Hall 5 – A114

Press Kit

Spiel ’19, Essen, Germany

23-10-2019

English

Hall 5 – A114

EXECUTIVE SUMMARY

Formula is a **family game** that is perfect for schools, on holiday and at home. It is mostly a **fun** game. At the same time, it has something **unique**: it is a **mathematical game**. However, kids do not realize they are doing maths, they are just playing a **fun game**.

Goal:
The goal of the game is to be the first to get rid of all your cards. You can get rid of your cards by **making a formula** and giving the answer.

It is a **simple concept** with endless possibilities. The best in maths doesn't necessarily win, which makes it fun to keep playing.

Target groups:

- Families with children age 6+
- Elementary schools
- Middle schools / high schools
- Remedial teachers and homework support organizations
- After school care organizations

Sales:
Formula has sold over **1,000 games** in the first few months only in the Netherlands.

Formula is looking for **distributors** to conquer the world.

An **expansion set** is available to make the game more challenging.

Contents

Note for editors

For more information please contact:
Alon Nir by phone on +31 6 54 92 13 22 or by email at info@formulagames.nl

Images can be used royalty-free with reference to Formula Games.

Hall 5 – A114

1. Press Release – Launch:

New card game Formula improves maths skills of children in a playful manner

Playing regularly during holidays prevents loss of maths knowledge

The maths skills of primary school students in the Netherlands have been decreasing significantly for years. Yet, mathematics is important for pupils to perform well in further education, on the labour market and in society in general. With the introduction of the family game Formula, there is now a new method to improve these skills. This fun and educational card game increases one's self-confidence, insight in and creativity with numbers. A person excelling in maths does not necessarily win the game, so it remains fun for everyone to play. Formula is recommended by the Netherlands Mathematical Institute, Foutloos Rekenen, teachers and educational professionals who have tested the game with children.

American research (Cooper 1996) shows that students lose 2.6 months of accumulated maths knowledge during the summer holidays. More recent studies from Austria (2015) and Sweden (2001) confirm the existence of this "the summer dip". Formula developer Alon Nir: "*There are several digital apps to prevent the dip during the summer holiday, but it is already quite a challenge for parents to get their children away from a screen. Playing a physical card game is seen by both (grand) parents and children as a fun activity. The fact that the children do not even realie that the game makes them better at maths, is of course a very nice side effect.*"

Hall 5 – A114

The game

Formula is an educational board game that noticeably improves maths skills. It is not only fun to play, but it also increases one's pleasure in maths. The confidence to calculate is playfully enhanced and it helps to gain more insight in and creativity with numbers. Every player can play at their own level. The maths game is unique in the sense that players must come up with both the sum (the formula) and the answer. The first person to get rid of all their cards has won. Aydin Cihangir, director of the Netherlands Mathematical Institute and of Foutloos Rekenen, is a fan of Formula. *"You learn mathematics at school or at a Foutloos Rekenen course. In addition to school or the course, Formula really offers something special. It keeps knowledge active, increases insight in and stimulates creativity with numbers, all in a playful manner. We recommend it to all our students."* Lieke Demenint, mother and owner of Kind Aan Zee in Scheveningen (after-school childcare): "The children really think it's a great game. They don't even realise they are doing math. "

In the classroom

Formula offers many opportunities in the classroom as an addition to school lessons. In first grade, kids keep it simple and mostly make formulas using the plus and minus symbols. In third grade, a teacher can instruct the students to use the multiplication or division symbols only so that the multiplication tables are practiced. In fifth grade, fractions can easily be added. Numerous variations are possible. *"The game fits in perfectly with our teaching methods"* (Kevin - maths coordinator and fifth grade teacher - OBS Het Volle Leven in The Hague).

