching new engineers what it is like to think, act, succeed and fail as an entrepreneur, and to establish a parallel between entrepreneurship and engineering.

Game Setup

Open up the game board and position the board so that all teams can move their desired pawns (You may also choose to display the game board with a projector, in order to ensure that it is in view of all students). Place all of the pawns on the start space of the outer ring; all pawns not selected leave in the game box. Distribute points to all teams at the start of the game (We suggest 5, as students will be able to take advantage of the risk/reward spaces from the start but will not be too far ahead in the

game). Remove all card decks from the box and shuffle them thoroughly. Place each deck in a space reachable by all teams (Putting the decks in the front of the classroom will encourage students to get out of their seats and move around).

How To Play

To start, every team rolls the die, the highest number goes first. If there is a tie, the remaining teams roll the die again. The order of turns follows a clockwise rotation from the team who rolled the highest number. As a professor, you will monitor the scoring for the game and you will be the judge on who wins points from the final questions.

What To Do On Your Turn

To move, teams must roll a die and move their pieces around the game board in a clockwise direction along the outer ring (The first ring is the “Brainstorming Stage”) according to the number they rolled on the die. The board is split up into 4 rings that model the journey of an entrepreneur. The outer ring is called the “Brainstorming Stage”, the next ring going towards the middle is the “Drawing Board” followed by the “Marketing Stage” and the “Sales Stage”. Teams start off by moving around the “Brainstorming Stage” until they acquire a certain number of points (10). Once they obtain this number of points, they proceed to the start space of the next stage. This process is repeated until they reach the final stage and acquire 25 or more points. Stages are related to the number points that a team has at one time. If a team has:

1 → 9 points	Brainstorming Stage
10 → 14 points	Drawing Board Stage
15 → 19 points	Marketing Stage
20 → 24 points	Sales Stage

If a team accumulates 25 or more points at any time, they advance to the final question space in the center of the board. On their next turn, they are presented with a final question.

An interesting aspect of the game is that teams can move backward in the game when things do not go their way. For example, if a team is at the Drawing board stage (ring 2) and loses points, falling in the range of points corresponding to the Brainstorming stage (outermost ring, ring1), they return to the start space of that stage. While the team is advancing around the ring, he or she will land on a multitude of spaces. These spaces include a “Risk/Reward” space, a “Legal Issues” space, a “Bank” space, a “Lunch Break” space, a “Resources” space, a “Curriculum” space, and a “Networking” space (see ‘What Do the Spaces Mean?’ below for space descriptions).

The Meaning Behind the Spaces and Their Corresponding Cards

Take a look at game board while reading the following:

Start Spaces: This space is where all of the pawns will start at the beginning of the game, and at the beginning of each level. When a team accumulates the desired

number of points to advance to the next stage, they advance to the start space of the next ring (If they are on the “Brainstorming” stage, they advance to the start space of the “Prototype” stage once they obtain 10 points).

Winner Space: This is the final space on the board that each team aims to reach in the quickest amount of time.

Final Question Space: This is the second to last space on the board that each team reports to when they have obtained at least 25 points. In order to move past this space and onto the winner’s space, teams must win an all-play competition. The catch: If a team’s answer is chosen, and they have at least 25 points, they have won (**whether it is their turn or not**). This means that if there are multiple teams with 25 points, and a final question card is drawn, those teams can win the game if their answer is chosen (in this case, you, the professor, are the judge for this competition, however you must have students submit their answers anonymously). If a team with less than 25 points answers the question correctly, they are awarded 4 points, which gives them a chance to come back. The purpose of this space is to keep teams that are behind in the game engaged and interested. The all-play competition was designed to promote ideation, critical thinking and teamwork, and most imperatively it keeps students involved and animated.

Risk/Reward Space - The Risk/Reward spaces are the most prevalent spaces in the game. Landing on this space grants teams the opportunity to gamble their points in an attempt to gain double the points they wager and progress closer to the winning space. Before the team that lands on this space draws a Risk/Reward card, they must decide how many points they would like to gamble (**make sure they decide what they want to gamble before the card is drawn**). A team does not have to gamble anything, but their turn ends with that decision. If a team has no points to gamble, they cannot draw a card. Also, points that have been deposited into the bank are not allowed to be gambled because they are locked (see “Bank Space” section below). Once a team has made their gamble, the instructor draws the top card of the Risk/Reward deck and reads it aloud to the class. If the card is positive, students receive the number of points they gambled multiplied by two. If the card is negative, students lose all gambled points.

Legal/Ethical Issues Space - These spaces are where teams encounter negative or positive legal or ethical experiences that they may face in the entrepreneurship field. When a team lands on this space, the professor draws a Legal/Ethical Issues card and reads it aloud. The card either informs the team of the illegal action they have committed and how great of a consequence they will suffer, or commends the team for making an ethical decision with their work.

Bank Space - When students land on the Bank space, teams have the opportunity to lock their points for protection (deposit them in the bank). If all points are locked and stored in the bank, teams are not allowed to bet them when a Risk/Reward card is drawn. A team can lock as many points as they desire. Therefore if a team locks 15 points, that team guarantees a spot in the Marketing stage (ring 3). However, once they

are locked, they cannot be unlocked until the team lands on the Bank space again. If a team lands on the Bank space and wishes to unlock points, they may do so at that time.

Lunch Break Space - This space acts as a safe zone (much similar to free parking in Monopoly). There is nothing good or bad about landing on this space, however this does enforce the idea that taking too many lunch breaks does impede success.

Resources Space - The Resources space awards teams a specified number of points if they answer the question displayed on the card correctly. The questions on the cards will refer to different resources found on the Rowan University campus and how students can take advantage of them. When a team lands on this space, the instructor draws a Resource card and asks the question on the card, if the team answers correctly, they receive points equal to the amount of points specified on the card. If the team answers incorrectly, the team's turn ends. There is no penalty for an incorrect answer

Curriculum Space - If a team lands on this space, the instructor draws a card from the Curriculum deck and reads it aloud. The questions include content that first-year engineering students may have learned during their courses. These questions can be true-false, multiple choice, or short answer questions. These cards only have one correct answer. Teams must answer the question correctly to earn points and there is no penalty for a wrong answer.

Networking Space - The team who lands on this space draws a card from the Networking deck and follows the instructions on the card. The purpose of the Networking Space is to teach students about different scenarios that can occur when dealing with investors, supporters, business partners, or consumers.