The social aspect is also important as children learn a lot from the formulas others have made. In our tests, children really helped each other very well. "*All children, the ones that are really good in maths and the ones that need extra attention, participated actively, helped and learned from each other. The child who is actually the worst in maths had won twice. I will not be able to get that smile off her face for a week!*" (Linde – 3rd grade teacher - OBS Het Volle Leven in The Hague)

About Formula games

Formula can be played from the age of six and is available on www.formulagames.eu. The base game costs € 12.50 excluding shipping. For children who have already come into contact with fractions, negative numbers, squares or square roots, the extension set (€ 10) is a useful addition. This makes it more challenging, but you can also keep it simple. The extension set can be added inside the box of the base game. The combination of the base game and the extension set costs € 20. Plastic has been

avoided in the Formula packaging. There is a paper band around the cards and the box is closed with two paper stickers. The game is therefore plastic-free.

Formula has been created by Alon Nir, whose father designed several games. During Alon's sabbatical, father and son sat down to take one of the father's games to the next level. That day, the creativity and adrenaline kept Alon up the whole night. In the middle of the night he came up with Formula. The next day he immediately went to cut and paste to make a prototype, just like his father used to do. After fine-tuning the game's concept, various designs of the game were made in collaboration with Studio Calico. These have been extensively tested by children, adults and teachers, whose feedback has been included in the end product.

2. Article Vives (translated into English)

Maths Game Formula:

simple and effective

It doesn't happen often, but sometimes you come across something new, of which you think: "This is so simple and so much fun, why doesn't this already exist?" Formula is such an innovation.

This time it is not an app, but an educational card game with a focus on mathematics. The players have to come up with a formula and give the correct answer to the formula. The person who is the first to get rid of all their cards is the winner. The game is simple and at the same time quite challenging. Every player can play the game at their own level and still play together. Kids (and adults) improve their maths skills in a playful manner, increase their insight in and creativity with numbers.

How do you come up with something like this?

Actually, it is quite simple. Alon Nir decided that after a nice carrier as a senior Finance Manager at a company in the meat industry, that it was time to take a sabbatical of a year. The primary goal was to spend time with his family and to find new energy and creativity. Take the time to think. Alon's dad has invented several games, but they never reached any further than the kitchen table. Full with energy, Alon and his dad were improving one of dad's games. That night, Alon could not sleep due to all the adrenaline and creativity. In the middle of the night while staring at the ceiling, Alon came up with Formula. Alon mentioned this story at a school-event from his kids to Sven de Laaf. Sven and Alon have kids in the same ages and had become friends. Sven also owns the product-design company Studio Calico. Together with the Design Lead of this company, the first designs were developed further into the final product.

From idea to end-product

The designer and the creator wanted to keep the game simple and at the same time make it easier for kids (and parents) to practice maths. That was the goal that the creator and the developers had in mind. Several studies were made during the development process. For example, they looked at the positioning of the game in the market. How does Formula relate to other games and how do you keep the game fun to play while at the same time keep its educational value? Of course, this cannot be done

from behind your desk! It is a journey past an endless amount of shops, meetings with target groups and many choices about which colours to use in cooperation with many children.

During the development of Formula, the game was played with kids and adults of different ages. In the end three proto-types were developed and tested in elementary school grade 1, 3 and 5 (ages 6, 8 and 10). During these “field-trails” the input of teachers was invaluable. The whole time, Formula could be frequently tested at “Kind aan Zee” (after-school care) and the public school “OBS Het Volle Leven” in the Hague.

The results from these tests was that 88% of the kids 6 years and older wanted to play the game again. The vast majority also wanted to play the game at home and on holiday with their parents. Teachers of the public school “OBS Het Volle Leven” were impressed and very enthusiastic about the level of involvement, cooperation and fun that the game released in the class room.

The teachers realized that this family-game is very suitable for the class room. It is for example possible to use alternative rules and only practice formula’s with multiplication and division. In addition, the children learn a lot from each other’s formula’s. They are constantly making calculations, even when it is someone else’s turn.

The social aspect is important as well. How do you react when someone makes an error in their formula? From our tests it was clear that the children helped each other in a good way and that despite the competition effect, a “bonding” was created. The instruction at the beginning to all the children is important to create this effect.

“We are confident that playing Formula regularly on holiday will ensure that the maths skills will be more likely to improve than decline.” – Alon, founder of Formula.

Family-game

It is well known that when students come back from their summer holiday, they have forgotten a lot of what they have learned in the previous school year. Not only in mathematics, but also for example in reading.

Of course, there are several apps to prevent the so-called summer dip. However, parents often already have to do their best to keep their kids away from a screen. Formula is a fun alternative. The best in maths doesn’t necessarily win, which makes it so much fun because different age groups can each play at their own level.

Children (and adults) often think that they are not good in maths. Before even seeing the equation, they already give up. It is great to see that Formula changes this. Winning a game gives the children the feeling they can do it. If this is accompanied by a compliment from a teacher or parent, the self confidence increases and their maths skills improve.

Summer dip

The summer dip during the school holidays does not get the attention it deserves. Teachers often lose a lot of time re-teaching the skills that their students should already master.

Already in 1908, the first scientific research was done on this phenomenon in the US. Research from 1996 shows that students in America lose on average 2.6 months of mathematics lessons during the summer holiday. More recent research from Austria (2015) and Sweden (2001) confirm the existence of a summer dip.

Formula Games B.V. will perform its own research on the effect of Formula on the summer dip.

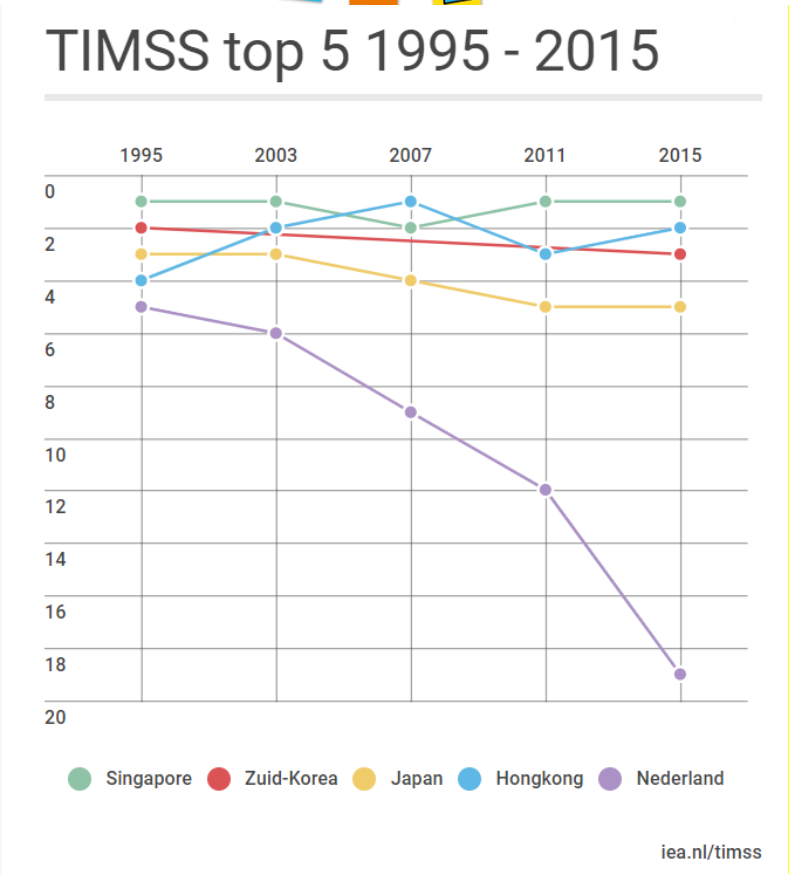
Error-less Calculations

Aydin Cihangir, director of the Netherlands Mathematical Institute and of “Foutloos Rekenen” (=Error-less Calculations), has become a fan of Formula. “Mathematics you learn in school or even better, at a course that we give called “Error-less Calculations”. In addition to school and our course, Formula gives something special. It keeps the knowledge active in a playful manner, increases the insight in and creativity with numbers. We recommend it to all our students”.

Besides the base-game, there is also an expansion pack. With the expansion pack, the base-game can be made more challenging. It is e.g. possible to add fractions and/or negative numbers. Many children (and adults) find calculations with fractions difficult. Formula provides a nice alternative way to practice calculations with fractions. Children that can be challenged even more can also play with negative numbers, square and square root.

Is Formula needed?

In 1995 the average Dutch student scored very high in mathematics compared to other countries. Trends in International Mathematics and Science Study (TIMMS) published their research results for the first time that year. The Netherlands came out as number 5. In 2015, The Netherlands dropped to number 19. This is not only the result of other countries performing better, but also because the level in the Netherlands dropped.



Zero plastic

The game is not only innovative, but has also been developed in a sustainable manner. We challenged our producer to adjust their process in order to abstain from plastic in our packaging. Sven de Laaf: “As a design studio, it was our task to challenge the client and the producer to make the product as sustainable as possible. Sustainability was one of the design principles in the design process. The result is not only that the product is plastic free, but also that the expansion pack fits in the package of the base game”.

Custom Formula

Formula is positioned as a Family game. If you are thinking: “This is fun! I want to make this available to all my students and/or teachers”, then the design team has built in several options whereby we can customize and personalize the packaging. Everything is possible in consultation. Of course, this does entail extra costs.

It is clear that this seemingly simple game has been thought through very well. That is why we think the slogan “Count on your brain!” Is very appropriate for our Vives readers. You can buy the game at https://www.formulagames.eu and in the better toy shops. Costs? EUR 12,50 for the base game.

3. Summary article Telegraaf (= largest Dutch newspaper)

"Playing with numbers" – June 4th 2019 by Gabi Ouwerkerk

Children's mathematical skills are declining for years now. Alon Nir wants to turn the tide with his family game Formula. "The best in math doesn't necessarily win, you need some luck as well". 45% of the children do not like maths, but 88% wanted to play the game again. Kids do not really notice they are doing maths; they are just having fun playing a game.

Everybody can play the game at its own level, but still play together. For kids (or adults) that do not have so much confidence in their maths skills, this game is perfect as well. The self confidence after winning a few games increases dramatically, which in turn increases the ability to do maths.

Several schools are using Formula during their lessons and have recommended their parents to play the game at home as well. Alon Nir mentions that he is very happy with those initiatives. He knows that the gaming industry is not an easy industry, however, Formula has everything to become a classic like Scrabble and Monopoly.

4. Copy of original article Telegraaf

T26 DFT

DE TELEGRAAF
DINSDAG 4 JUNI 2019

DFT ONDERNEMEN

WOENSDAG TECH | DONDERDAG ONDERNEMEN | VRIJDAG INTERVIEW | ZATERDAG CARRIÈRE

Nooit meer dag offline

AMSTERDAM • Hoewel ruim driekwart van de werkgevers vindt dat hun werknemers gereageld offline moeten zijn, geeft de helft van de werknemers hier geen gehoor aan. Werkgevers geven zelf ook niet het juiste voorbeeld. Dat blijkt uit onderzoek van Tele2 Zakelijk.

Zeven op de tien werkgevers zijn zelf continu, dus ook buiten werktijd, bereikbaar. Wel plant de helft van de werkgevers voor zichzelf offline tijd in. Iets dat er bij werknemers vaak bij inschiet, terwijl er wel behoefte aan is. Zes op de tien werknemers ontvangen van de leidinggevende nooit tips of begeleiding gericht op slim en efficiënt werken.

Hoewel 63% van de werkgevers zegt een prioriteit te maken van werkdrukregulering, ervaart de werknemer dit in de praktijk niet. Zo geven zes op de tien bijvoorbeeld aan dat de werkgever niet vaak genoeg informeert naar de werkdruk (55%) en bijna één derde voelt zich niet door de werkgever gehoord (27%).

STARTER VAN DE WEEK Formula geeft plezier in rekenen

Spelen met getallen

door **Gabi Ouwerkerk**

DEN HAAG • **De rekenvaardigheid van kinderen op de basisschool neemt al jaren af. Ondernemer Alon Nir wil deze trend keren met het gezelschapsspel Formula waarmee kinderen spelenderwijs sommen leren maken. „De beste rekenaar hoeft niet te winnen, er komt ook een dosis geluk bij kijken."**

Formula bestaat uit kaarten met getallen van 0 tot 9 en de symboolkaarten +, -, :, x en =. Door met de kaarten in de hand een rekensom te maken, kun je kaarten wegspelen. De speler die als eerste zijn kaarten kwijt is, heeft gewonnen. „Eigenlijk is het spel zo simpel, dat ik me rot heb gezocht op internet om te kijken of het niet al bestond", geeft Nir toe.

Het bedenken van spellen heeft hij niet van een vreemde. Zijn vader bedacht vroeger altijd spelletjes. Verder dan wat grove prototypes zijn die nooit gekomen en vorig jaar besloot Nir samen met zijn vader te kijken of ze één van de spellen door konden ontwikkelen. „Die dag kwam er zoveel creativiteit en adrenaline bij me los, dat ik er niet van kon slapen. Die nacht heb ik Formula bedacht en de volgende dag een prototype gemaakt."

Mindere rekenaar kan winnen

Zijn kinderen van 7 en 9 jaar oud fungeerden als eerste proefpersonen. „Ze vonden het meteen heel leuk en hun vriendjes en ouders ook." Ook de school van de kinderen reageerde enthousiast. Een vader van school met een eigen ontwerpstudio, Studio Calico, bood aan te helpen met het design.

„We hebben de verschillende designs en spelregels uitvoerig getest in de groepen 3, 5 en 7 op school", aldus Nir die de kinderen zowel voor als na het spelen van Formula een vragenlijst liet invullen. „Een van de vragen was of ze rekenen leuk vonden. Bij 45% was dat niet het geval. Toch gaf 88% na afloop aan het spel zo leuk te vinden dat ze het vaker wilden spelen."

Zelfvertrouwen

Nir kan dit wel verklaren: „Kinderen zien het echt als een spelletje en hebben niet door dat ze aan het rekenen zijn. Bovendien heb je het geluk nodig dat je de juiste kaarten krijgt. Als mindere rekenaars een potje winnen, geeft ze dat veel zelfvertrouwen."

Spelers kunnen het spel zo moeilijk of makkelijk maken als ze zelf willen. Zo is het mogelijk de symbolen vermenigvuldigen en delen weg te laten, zodat alleen sommen gemaakt kunnen worden met optellen en aftrekken. Voor gevorderden is een uitbreidingsset beschikbaar met negatieve getallen, breuken, wortels en kwadraten.

Alon Nir was verrast dat er nog geen spel als Formula bestond.
FOTO ANNE DE RIJKE

- **Naam bedrijf:** Formula Games B.V.
- **Wie:** Alon Nir
- **Wat:** Het bedenken en uitgeven van educatieve spellen
- **Waar:** Den Haag
- **Officiële startdatum:** 17 januari 2019
- **Gedane investering:** Circa €40.000
- **Beoogde jaaromzet:** €150.000 (2020)
- **Meer informatie:** formulagames.nl

Klassieker

Een aantal scholen gebruikt Formula inmiddels in de rekenles. „Vaak raden ze ook ouders aan het te kopen", vertelt Nir die blij is met dat initiatief. „Ik weet inmiddels dat de spelletjesmarkt geen eenvoudige industrie is. Een aantal grote spelers domineert de markt en het is lastig daar tussen te komen. Maar Formula heeft alles in zich om een klassieker te worden net als Scrabble en Monopoly."

VRAAG & ANTWOORD

Oproepcontract

Wij werken veel met tijdelijke oproepkrachten.

5. Game Rules

GAME RULES

EN

Objective

Be the first player to get rid of all the cards in your hand. You play your cards by forming both a formula and the correct answer to this formula. See below for the detailed game rules.

Setup

1. The yellow cards with the **symbols** (+, -, x, ÷ en =) on them are placed face up in the centre of the table.

2. Decide together who will shuffle and deal the first round. This person shuffles all the Numbers and Joker cards and deals each player 7 cards.

3. The remaining cards are turned faced down in a pile: the **stock pile.**

4. Take two cards from the **stock pile** and place them face up on the table. Make sure there is a little bit of space between them! Place the card with the **symbol** '=' to the right of these cards. This is the starting point of the formula, e.g.:

Game Play

The player left of the dealer starts by completing the Formula that is on the table. This is done by placing a **symbol** (+, -, x, ÷) between the two numbers and placing a card from the players hand to the right of the **symbol** '=' as the answer.
For example, if there is a 2 and a 4 on the table, the player can put the **symbol** '+' in between these numbers and play the 6 as the answer:

If the player does not have a 6, but instead has an 8, the player could put the **symbol** 'x' between the 2 and the 4 and play the 8 as the answer (2 x 4 = 8).
When a player cannot complete the formula, a card must be drawn from the **stock pile**. Then the next person can try to come up with a correct answer.
Once the first formula is made, the next person can adjust the formula by putting down cards on top of the ones that are already on the table. A maximum of 3 cards can be played in each turn and you can change the **symbol** (+, -, x, ÷).

These are the options available to you:
1. Put down a completely new formula with 3 new cards: 1 x 8 = 8.

2. Put down a completely new formula with 3 new cards while at the same time using a card that is already on the table: 8 x 8 = 64 therefore re-using the 6 of the previous formula.

3. Use one of the cards that is on the table to make a new formula and add two new cards. For example, leave the 2 in above example and add a 3 and a 5 to make 2 + 3 = 5.

4. Use two of the cards that are on the table and make a new formula. Using the above example, leave the 2 and the 4, exchange the **symbol** '+' for the **symbol** 'x' and lay down the answer 8 on top of the 6.

In case all the cards from the **stock pile** have been used, the cards that are underneath the current formula are shuffled and made into the new **stock pile**.

Joker

There are 2 Jokers in the game. Each Joker can represent a number between 0-9. The Joker keeps the number that the first player has assigned to it.

Special rules

It is allowed to make one number using two cards, e.g.:

Pay attention to the maximum number of cards (3) you can play in each turn.
When two cards form one number (like the 10 in the above example), the next player can replace these two cards with one card, e.g.:

This player could also change one of the cards forming the 10, so for example, leave the 1 from the 10 and put a 2 on top of the 0 making the new number 12. If the player than also puts down a 4 and an 8, the following formula can be made:

Basically, the player can change one of the two cards or replace both cards with one new card. The player cannot use just one of the cards and take the other card away. So you cannot take away the 0 from the 10 and use just the 1 (unless you put a new 1 on top).
The formula: "number" x 0 = 0 has to be completely replaced by the next player. Otherwise the next player can always put down 3 cards, e.g. 428 x 0 = 0 and the game will be over too quickly.

Is the game progressing too quickly? Increase the level of difficulty as follows:

Agree with each other to use at least 1 card that is already on the table when making your formulas. This will undoubtedly lead to a longer game as a card will need to be taken from the **stock pile** more often.

Other variations:

- The winner of the game starts with an extra card in the next round.

- You continue until everybody has played all their cards.

- The winner is not the one who finishes first, but the one that has collected the most points. You collect points with every formula you finish. The outcome of the formula is the amount of points you receive. You keep track of your own points. When somebody has played all their cards that round ends. Any card that a player still has in his hands is deducted from the score, for example, a player has made the following formulas 8 x 8 = 64 and 1 + 2 = 3 and still has a 7 and a 9 in his hands, then this player has 64 + 3 - 7 - 9 = 51 points. The person who finishes first gets a bonus of 10 points. If you still have a joker at the end this leads to a deduction of 25 points. The outcome of each round is added up and the first person to reach 250 points wins the game.

Have you come up with other fun variations? Please share them on: *www.formulagames.co.uk*